



**PRECISION GROUND FLAT STOCK, reg, O/S**

**\$MART FLAT STOCK**

**HARD FLAT**

**EDM BLOCK HARDENED**

**DRILL ROD**

**COLD FINISHED ROUNDS**

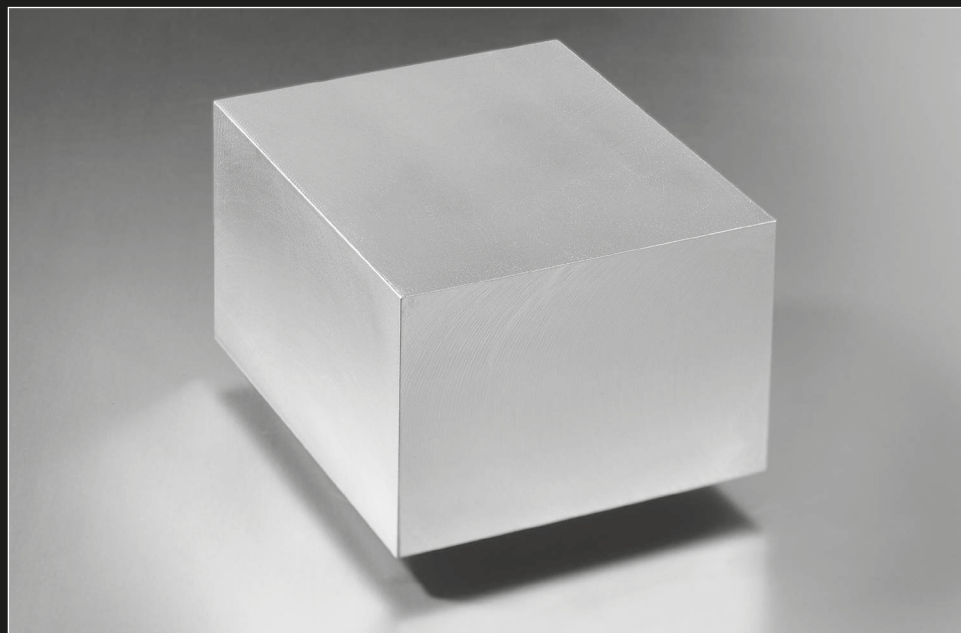
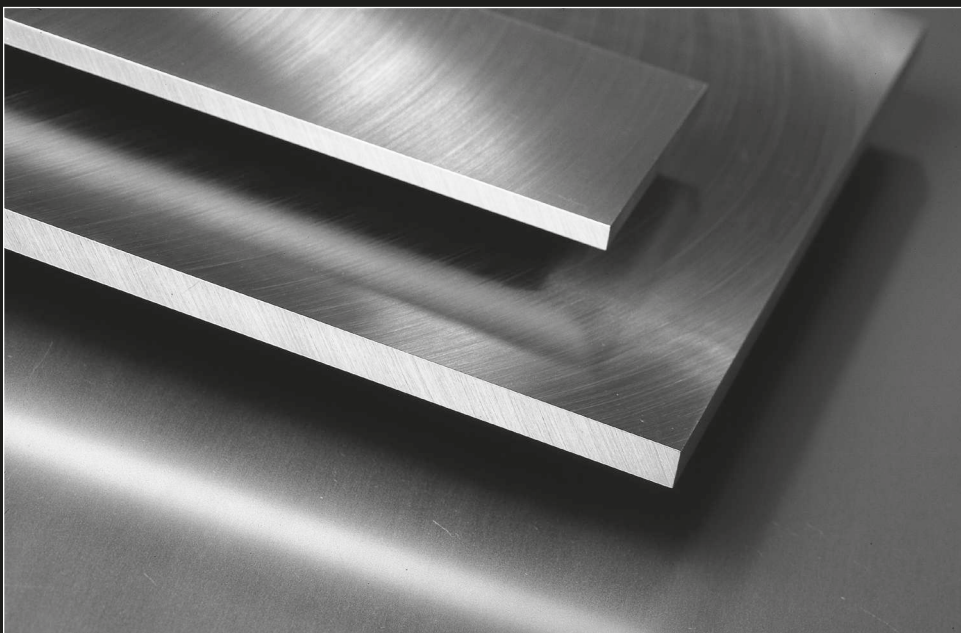
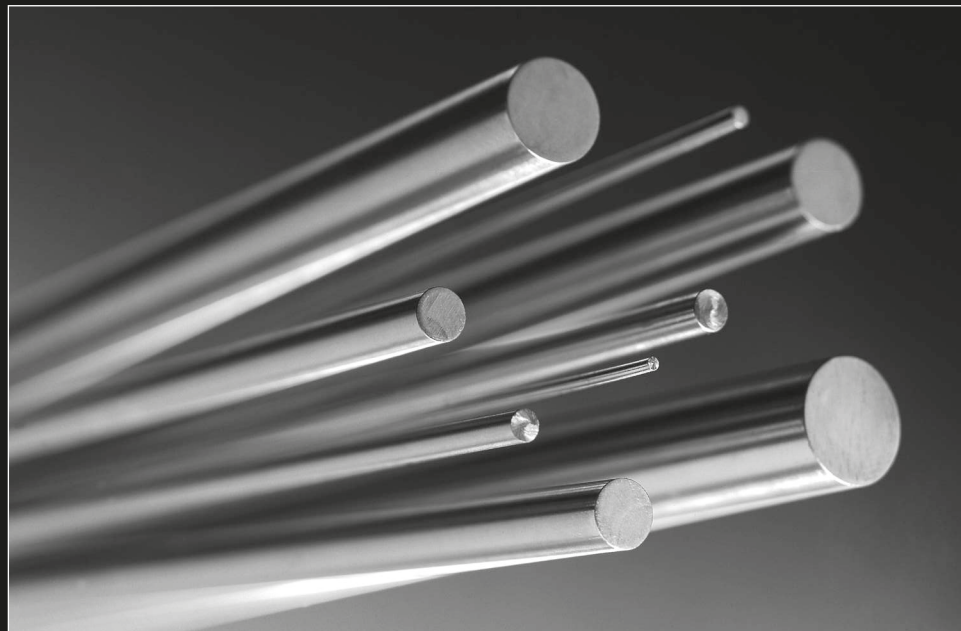
**DECARB FREE ROUNDS**

**THE POWER OF STEEL GRADE VARIETY!**

|                     |        |           |              |                 |               |          |                     |  |
|---------------------|--------|-----------|--------------|-----------------|---------------|----------|---------------------|--|
| A2                  | L6     |           |              |                 |               | 410      |                     |  |
| A8 mod./<br>Chipper | O1     | Toolox 33 | 420 ESR      |                 |               | 420      |                     |  |
| D2                  | P20    | Toolox 44 | 420 LC       |                 |               | 420 mod. |                     |  |
| H10                 | P20 PH | W1        | 420FM        |                 | 303           | 420RM    |                     |  |
| H13                 | P20+Ni | 1018/A36  | 5120         |                 | 304           | 430F     |                     |  |
| H13 ESR             | S1     | 1045      | 52100/<br>L1 | HSS M2          | 314           | 431      | 4140/<br>4142       |  |
| L3                  | S7     | 2990mod.  | 6F7 ESR      | HSS PM<br>M4 HC | 316L /<br>316 | 440B     | 4140 PH/<br>4142 PH |  |
|                     |        |           |              |                 | 316Ti         | 440C     | 5115                |  |

**CONTACT US: +1 (331) 234-9900 or [sales@abrams-industries.com](mailto:sales@abrams-industries.com)**





**ABRAMS PREMIUM FLATS, ROUNDS, BLANKS AND BLOCKS!**

**BECOME BETTER THAN YOUR COMPETITION !**

## **WIN WITH ABRAMS PREMIUM STEEL**

- + **44** steel grades
  - + More than **53,000** items
  - + As **Flats** and **Rounds**
  - + In **Imperial** and **Metric** Sizes
  - + **NO** minimum order value
  - + **NO** minimum order quantity
  - + **Specials** on request
  - + **Same day shipping** (subject to availability)
  - + From our **Production Site / Warehouse** in Illinois, U.S.A.
- 

**= Sum of your competitive advantages!**



## PRODUCTION + STOCK !

### 3 MAIN REASONS WHY ...

**ABRAMS INDUSTRIES IS AN APPROVED SUPPLIER FOR MANY TOP US INDUSTRIAL COMPANIES:**



#### ① AGILITY

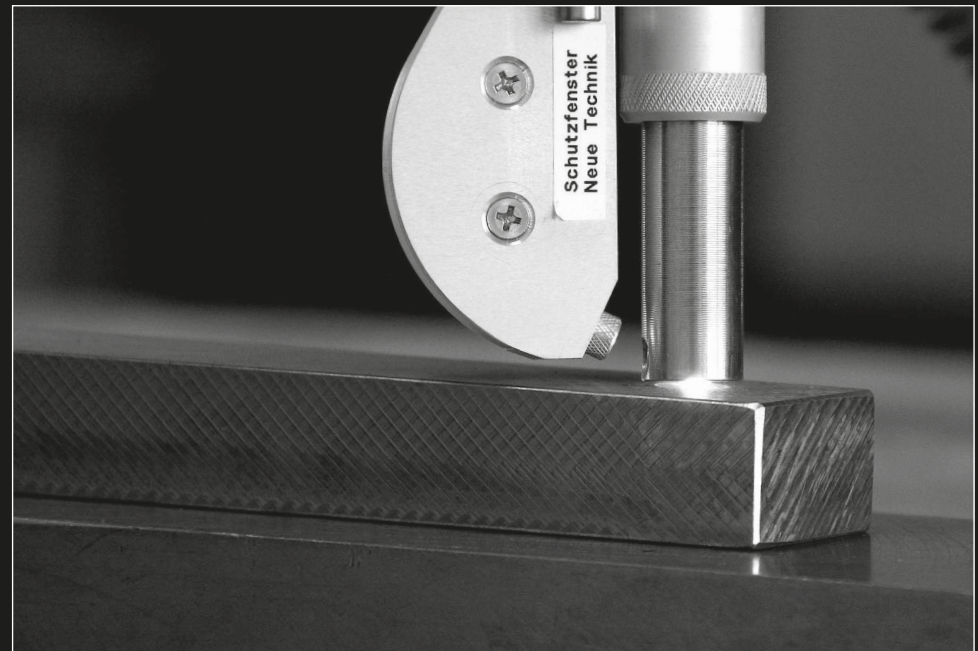
due to our deep inventories of raw material and production capacity in our PRODUCTION SITE in Illinois, U.S.A.

#### ② FAST SHIPPING

due to our finished stock inventories.

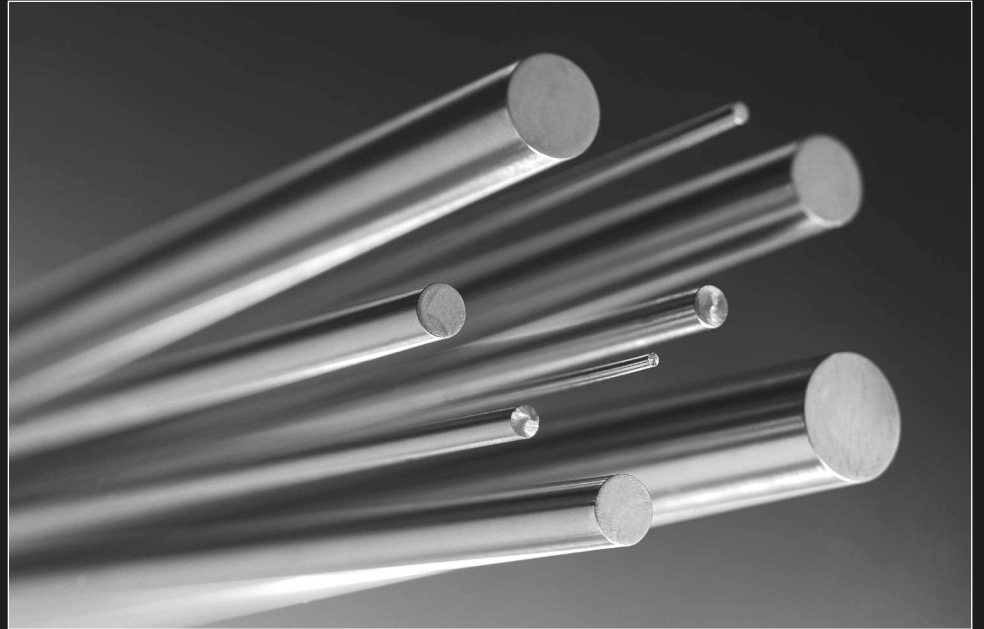
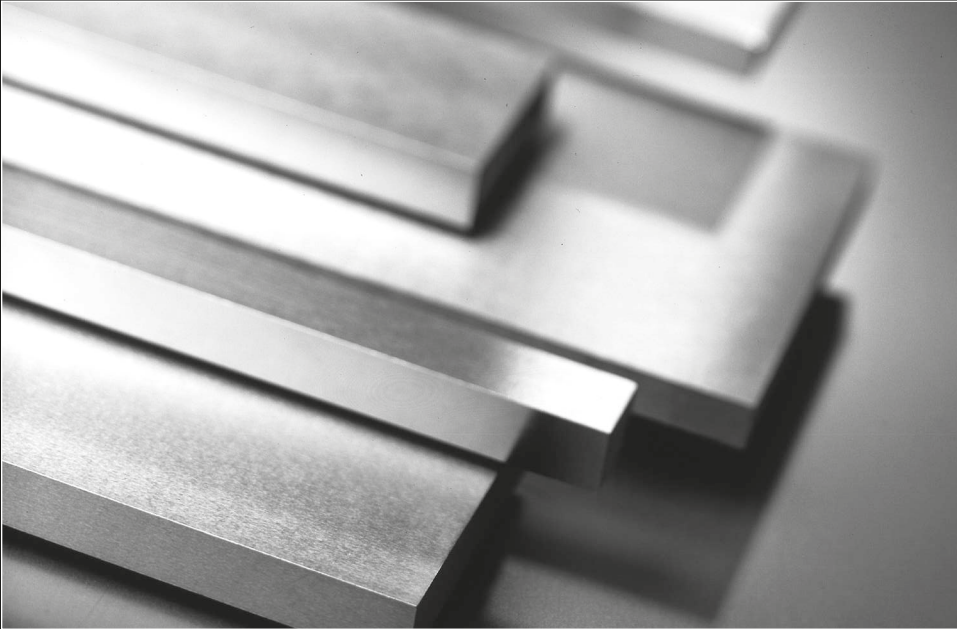


## QUALITY !



### ③ PREMIUM QUALITY

because of the availability of a Positive Steel Identification provided by certified Spectrometer Analysis.



**TOOL STEEL**

**HIGH SPEED STEEL**

**STAINLESS STEEL**

**HEAT-TREATABLE STEEL**

**CASE HARDENING STEEL**

## CONSTANTLY EVOLVING !

... that is **ABRAMS INDUSTRIES**.





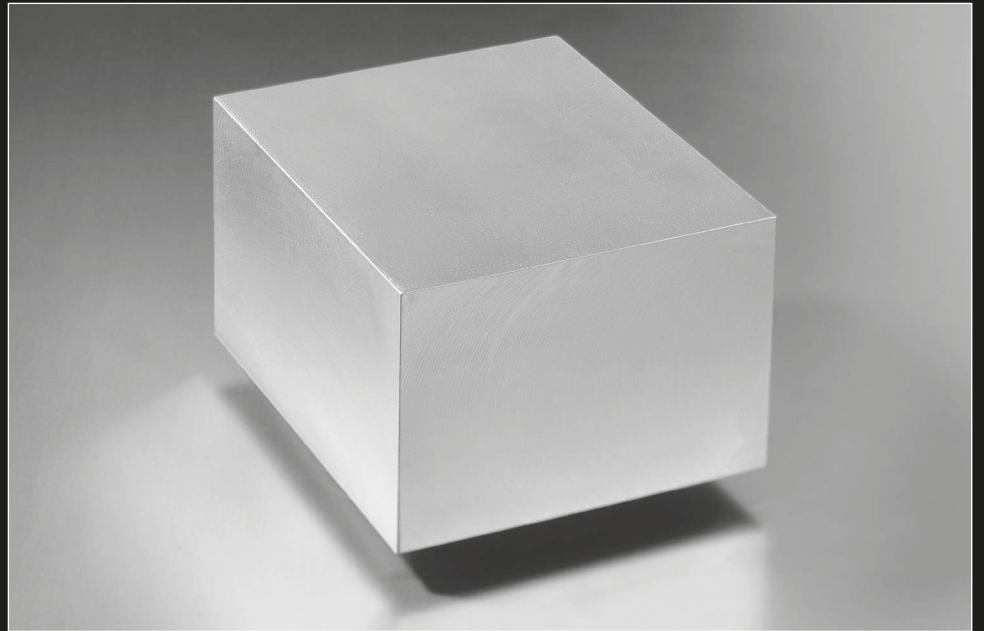
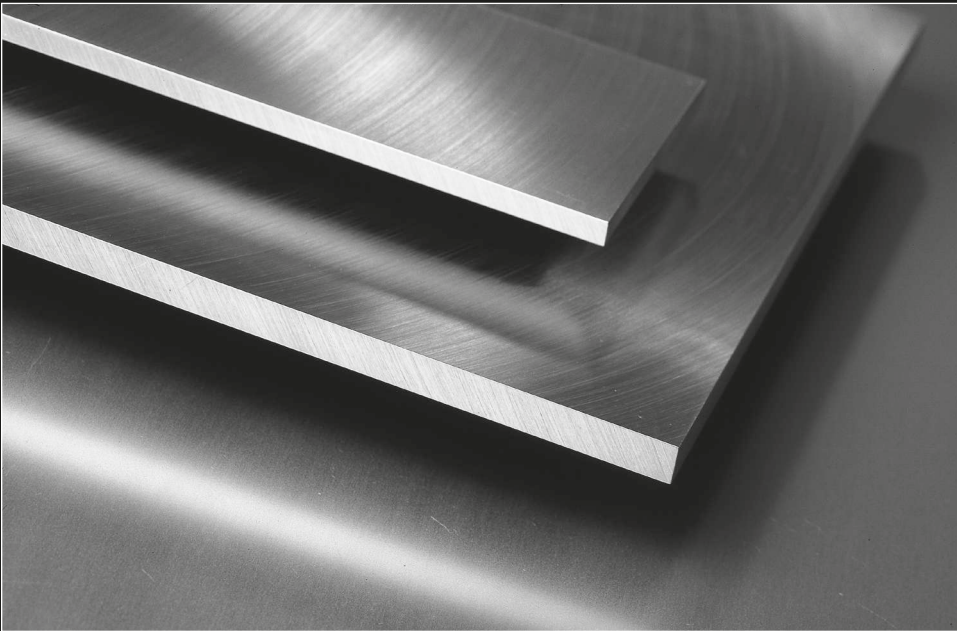
**TOOL STEEL**

**HIGH SPEED STEEL**

**STAINLESS STEEL**

**HEAT-TREATABLE STEEL**

**CASE HARDENING STEEL**

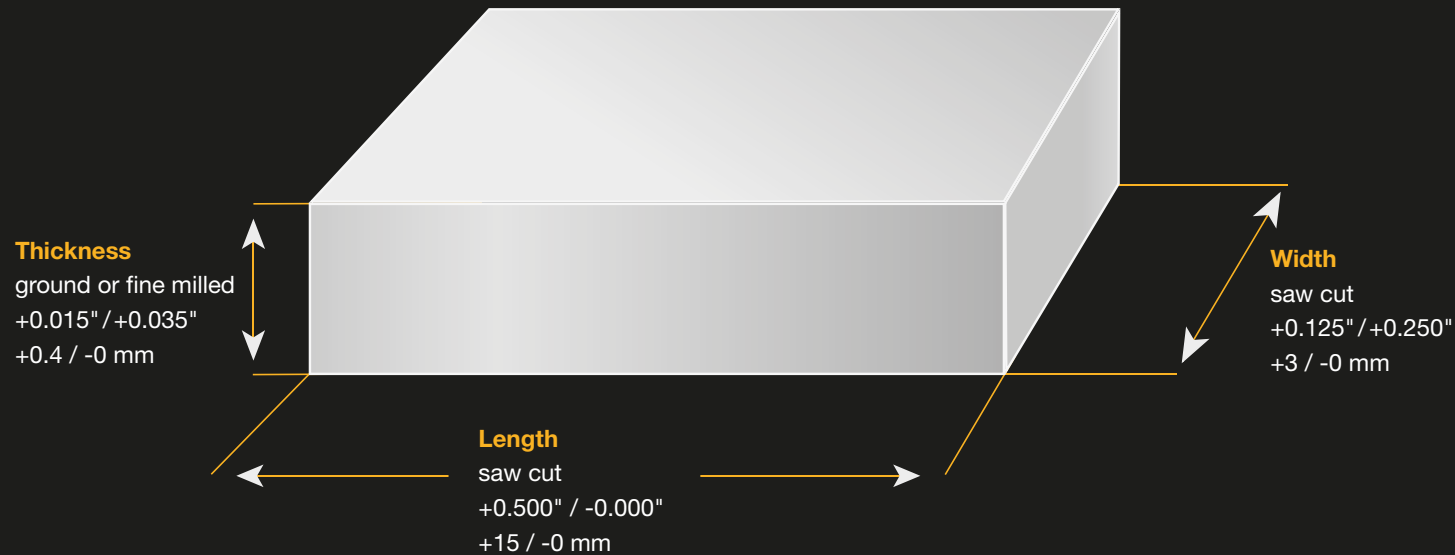


**ABRAMS PREMIUM BLANKS AND BLOCKS!**

NEW TO THE CANADIAN MARKET !

## \$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY

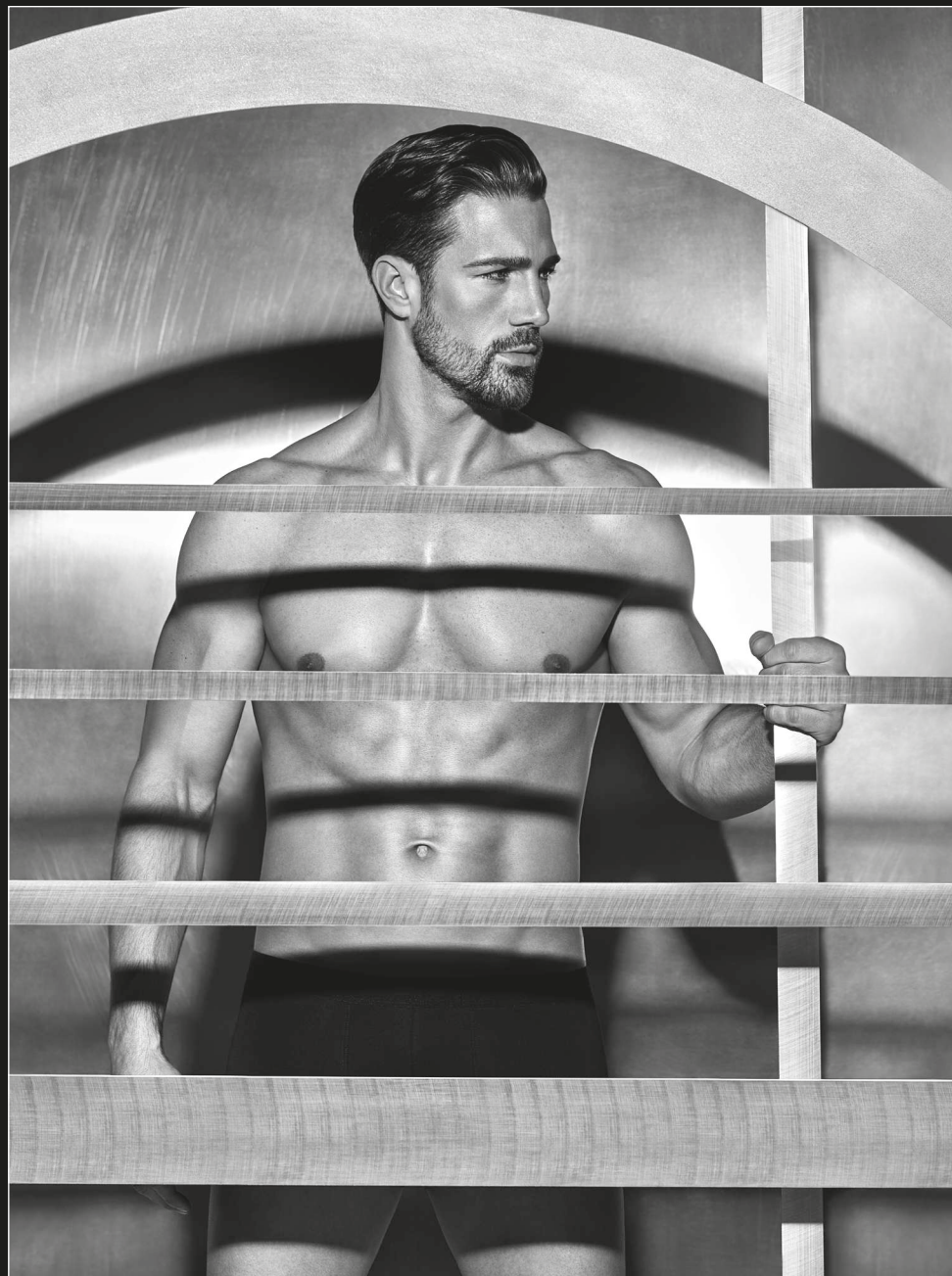
Always close to your final dimensions.



ABRAMS – \$AVES TIME AND MONEY!

**ABRAMS!**  
PREMIUM STEEL

WATCH THE MAKING OF THE  
4TH MOTIF FOR CALENDAR  
2016 / 2019





**ABRAMS VARIETY!**

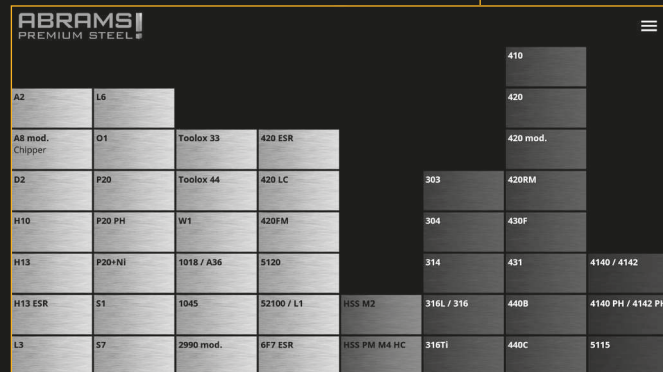
## ... 44 DIFFERENT STEEL GRADES

|                     |        |           |              |                 |              |          |                     |
|---------------------|--------|-----------|--------------|-----------------|--------------|----------|---------------------|
|                     |        |           |              |                 |              | 410      |                     |
| A2                  | L6     |           |              |                 |              | 420      |                     |
| A8 mod./<br>Chipper | O1     | Toolox 33 | 420 ESR      |                 |              | 420 mod. |                     |
| D2                  | P20    | Toolox 44 | 420 LC       |                 | 303          | 420RM    |                     |
| H10                 | P20 PH | W1        | 420FM        |                 | 304          | 430F     |                     |
| H13                 | P20+Ni | 1018/A36  | 5120         |                 | 314          | 431      | 4140/<br>4142       |
| H13 ESR             | S1     | 1045      | 52100/<br>L1 | HSS M2          | 316L/<br>316 | 440B     | 4140 PH/<br>4142 PH |
| L3                  | S7     | 2990mod.  | 6F7 ESR      | HSS PM<br>M4 HC | 316Ti        | 440C     | 5115                |

# THE ABRAMS STEEL GUIDE !

Our patented application can be downloaded free of charge onto your smartphone (iPhone/android phone) or tablet (iPad/android tablet), as well as being available as a free web browser version on your PC (see [abrams-steelguide.com](http://abrams-steelguide.com)).

The following graphics have been taken from the Android version.



| ABRAMS! PREMIUM STEEL |        |            |            |              |            |      |                   |
|-----------------------|--------|------------|------------|--------------|------------|------|-------------------|
| A2                    | L6     |            |            |              |            |      | 410               |
| A8 mod. Chipper       | D1     | Toolox 33  | 420 ESR    |              |            |      | 420               |
| D2                    | P20    | Toolox 44  | 420 LC     |              |            |      | 420 mod.          |
| H10                   | P20 PH | W1         | 420FM      |              | 303        |      | 420RM             |
| H13                   | P20+Ni | 1018 / A36 | 5120       |              | 304        |      | 430F              |
| H13 ESR               | S1     | 1045       | 52100 / L1 | HSS M2       | 314        | 431  | 4140 / 4142       |
| L3                    | S7     | 2990 mod.  | 6F7 ESR    | HSS PM M4 HC | 316L / 316 | 440B | 4140 PH / 4142 PH |
|                       |        |            |            |              | 316Ti      | 440C | 5115              |

## TWO POSSIBLE WAYS TO START

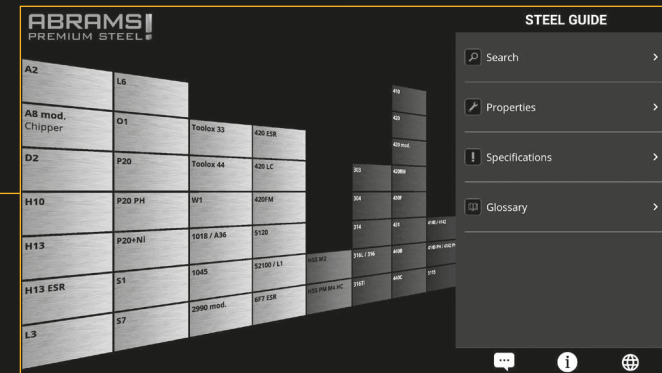
i.e. you require TOOL STEEL for a stamping tool.

## STEP 1 A

You know the technical requirements and you are looking for the suitable steel grade.

## STEP 1 B

Choose a steel grade you know and usually work with.



In the ABRAMS STEEL GUIDE menu you will find a full text search, a summary of technical properties, a list of specifications we deliver and a glossary of steels, alloys and heat treatments.



Your desired steel grade will be shown with first indicative traits.

## ABRAMS STEEL GUIDE

Patent No.: US 8,463,771 B2

Date of Patent: June 11, 2013

### STEP 2 A

For example, click to open the property view.



Choose the most important technical properties – in any desired combination.

### STEP 3 A

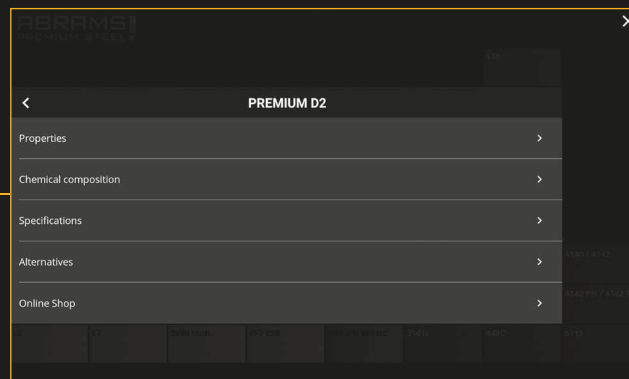
Click to choose each of the properties to optimize them.



Here you can optimize any property, such as wear resistance – e.g. if it is less important or very important for your stamping tool. You immediately get the steel grade you need.

### STEP 2 B

Click to get the detailed view.



All the details of the chosen steel grade are provided: technical properties, chemical composition and specifications. Search for alternatives and get direct access to our online shop.

### STEP 3 B

Here we have chosen the function "alternatives to the grade AISI D2".



As a result, a highlighted list of steel grades appears with similar or possibly better properties than AISI D2. Adjust or delete single properties to find the ideal steel grade for your stamping tool.



## ABRAMS ART PROJECT

“EXCELLENT WORK!” ...

... is the praise that we receive from our customers and partners.

ABRAMS Industries is proud to produce a high quality photographic calendar, which has been very highly coveted by our valued customers and partners. Not to mention the honor of having had our calendar recognized multiple times in the “JAHRBUCH DER WERBUNG / GERMANY” (the renowned Yearbook of Advertising and Marketing) as well as further accolades in a variety of trade journals.

Through our photographic art project, we have sought to contrast the highly technical qualities of our steel with the warmth of the human form and the beauty of both with a modern interpretation. To date, our efforts have been presented in 7 limited edition art calendars, which we trust will continue to enrich your working day.

We have staged iconic cultural symbols with the perfection and variety of ABRAMS PREMIUM STEEL and ABRAMS PREMIUM ALUMINUM products, under the guidance of our Art Director Ms. Nur Hayat Nezir.

The result: 13 exceptional motifs with models from Milan, Amsterdam and Berlin, taken by the photographer Benjamin Becker.

The art calendar is a limited release to our valued customers and partners around the world.

To view the making of the ABRAMS Art Project 2022 / 2025, simply scan the QR code:





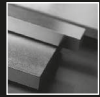


## FLATS !

Below are our flats in different categories in imperial as well as metric sizes.

Every item is available in different **thickness**, **width** and **length**. On request – specific to your needs!

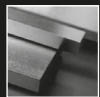
### IMPERIAL



#### Precision Ground Flat Stock, regular [GFS reg]

For example: 3/4" x 4" x 36" reg

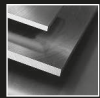
- **Thickness** ground, tol. +/-0.001"
- **Width** ground or fine milled, tol. +0.005" / -0.000"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### Precision Ground Flat Stock, oversize [GFS O/S]

For example: 3/4" x 4" x 36" O/S

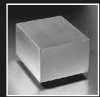
- **Thickness** ground, tol. +0.010" / +0.015"
- **Width** ground or fine milled, tol. +0.010" / +0.015"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### \$mart Flat Stock [\$mart] Standardized Precision Blanks

For example: 3/4" x 4" x 24"

- **Thickness** ground or fine milled, tol. +0.015" / +0.035"
- **Width** saw cut, tol. +0.125" / +0.250"
- **Length** saw cut, tol. +0.500" / -0.000"



#### EDM Block hardened [EDM]

For example: 1/2" x 4" x 4"

- **Thickness** ground or fine milled, tol. +0.010" / -0.000"
- Square dimension ground or fine milled, tol. min. +0.0125"
- Grain structure is perpendicular in relation to top & bottom.

### METRIC



#### Precision Ground Flat Stock Metric, regular [GFSM reg] acc. to DIN\* 59350

For example: 20.0 x 100.0 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.05 / -0 mm
  - **Width** ground or fine milled, tol. +0.2 / -0 mm
  - **Length** milled or saw cut, tol. +35 / -0 mm
- Exception: AISI 1045: **T** +0.25 / -0 mm; **W** +0.4 / -0 mm



#### Precision Ground Flat Stock Metric, oversize [GFSM O/S]

For example: 20.3 x 100.3 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** ground or fine milled, tol. +0.4 / -0 mm
- **Length** milled or saw cut, tol. +35 / -0 mm



#### \$mart Flat Stock Metric [\$martM] Standardized Precision Blanks Metric

For example: 20.3 x 103 x 600 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** saw cut, tol. +3 / -0 mm
- **Length** saw cut, tol. +15 / -0 mm



#### Hard Flat Metric [HardM] Hardened Standardized Blanks Metric

For example: 10.2 x 250 x 500 mm

- **Thickness** ground or fine milled, tol. +0.2 / -0 mm
- **Width** saw cut or sheared, tol. +10 / -0 mm
- **Length** saw cut or sheared, tol. +10 / -0 mm

Flatness tolerance: +0.2 / -0 mm across the item (aimed for)

### \*DIN: DEUTSCHE INDUSTRIE NORM (GERMAN INDUSTRY STANDARD) !

Precision ground flat stock is a bar with a sharp-edged, rectangular or square cross-section made of tool steel with finely machined, decarburization-free longitudinal surfaces. In Germany, it is standardized in DIN 59350. Precision ground flat stock is used primarily as a semi-finished product in machine, tool, fixture and mold construction.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)

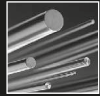




## ROUNDS !

Below are our rounds in different categories in imperial as well as metric sizes.  
Any item is available in different **diameters** and / or **length**. On request – specific to your needs!

### IMPERIAL

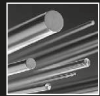


#### Drill Rod [DR] Precision Round Bars

**For example: DR 3/4" x 36"**

Turned, ground & polished (TGP)

- Tol. Dia. < 1/8":  $\pm 0.0003"$ , L  $+0.125"$  /  $-0.000"$
- Tol. Dia. 1/8" to < 1/2":  $\pm 0.0005"$ , L  $+0.125"$  /  $-0.000"$
- Tol. Dia. 1/2" to 2":  $\pm 0.001"$ , L  $+0.125"$  /  $-0.000"$



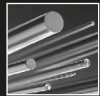
#### Cold Finished Rounds [CF] Precision Round Bars

**For example: CF 3/4" x 36"**

Drawn, smooth turned, ground, or ground and polished

- Tol. Dia. < 1/2":  $\pm 0.0015"$ , L  $\pm \text{tol.}$  /  $-0.400"$
- Tol. Dia. 1/2" to < 1-1/2":  $\pm 0.0025"$ , L  $\pm \text{tol.}$  /  $-0.400"$
- Tol. Dia. 1-1/2" to 4":  $\pm 0.004"$ , L  $\pm \text{tol.}$  /  $-0.400"$

These are maximum tolerances. For more exact tolerances call our sales team.



#### Decarb Free Rounds [DCF] Oversize Round Bars

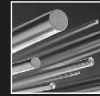
**For example: DCF 3/4" x 36"**

Peeled or rough-turned

- Tol. Dia. min.  $+0.010"$ , L  $\pm \text{tol.}$  /  $-0.400"$
- Exception: 4XX Series stainless steel, tol. Dia.  $\pm \text{tol.}$  /  $-0.000"$ , L  $\pm \text{tol.}$  /  $-0.400"$

These steel rounds are oversized to finish to nominal diameter.

### METRIC



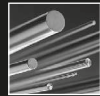
#### Drill Rod Metric [DRM] Precision Round Bars Metric

**For example: DRM 10.0 mm x 914 mm (36")**

Turned, ground & polished (TGP) - ISO h9

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm \text{tol.}$
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm \text{tol.}$
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm \text{tol.}$

These are maximum tolerances. For more exact tolerances call our sales team.



#### Cold Finished Rounds Metric [CFM] Precision Round Bars Metric

**For example: CFM 10.0 mm x 914 mm (36")**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm \text{tol.}$
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm \text{tol.}$
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm \text{tol.}$

These are maximum tolerances. For more exact tolerances call our sales team.

## STEEL CATEGORIES !

Steel grades are classified by their **technical properties** and/or by their **intended use**.

For example: Cold work steel, hot work steel, plastic mold steel, high speed steel, corrosion resistant steel or case hardening steel.  
Steel grades are often assigned to several classification groups.

For more details on our shapes see: [us.abrams-industries.com/product-overview](https://us.abrams-industries.com/product-overview)





ABRAMS PREMIUM TOOL STEEL!

**ABRAMS!**  
PREMIUM STEEL

## TOOL STEEL I

## STEEL GRADE - AISI

| TOOL STEEL I              | TOOL STEEL I       |                   |             |                           |                           |                  |                        |                      |                |        |                  |              |                  |               |  |  |   |                             |                 |                |                    |                  |                 |                                      |                                 |                      |                      |  |
|---------------------------|--------------------|-------------------|-------------|---------------------------|---------------------------|------------------|------------------------|----------------------|----------------|--------|------------------|--------------|------------------|---------------|--|--|---|-----------------------------|-----------------|----------------|--------------------|------------------|-----------------|--------------------------------------|---------------------------------|----------------------|----------------------|--|
|                           | STEEL GRADE - AISI |                   |             |                           |                           |                  |                        |                      |                |        |                  |              |                  |               |  |  |   |                             |                 |                |                    |                  |                 |                                      |                                 |                      |                      |  |
|                           | GFS reg 18" , 36"  | GFS O/S 18" , 36" | GFS reg 24" | GFSM reg 500 mm, 1,000 mm | GFSM O/S 500 mm, 1,000 mm | \$mart 12" , 24" | \$martM 300 mm, 600 mm | HardM 250 mm, 500 mm | EDM (hardened) | DR 36" | DRM 914 mm (36") | CF 18" , 36" | CFM 914 mm (36") | DCF 18" , 36" | Max. delivery hardness (annealed / pre-hardened) [BHN] | Delivery hardness (hardened) approx. [HRC] | Tensile strength (deliv. cond.) approx. [KSI] | Max. working hardness [KSI] | Cold Work Steel | Hot Work Steel | Plastic Mold Steel | High Speed Steel | Stainless Steel | Stainless Steel, corrosion resistant | Stainless Steel, acid resistant | Heat-Treatable Steel | Case hardening Steel |  |
| PREMIUM A2                | ✓                  | ✓                 |             | ✓                         |                           |                  |                        |                      | ✓              | ✓      |                  |              | ✓                | 241           |  | 118.2                                      | 62  | ✓                           |                 | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM A8 mod. / Chipper |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 250           |  | 123.2                                      | 60  | ✓                           |                 |                |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM D2                | ✓                  | ✓                 |             | ✓                         |                           |                  | ✓                      | ✓                    | ✓              | ✓      |                  |              | ✓                | 255           | 57   | 124.7                                      | 62  | ✓                           |                 | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM H10               |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 229           |  | 111.6                                      | 52  |                             | ✓               | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM H13               |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              | ✓                | 229           |  | 111.6                                      | 56  |                             | ✓               | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM H13 ESR           |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 229           |  | 111.6                                      | 56  |                             | ✓               | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM L3                |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 223           |  | 108.7                                      | 64  | ✓                           |                 |                |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM L6                |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              | ✓                | 250           |  | 123.2                                      | 54  |                             | ✓               |                |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM O1                | ✓                  | ✓                 |             | ✓                         | ✓                         |                  | ✓                      |                      | ✓              | ✓      |                  |              | ✓                | 229           | 57   | 111.6                                      | 62  | ✓                           |                 | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM P20               |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 225           |  | 108.8                                      | 50  | ✓                           |                 | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM P20 PH            |                    |                   |             | ✓                         | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 325           |  | 159.5                                      | 50  | ✓                           |                 | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM P20+Ni            |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 325           |  | 159.5                                      | 50  | ✓                           |                 | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM S1                |                    |                   |             |                           | ✓                         | ✓                |                        |                      |                |        |                  |              |                  | 229           |  | 111.6                                      | 60  | ✓                           |                 |                |                    |                  |                 |                                      |                                 |                      |                      |  |
| PREMIUM S7                |                    |                   |             |                           | ✓                         | ✓                |                        |                      | ✓              |        |                  |              | ✓                | 225           |  | 110.2                                      | 60  |                             | ✓               | ✓              |                    |                  |                 |                                      |                                 |                      |                      |  |

## IMPERIAL

Precision Ground Flat Stock, regular [GFS reg]

Precision Ground Flat Stock, oversize [GFS O/S]

\$mart Flat Stock [\$mart] - Standardized Precision Blanks

EDM Block hardened [EDM]

Drill Rod [DR] - Precision Round Bars

Cold Finished Rounds [CF] - Precision Round Bars

Decarb Free Rounds [DCF] - Oversize Round Bars

## METRIC

Precision Ground Flat Stock Metric, regular [GFSM reg] - acc. to DIN\* 59350

Precision Ground Flat Stock Metric, oversize [GFSM O/S]

\$mart Flat Stock Metric [\$martM] - Standardized Precision Blanks Metric

Hard Flat Metric [HardM] - Hardened Standardized Blanks Metric

Drill Rod Metric [DRM] - Precision Round Bars Metric

Cold Finished Rounds Metric [CFM] - Precision Round Bars Metric

\*DIN: Deutsche Industrie Norm (German Industry Standard)

ABRAMS – THE POWER OF STEEL GRADE VARIETY!

**ABRAMS!**  
 PREMIUM STEEL

# PREMIUM A2 - PRECISION GROUND FLAT STOCK, REGULAR

# TOOL STEEL

Length: 18"

## IMPERIAL DIMENSIONS in inch

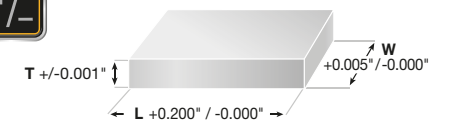
| WIDTH                    | THICKNESS |       |       |       |       |       |      |       |       |       |      |       |      |      |      |      |      |    |        |        |    |
|--------------------------|-----------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|------|------|------|------|------|----|--------|--------|----|
|                          | 1/32"     | 3/64" | 1/16" | 5/64" | 3/32" | 7/64" | 1/8" | 5/32" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" | 1-1/4" | 1-1/2" | 2" |
| Available Dimensions [■] |           |       |       |       |       |       |      |       |       |       |      |       |      |      |      |      |      |    |        |        |    |
| 3/16"                    |           |       |       |       |       |       |      |       | ■     |       |      |       |      |      |      |      |      |    |        |        |    |
| 1/4"                     |           |       |       |       |       |       | ■    |       | ■     |       | ■    |       |      |      |      |      |      |    |        |        |    |
| 5/16"                    |           |       |       |       |       |       | ■    |       | ■     |       | ■    | ■     |      |      |      |      |      |    |        |        |    |
| 3/8"                     |           |       |       |       |       |       | ■    |       | ■     |       | ■    | ■     | ■    |      |      |      |      |    |        |        |    |
| 1/2"                     | ■         | ■     | ■     | ■     | ■     | ■     | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    |      |      |      |    |        |        |    |
| 5/8"                     |           | ■     |       |       |       |       | ■    | ■     | ■     |       | ■    | ■     | ■    | ■    | ■    |      |      |    |        |        |    |
| 3/4"                     | ■         | ■     | ■     | ■     | ■     | ■     | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      |    |        |        |    |
| 7/8"                     |           |       |       |       |       |       | ■    |       | ■     |       | ■    | ■     |      | ■    |      |      | ■    |    |        |        |    |
| 1"                       | ■         | ■     | ■     | ■     | ■     | ■     | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"                   | ■         | ■     | ■     | ■     | ■     | ■     | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"                   | ■         | ■     | ■     | ■     | ■     | ■     | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 1-3/4"                   | ■         | ■     |       |       |       |       | ■    | ■     | ■     |       | ■    | ■     | ■    | ■    |      | ■    |      | ■  |        |        |    |
| 2"                       | ■         | ■     | ■     | ■     | ■     | ■     | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"                   | ■         |       | ■     |       | ■     |       | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"                       | ■         |       | ■     |       | ■     |       | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3 1/2"                   | ■         |       |       |       |       |       | ■    | ■     | ■     |       | ■    | ■     | ■    | ■    |      |      |      |    |        | ■      |    |
| 4"                       | ■         |       | ■     |       | ■     |       | ■    | ■     | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"                       | ■         |       |       |       | ■     |       | ■    | ■     | ■     |       | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  | ■      | ■      |    |
| 6"                       | ■         |       | ■     |       | ■     |       | ■    | ■     | ■     |       | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 7"                       |           |       |       |       |       |       | ■    |       | ■     |       | ■    |       |      | ■    |      |      |      |    |        |        |    |
| 8"                       | ■         |       | ■     |       |       |       | ■    | ■     | ■     |       | ■    | ■     | ■    | ■    | ■    |      |      |    |        |        |    |
| 10"                      |           |       |       |       |       |       | ■    |       | ■     |       | ■    | ■     | ■    | ■    | ■    |      |      |    |        |        |    |
| 12"                      |           |       |       |       |       |       | ■    |       | ■     |       | ■    | ■     | ■    | ■    |      |      |      |    |        |        |    |



**[GFS reg]: Surface Condition**  
**Thickness:** ground  
**Width:** ground or fine milled  
**Length:** milled or saw cut



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



### Contact us

+1 (331) 234-9900  
[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[abrams-steel.com/A2-1](http://abrams-steel.com/A2-1)



### Technical Properties

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding.  
 Working hardness: 58-62 HRC.



### Applications

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.



### AISI A2 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/A2](http://abrams-steel.com/A2)

via smartphone / tablet:











































































































































































































































## PREMIUM A2 - PRECISION GROUND FLAT STOCK, REGULAR

## TOOL STEEL

Length: 36"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 1/32"   | 3/64"   | 1/16"   | 5/64"   | 3/32"   | 7/64"   | 1/8"  | 5/32"   | 3/16"   | 7/32"   | 1/4"  | 5/16"   | 3/8"  | 1/2"  | 5/8"  | 3/4"  | 7/8"  | 1"  | 1-1/4"  | 1-1/2"  | 2"  |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3/16"   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |
| 1/4"  |   |   |   |   |   |   |      |   |      |   |      |   |   |   |   |   |   |   |   |   |   |
| 5/16"   |   |   |   |   |   |   |      |   |      |   |      |      |   |   |   |   |   |   |   |   |   |
| 3/8"  |   |   |   |   |   |   |      |   |      |   |      |      |     |   |   |   |   |   |   |   |   |
| 1/2"  |                        |  |    |  |    |  |    |    |    |  |    |    |    |    |   |   |   |   |   |   |   |
| 5/8"  |   |  |   |   |   |   |      |      |      |   |    |    |    |    |    |   |   |   |   |   |   |
| 3/4"  |                        |  |    |  |    |  |    |    |    |  |    |    |    |    |    |   |   |   |   |   |   |
| 7/8"  |   |   |   |   |   |   |      |   |      |   |      |      |   |    |   |   |   |    |   |   |   |
| 1"  |                        |  |    |  |    |  |    |    |    |  |    |    |    |    |    |    |    |    |   |    |   |
| 1-1/4"  |                        |  |    |  |    |  |    |    |    |  |    |    |    |    |    |    |    |    |    |    |   |
| 1-1/2"  |                        |  |    |  |    |  |   |    |    |  |   |    |    |    |    |    |    |    |    |    |    |
| 1-3/4"  |                        |  |   |   |   |   |      |      |      |   |    |    |    |    |   |    |   |    |   |   |   |
| 2"  |                        |  |    |  |    |  |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 2-1/2"  |                        |   |    |   |    |   |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |
| 3"  |                        |   |    |   |    |   |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 3 1/2"  |                        |   |   |   |   |   |      |      |      |   |    |    |    |    |   |   |   |   |   |   |    |
| 4"  |                        |   |    |   |    |   |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 5"  |                        |   |   |   |    |   |    |    |    |   |    |    |    |    |    |    |   |    |    |    |    |
| 6"  |                      |   |  |   |  |   |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
| 7"  |   |   |   |   |   |   |    |   |    |   |    |   |   |  |   |   |   |   |   |   |   |
| 8"  |                      |   |  |   |   |   |    |    |    |   |  |  |  |  |  |   |   |   |   |   |   |
| 10"   |   |   |   |   |   |   |    |   |    |   |    |  |  |  |  |   |   |   |   |   |   |
| 12"   |   |   |   |   |   |   |    |   |    |   |    |  |  |  |   |   |   |   |   |   |   |



## Technical Properties

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding. Working hardness: 58-62 HRC.



## Applications

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.



## [GFS reg]: Surface Condition

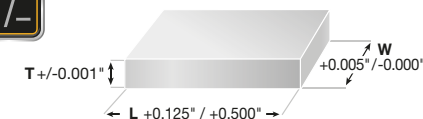
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



## Don't see your exact dimension(s)?

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# PREMIUM A2 - PRECISION GROUND FLAT STOCK, OVERSIZE

# TOOL STEEL

Length: 18"

## IMPERIAL DIMENSIONS in inch

| WIDTH  | THICKNESS                |       |       |      |       |      |      |       |      |      |      |    |        |        |    |
|--------|--------------------------|-------|-------|------|-------|------|------|-------|------|------|------|----|--------|--------|----|
|        | 1/8"                     | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 9/16" | 5/8" | 3/4" | 7/8" | 1" | 1-1/4" | 1-1/2" | 2" |
|        | Available Dimensions [■] |       |       |      |       |      |      |       |      |      |      |    |        |        |    |
| 3/16"  |                          |       | ■     |      |       |      |      |       |      |      |      |    |        |        |    |
| 1/4"   | ■                        |       | ■     | ■    |       |      |      |       |      |      |      |    |        |        |    |
| 5/16"  | ■                        |       | ■     | ■    | ■     |      |      |       |      |      |      |    |        |        |    |
| 3/8"   | ■                        |       | ■     | ■    | ■     | ■    |      |       |      |      |      |    |        |        |    |
| 1/2"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       |      |      |      |    |        |        |    |
| 5/8"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    |      |      |    |        |        |    |
| 3/4"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    |      |    |        |        |    |
| 7/8"   | ■                        |       | ■     | ■    | ■     |      | ■    |       |      |      | ■    |    |        |        |    |
| 1"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2" | ■                        | ■     | ■     | ■    | ■     |      | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 1-3/4" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       |      | ■    |      | ■  |        |        |    |
| 2"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■     | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■     | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3 1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■     | ■    | ■    | ■    | ■  |        | ■      |    |
| 4"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2" |                          |       |       |      |       | ■    | ■    |       |      | ■    |      | ■  |        |        |    |
| 5"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 6"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 7"     | ■                        |       | ■     | ■    |       | ■    | ■    |       |      |      |      |    |        |        |    |
| 8"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    |      | ■  |        |        |    |
| 10"    | ■                        |       | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    |      |    |        |        |    |
| 12"    | ■                        |       | ■     | ■    | ■     | ■    | ■    |       |      | ■    |      | ■  |        |        |    |



### [GFS O/S]: Surface Condition

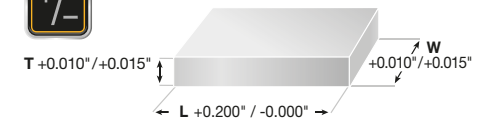
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



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### Technical Properties

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding. Working hardness: 58-62 HRC.



### Applications

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.



### AISI A2 – all at a glance!

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via smartphone / tablet:



## PREMIUM A2 - PRECISION GROUND FLAT STOCK, OVERSIZE

## TOOL STEEL

Length: 36"

## IMPERIAL DIMENSIONS in inch

| WIDTH  | THICKNESS                |       |       |      |       |      |      |       |      |      |      |    |        |        |    |
|--------|--------------------------|-------|-------|------|-------|------|------|-------|------|------|------|----|--------|--------|----|
|        | 1/8"                     | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 9/16" | 5/8" | 3/4" | 7/8" | 1" | 1-1/4" | 1-1/2" | 2" |
|        | Available Dimensions [■] |       |       |      |       |      |      |       |      |      |      |    |        |        |    |
| 3/16"  |                          |       | ■     |      |       |      |      |       |      |      |      |    |        |        |    |
| 1/4"   | ■                        |       | ■     | ■    |       |      |      |       |      |      |      |    |        |        |    |
| 5/16"  | ■                        |       | ■     | ■    | ■     |      |      |       |      |      |      |    |        |        |    |
| 3/8"   | ■                        |       | ■     | ■    | ■     | ■    |      |       |      |      |      |    |        |        |    |
| 1/2"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       |      |      |      |    |        |        |    |
| 5/8"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    |      |      |    |        |        |    |
| 3/4"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    |      |    |        |        |    |
| 7/8"   | ■                        |       | ■     | ■    | ■     |      | ■    |       |      |      | ■    |    |        |        |    |
| 1"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 1-3/4" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       |      | ■    |      | ■  |        |        |    |
| 2"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■     | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■     | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3 1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■     | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 4"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2" |                          |       |       |      |       | ■    | ■    |       |      | ■    |      | ■  |        |        |    |
| 5"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 6"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 7"     | ■                        |       | ■     | ■    |       | ■    | ■    |       |      |      |      |    |        |        |    |
| 8"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    |      | ■  |        |        |    |
| 10"    | ■                        |       | ■     | ■    | ■     | ■    | ■    |       | ■    | ■    |      |    |        |        |    |
| 12"    | ■                        |       | ■     | ■    | ■     | ■    | ■    |       |      | ■    |      | ■  |        |        |    |



## Technical Properties

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding. Working hardness: 58-62 HRC.



## Applications

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.



## [GFS O/S]: Surface Condition

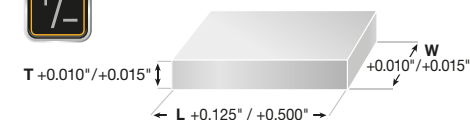
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



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## AISI A2 – all at a glance!

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via smartphone/tablet:



# PREMIUM A2 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|------|------|------|------|------|------|------|------|
|                           | 4.2       | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 | 25.3 | 30.3 | 32.3 |
| Available Dimensions [mm] |           |     |     |      |      |      |      |      |      |      |      |
| 10.3                      |           |     |     | ■    |      |      |      |      |      |      |      |
| 12.3                      |           |     |     |      | ■    |      |      |      |      |      |      |
| 16.3                      |           |     |     |      |      |      | ■    |      |      |      |      |
| 20.3                      |           |     |     |      |      |      |      | ■    |      |      |      |
| 25.3                      | ■         | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 30.3                      | ■         | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      | ■    |      |
| 32.3                      | ■         | ■   | ■   | ■    | ■    |      | ■    | ■    | ■    |      | ■    |
| 40.3                      | ■         | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 50.3                      | ■         | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |
| 60.3                      |           | ■   | ■   | ■    | ■    | ■    |      | ■    |      |      |      |
| 63.3                      |           | ■   | ■   | ■    | ■    |      | ■    |      |      |      |      |
| 80.3                      |           | ■   | ■   | ■    | ■    |      |      |      |      |      |      |
| 100.3                     |           | ■   | ■   | ■    |      |      |      |      |      |      |      |
| 125.3                     |           |     | ■   |      |      |      |      |      |      |      |      |



#### [GFSM O/S]: Surface Condition

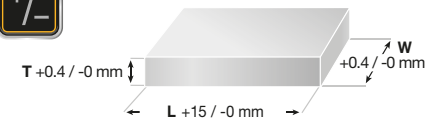
Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



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#### Technical Properties

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#### Applications

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via smartphone / tablet:





## PREMIUM A2 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

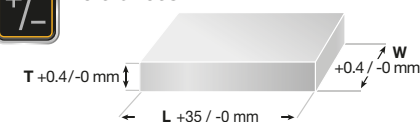
|       | THICKNESS                |     |     |      |      |      |      |      |
|-------|--------------------------|-----|-----|------|------|------|------|------|
|       | 4.2                      | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 |
| WIDTH | Available Dimensions [■] |     |     |      |      |      |      |      |
| 10.3  |                          |     |     | ■    |      |      |      |      |
| 12.3  |                          |     |     |      | ■    |      |      |      |
| 16.3  |                          |     |     |      |      |      | ■    |      |
| 20.3  |                          |     |     |      |      |      |      | ■    |
| 25.3  | ■                        | ■   | ■   | ■    | ■    | ■    | ■    | ■    |
| 30.3  | ■                        | ■   | ■   | ■    | ■    | ■    | ■    |      |
| 32.3  | ■                        | ■   | ■   | ■    | ■    |      | ■    |      |
| 40.3  | ■                        | ■   | ■   | ■    | ■    |      |      |      |
| 50.3  | ■                        | ■   | ■   | ■    |      |      |      |      |
| 60.3  |                          | ■   | ■   |      |      |      |      |      |
| 63.3  |                          | ■   | ■   |      |      |      |      |      |
| 80.3  |                          | ■   |     |      |      |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |

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**Technical Properties**

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**AISI A2 – all at a glance!**

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via smartphone/tablet:



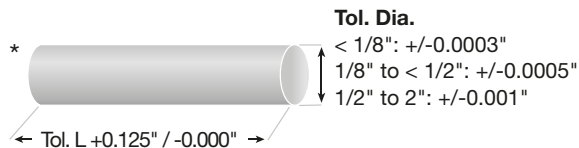
## PREMIUM A2 - DRILL ROD

## TOOL STEEL

Length: **36"**

### IMPERIAL DIAMETERS in inch

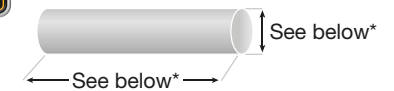
| Available Diameters [●] |   |        |   |        |   |        |   |
|-------------------------|---|--------|---|--------|---|--------|---|
| 1/16"                   | ● | »      |   | »      |   | »      |   |
| 5/64"                   | ● | 17/64" | ● | 29/64" | ● | 7/8"   | ● |
| 3/32"                   | ● | 9/32"  | ● | 15/32" | ● | 1"     | ● |
| 7/64"                   | ● | 19/64" | ● | 31/64" | ● | 1-1/8" | ● |
| 1/8"                    | ● | 5/16"  | ● | 1/2"   | ● | 1-1/4" | ● |
| 9/64"                   | ● | 21/64" | ● | 17/32" | ● | 1-3/8" | ● |
| 5/32"                   | ● | 11/32" | ● | 9/16"  | ● | 1-1/2" | ● |
| 11/64"                  | ● | 23/64" | ● | 19/32" | ● | 1-3/4" | ● |
| 3/16"                   | ● | 3/8"   | ● | 5/8"   | ● | 2"     | ● |
| 13/64"                  | ● | 25/64" | ● | 21/32" | ● |        |   |
| 7/32"                   | ● | 13/32" | ● | 11/16" | ● |        |   |
| 15/64"                  | ● | 27/64" | ● | 3/4"   | ● |        |   |
| 1/4"                    | ● | 7/16"  | ● | 13/16" | ● |        |   |
| »                       |   | »      |   | »      |   |        |   |



**[DR]: Surface Condition**  
 Turned, ground & polished (TGP)



#### Tolerances



#### Standard values

Delivery condition: maximum 241 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



#### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.



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#### Direct access to our online shop

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#### Technical Properties

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding.  
 Working hardness: 58-62 HRC.



#### Applications

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.



#### AISI A2 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/A2](http://abrams-steel.com/A2)

via smartphone / tablet:



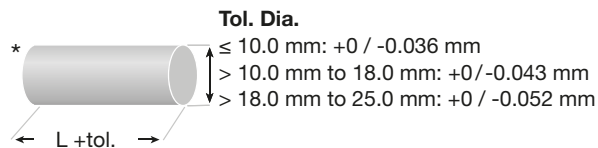
## PREMIUM A2 - DRILL ROD METRIC

## TOOL STEEL

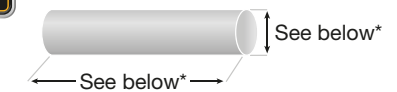
Length: 914 mm (36")

METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 3.0                     | ● |
| 4.0                     | ● |
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[DRM]: Surface Condition**

Turned, ground &amp; polished (TGP) - ISO h9

**Tolerances****Standard values**

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).

Custom orders on request

- according to your requirements.

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**Technical Properties**

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding. Working hardness: 58-62 HRC.

**Applications**

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.

**AISI A2 – all at a glance!**

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2016 / 2019



ABRAMS PREMIUM DECARB FREE ROUNDS - PEELED OR ROUGH-TURNED!

**ABRAMS!**  
PREMIUM STEEL



## PREMIUM A2 - DECARB FREE ROUNDS

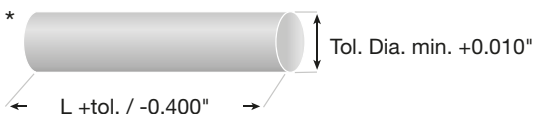
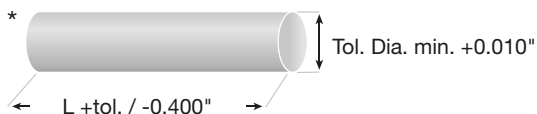
## TOOL STEEL

Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

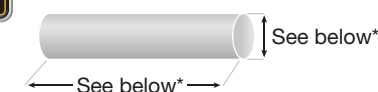
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 241 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.95 | 0.1 | 0.4 | 0    | 0    | 4.8 | 0.9 | 0.15 |
| 1.05 | 0.4 | 0.8 | 0.03 | 0.03 | 5.5 | 1.2 | 0.35 |



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**[36"]** - [abrams-steel.com/A2-23](http://abrams-steel.com/A2-23)



### Technical Properties

Air hardening cold work steel, good machinability, high wear resistance and improved toughness (reduced occurrence of hard carbides with about 5% chromium compared to 12% chromium in ledeburite AISI D2). Good dimensional stability during heat treatment and easily repairable through welding.  
Working hardness: 58-62 HRC.



### Applications

Blanking tools, stamping tools, dies, punches, trimming tools, cutting tools, thread rolling tools, thread rolling dies, shear knives, circular shear knives, cold pilger mandrels, cold stamping tools, plastic molds.



### AISI A2 – all at a glance!

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# PREMIUM A8 mod. / Chipper - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

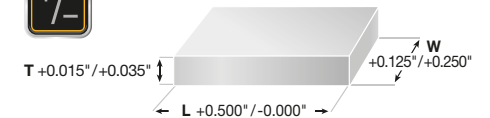
| WIDTH                     | THICKNESS |      |       |       |      |       |      |      |      |      |
|---------------------------|-----------|------|-------|-------|------|-------|------|------|------|------|
|                           | 3/32"     | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" |
| Available Dimensions [mm] |           |      |       |       |      |       |      |      |      |      |
| 1"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 1-1/4"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 1-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 2"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 2-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 3"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 3-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 4"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 4-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 5"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 5-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 6"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 6-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 7"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 7-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 8"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 8-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 9"                        | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 9-1/2"                    | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 10"                       | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 10-1/2"                   | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 11"                       | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 11-1/2"                   | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 12"                       | ■         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S     | Cr  | Mo  | V   |
|------|-----|------|------|-------|-----|-----|-----|
| 0.45 | 0.7 | 0.35 | 0    | 0     | 7.3 | 1.3 | 1.3 |
| 0.5  | 0.9 | 0.45 | 0.02 | 0.005 | 7.8 | 1.5 | 1.5 |



### Don't see your exact dimension(s)?

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### Technical Properties

Very robust cold work steel which can be used for a wide range of applications. Has good through-hardenedability and high toughness (reduced occurrence of hard carbides with about 8% chromium compared to 12% chromium in AISI D2). High cutting power, high wear resistance as well as excellent tempering resistance.  
 Working hardness: 50-60 HRC.



### Applications

Blanking tools, stamping tools, embossing tools, forming dies, press dies, die inserts, extrusion dies, reinforcements, cold extrusion tools, tube tools, cutting tools, industrial knives, wood chipping knives, veneer knives.



### AISI Chipper – all at a glance!

Datasheets, online shop,  
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via smartphone / tablet:



## PREMIUM A8 mod. / Chipper - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                 |      |       |       |      |       |      |      |      |      |
|---------|---------------------------|------|-------|-------|------|-------|------|------|------|------|
|         | 3/32"                     | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" |
|         | Available Dimensions [mm] |      |       |       |      |       |      |      |      |      |
| 1"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 1-1/4"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 1-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 2"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 2-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 3"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 3-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 4"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 4-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 5"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 5-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 6"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 6-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 7"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 7-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 8"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 8-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 9"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 9-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 10"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 10-1/2" | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 11"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 11-1/2" | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 12"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 13"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 14"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 15"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 16"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 17"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 18"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 19"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |
| 20"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |



## Technical Properties

Very robust cold work steel which can be used for a wide range of applications. Has good through-hardenedability and high toughness (reduced occurrence of hard carbides with about 8% chromium compared to 12% chromium in AISI D2). High cutting power, high wear resistance as well as excellent tempering resistance. Working hardness: 50-60 HRC.



## Applications

Blanking tools, stamping tools, embossing tools, forming dies, press dies, die inserts, extrusion dies, reinforcements, cold extrusion tools, tube tools, cutting tools, industrial knives, wood chipping knives, veneer knives.



## [\$mart]: Surface Condition

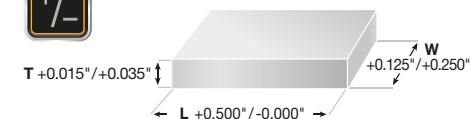
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S     | Cr  | Mo  | V   |
|------|-----|------|------|-------|-----|-----|-----|
| 0.45 | 0.7 | 0.35 | 0    | 0     | 7.3 | 1.3 | 1.3 |
| 0.5  | 0.9 | 0.45 | 0.02 | 0.005 | 7.8 | 1.5 | 1.5 |



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via smartphone/tablet:



A2

A8 mod. /  
Chipper



# PREMIUM A8 mod. / Chipper - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 300 mm

### METRIC DIMENSIONS in mm

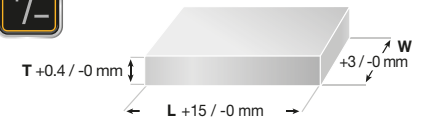
|       | THICKNESS                 |     |     |     |     |     |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|
|       | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S     | Cr  | Mo  | V   |
|------|-----|------|------|-------|-----|-----|-----|
| 0.45 | 0.7 | 0.35 | 0    | 0     | 7.3 | 1.3 | 1.3 |
| 0.5  | 0.9 | 0.45 | 0.02 | 0.005 | 7.8 | 1.5 | 1.5 |



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#### Technical Properties

Very robust cold work steel which can be used for a wide range of applications. Has good through-hardenability and high toughness (reduced occurrence of hard carbides with about 8% chromium compared to 12% chromium in AISI D2). High cutting power, high wear resistance as well as excellent tempering resistance.  
 Working hardness: 50-60 HRC.



#### Applications

Blanking tools, stamping tools, embossing tools, forming dies, press dies, die inserts, extrusion dies, reinforcements, cold extrusion tools, tube tools, cutting tools, industrial knives, wood chipping knives, veneer knives.



#### AISI Chipper – all at a glance!

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via smartphone / tablet:



## PREMIUM A8 mod. / Chipper - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH | THICKNESS                 |     |     |     |     |     |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|
|       | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 |
|       | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |



## [\$martM]: Surface Condition

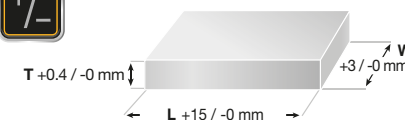
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S     | Cr  | Mo  | V   |
|------|-----|------|------|-------|-----|-----|-----|
| 0.45 | 0.7 | 0.35 | 0    | 0     | 7.3 | 1.3 | 1.3 |
| 0.5  | 0.9 | 0.45 | 0.02 | 0.005 | 7.8 | 1.5 | 1.5 |



## Don't see your exact dimension(s)?

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## Technical Properties

Very robust cold work steel which can be used for a wide range of applications. Has good through-hardenability and high toughness (reduced occurrence of hard carbides with about 8% chromium compared to 12% chromium in AISI D2). High cutting power, high wear resistance as well as excellent tempering resistance. Working hardness: 50-60 HRC.



## Applications

Blanking tools, stamping tools, embossing tools, forming dies, press dies, die inserts, extrusion dies, reinforcements, cold extrusion tools, tube tools, cutting tools, industrial knives, wood chipping knives, veneer knives.



## AISI Chipper – all at a glance!

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PERFECTION FROM TIP TO TOE!

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PREMIUM STEEL

A2

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Chipper



# PREMIUM D2 - PRECISION GROUND FLAT STOCK, REGULAR

# TOOL STEEL

Length: 18"

## IMPERIAL DIMENSIONS in inch

| WIDTH  | THICKNESS                |       |      |       |       |      |       |      |      |      |      |      |    |
|--------|--------------------------|-------|------|-------|-------|------|-------|------|------|------|------|------|----|
|        | 1/16"                    | 3/32" | 1/8" | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" |
|        | Available Dimensions [■] |       |      |       |       |      |       |      |      |      |      |      |    |
| 1/2"   | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    |      |      |      |    |
| 5/8"   |                          |       |      |       |       |      |       |      |      | ■    |      |      |    |
| 3/4"   | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      |    |
| 7/8"   |                          |       |      |       |       |      |       |      |      |      |      | ■    |    |
| 1"     | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 1-1/4" | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 1-1/2" | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 2"     | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 2-1/2" | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 3"     | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 4"     | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 5"     | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 6"     | ■                        | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |



### [GFS reg]: Surface Condition

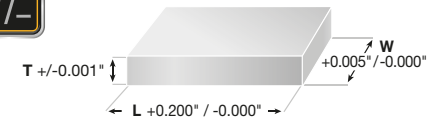
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



### Tolerances



### Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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### Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel.

Working hardness: 57-62 HRC.



### Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



### ! AISI D2 – all at a glance!

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via smartphone / tablet:



## PREMIUM D2 - PRECISION GROUND FLAT STOCK, REGULAR

## TOOL STEEL

Length: 36"

## IMPERIAL DIMENSIONS in inch

| WIDTH                    | THICKNESS |       |      |       |       |      |       |      |      |      |      |      |    |
|--------------------------|-----------|-------|------|-------|-------|------|-------|------|------|------|------|------|----|
|                          | 1/16"     | 3/32" | 1/8" | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" |
| Available Dimensions [■] |           |       |      |       |       |      |       |      |      |      |      |      |    |
| 1/2"                     | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    |      |      |      |    |
| 5/8"                     |           |       |      |       |       |      |       |      |      | ■    |      |      |    |
| 3/4"                     | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      |    |
| 7/8"                     |           |       |      |       |       |      |       |      |      |      |      | ■    |    |
| 1"                       | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 1-1/4"                   | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 1-1/2"                   | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 2"                       | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 2-1/2"                   | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 3"                       | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 4"                       | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 5"                       | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 6"                       | ■         | ■     | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |



## Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel. Working hardness: 57-62 HRC.



## Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



## [GFS reg]: Surface Condition

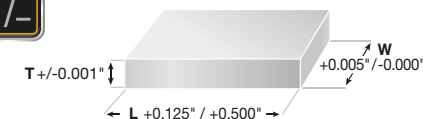
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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via smartphone/tablet:



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Chipper

D2

# PREMIUM D2 - PRECISION GROUND FLAT STOCK, OVERSIZE

# TOOL STEEL

Length: 18"

## IMPERIAL DIMENSIONS in inch

| WIDTH                    | THICKNESS |       |       |      |       |      |      |      |      |      |    |
|--------------------------|-----------|-------|-------|------|-------|------|------|------|------|------|----|
|                          | 1/8"      | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" |
| Available Dimensions [■] |           |       |       |      |       |      |      |      |      |      |    |
| 1/2"                     | ■         | ■     | ■     | ■    | ■     | ■    | ■    |      |      |      |    |
| 5/8"                     |           |       |       |      |       |      |      | ■    |      |      |    |
| 3/4"                     | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      |    |
| 7/8"                     |           |       |       |      |       |      |      |      |      | ■    |    |
| 1"                       | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 1-1/4"                   | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 1-1/2"                   | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 2"                       | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 2-1/2"                   | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 3"                       | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 4"                       | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 5"                       | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 6"                       | ■         | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |



### [GFS O/S]: Surface Condition

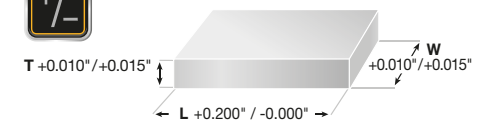
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



### Tolerances



### Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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### Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel.

Working hardness: 57-62 HRC.



### Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



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via smartphone / tablet:



## PREMIUM D2 - PRECISION GROUND FLAT STOCK, OVERSIZE

## TOOL STEEL

Length: 36"

## IMPERIAL DIMENSIONS in inch

| WIDTH  | THICKNESS                |       |       |      |       |      |      |      |      |      |    |
|--------|--------------------------|-------|-------|------|-------|------|------|------|------|------|----|
|        | 1/8"                     | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" |
|        | Available Dimensions [■] |       |       |      |       |      |      |      |      |      |    |
| 1/2"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    |      |      |      |    |
| 5/8"   |                          |       |       |      |       |      |      | ■    |      |      |    |
| 3/4"   | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      |    |
| 7/8"   |                          |       |       |      |       |      |      |      |      | ■    |    |
| 1"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 1-1/4" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 1-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 2"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 2-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 3"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 4"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■    | ■  |
| 5"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |
| 6"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    |      | ■  |



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## Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



## [GFS O/S]: Surface Condition

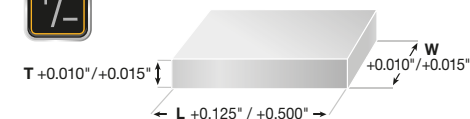
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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Chipper

D2



# PREMIUM D2 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |     |     |     |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|-----|------|------|------|------|------|------|
|                           | 2.2       | 3.2 | 4.2 | 5.2 | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 |
| Available Dimensions [mm] |           |     |     |     |     |     |      |      |      |      |      |      |
| 6.2                       |           |     |     |     | ■   |     |      |      |      |      |      |      |
| 8.2                       |           |     |     |     |     | ■   |      |      |      |      |      |      |
| 10.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    |      |      |      |      |      |
| 12.3                      |           |     |     |     |     |     |      | ■    |      |      |      |      |
| 15.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    |      |      |      |
| 20.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |
| 25.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |
| 30.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |
| 40.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |
| 50.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |
| 60.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |
| 80.3                      | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |
| 100.3                     | ■         | ■   | ■   | ■   | ■   | ■   | ■    |      |      |      |      |      |
| 125.3                     | ■         | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |      |
| 150.3                     | ■         | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |
| 200.3                     | ■         | ■   | ■   | ■   |     |     |      |      |      |      |      |      |
| 250.3                     | ■         | ■   | ■   |     |     |     |      |      |      |      |      |      |
| 300.3                     | ■         | ■   |     |     |     |     |      |      |      |      |      |      |



#### [GFSM O/S]: Surface Condition

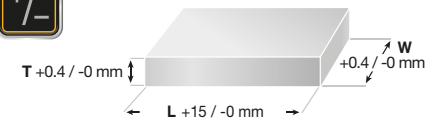
Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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#### Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel.

Working hardness: 57-62 HRC.



#### Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



#### AISI D2 – all at a glance!

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via smartphone / tablet:



## PREMIUM D2 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

| WIDTH | THICKNESS                |     |     |     |     |     |      |      |      |      |      |
|-------|--------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|
|       | 2.2                      | 3.2 | 4.2 | 5.2 | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 |
|       | Available Dimensions [■] |     |     |     |     |     |      |      |      |      |      |
| 6.2   |                          |     |     |     | ■   |     |      |      |      |      |      |
| 8.2   |                          |     |     |     |     | ■   |      |      |      |      |      |
| 10.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    |      |      |      |      |
| 12.3  |                          |     |     |     |     |     |      | ■    |      |      |      |
| 15.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    |      |      |
| 16.3  |                          |     |     |     |     |     |      |      |      | ■    |      |
| 20.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |
| 25.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |
| 30.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |
| 32.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |
| 40.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |
| 50.3  | ■                        | ■   | ■   | ■   | ■   | ■   | ■    |      |      |      |      |
| 60.3  | ■                        | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |
| 63.3  | ■                        | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |
| 70.3  | ■                        | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |
| 80.3  | ■                        | ■   | ■   | ■   | ■   |     |      |      |      |      |      |
| 90.3  | ■                        | ■   | ■   | ■   | ■   |     |      |      |      |      |      |
| 100.3 | ■                        | ■   | ■   | ■   |     |     |      |      |      |      |      |
| 125.3 | ■                        | ■   | ■   |     |     |     |      |      |      |      |      |
| 150.3 | ■                        | ■   |     |     |     |     |      |      |      |      |      |
| 160.3 | ■                        | ■   |     |     |     |     |      |      |      |      |      |
| 175.3 | ■                        | ■   |     |     |     |     |      |      |      |      |      |
| 180.3 | ■                        |     |     |     |     |     |      |      |      |      |      |
| 200.3 | ■                        |     |     |     |     |     |      |      |      |      |      |



## Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel. Working hardness: 57-62 HRC.



## Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



## [GFSM O/S]: Surface Condition

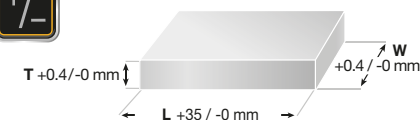
Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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via smartphone/tablet:



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A8 mod. /  
Chipper

D2

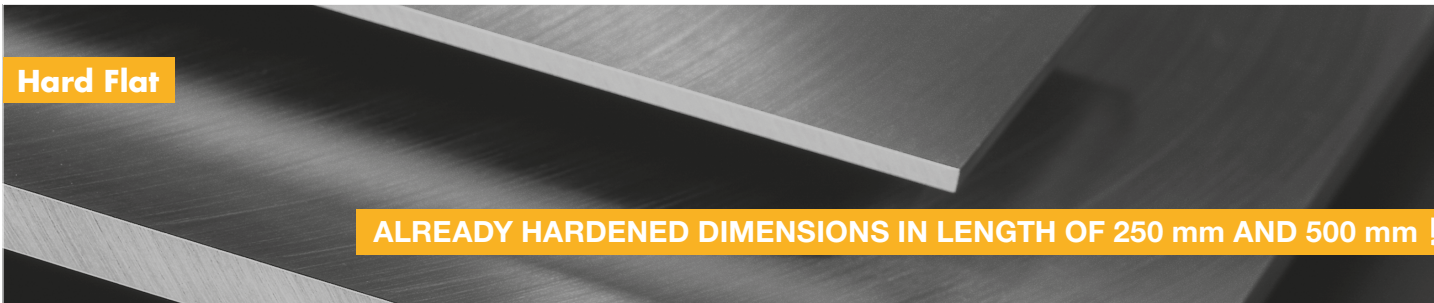
## PREMIUM D2 - HARD FLAT METRIC

## TOOL STEEL

Length: 250 mm

### METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |     |     |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 | 4.7 | 5.2 | 6.2 | 7.2 | 8.2 | 9.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |     |     |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   |



Length: 500 mm

### METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   |

Hardened dimensions are delivered with approx. 57 HRC, at least double tempered.



#### Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel. Working hardness: 57-62 HRC.



#### Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.

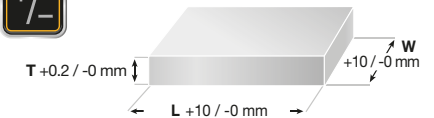


#### [HardM]: Surface Condition

Thickness: ground or fine milled  
Width: saw cut or sheared  
Length: saw cut or sheared



#### Tolerances



#### Standard values

Delivery condition: maximum 255 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



#### Don't see your exact dimension(s)?

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[250 mm] - [abrams-steel.com/D2-14](http://abrams-steel.com/D2-14)  
[500 mm] - [abrams-steel.com/D2-15](http://abrams-steel.com/D2-15)



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via smartphone / tablet:



## PREMIUM D2 - EDM BLOCK HARDENED

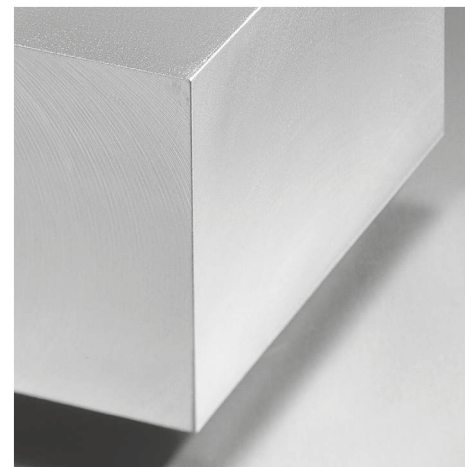
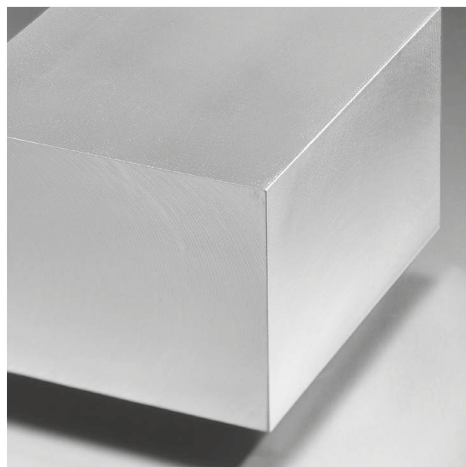
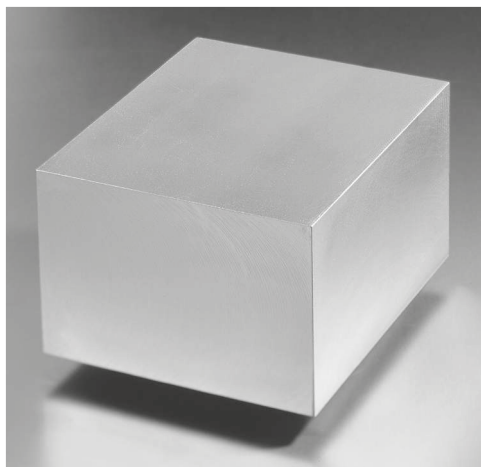
## TOOL STEEL

Square: 4-12"

## IMPERIAL DIMENSIONS in inch

| THICKNESS | THICKNESS                |    |    |    |    |
|-----------|--------------------------|----|----|----|----|
|           | 1/2"                     | 1" | 2" | 3" | 4" |
| SQUARE    | Available Dimensions [■] |    |    |    |    |
| 4"        | ■                        | ■  | ■  | ■  | ■  |
| 8"        | ■                        | ■  | ■  | ■  | ■  |
| 12"       | ■                        | ■  | ■  | ■  | ■  |

Hardened erosion blocks are tempered at least three times at approx. 61 HRC.



## Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel. Working hardness: 57-62 HRC.



## Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



## [EDM]: Surface Condition

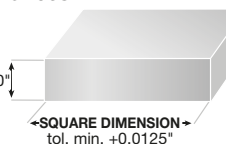
Thickness: ground or fine milled

Square dimension: ground or fine milled



## Tolerances

T +0.010"/-0.000"



## Standard values

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



## Don't see your exact dimension(s)?

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Chipper

D2



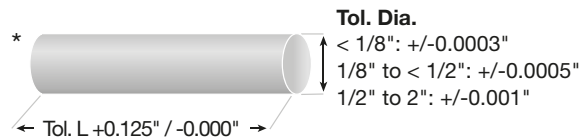
## PREMIUM D2 - DRILL ROD

## TOOL STEEL

Length: **36"**

### IMPERIAL DIAMETERS in inch

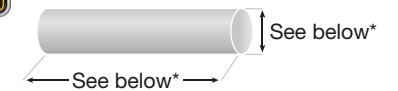
| Available Diameters [●] |   |
|-------------------------|---|
| 1/8"                    | ● |
| 3/16"                   | ● |
| 1/4"                    | ● |
| 5/16"                   | ● |
| 3/8"                    | ● |
| 7/16"                   | ● |
| 1/2"                    | ● |
| 5/8"                    | ● |
| 3/4"                    | ● |
| 7/8"                    | ● |
| 1"                      | ● |



**[DR]: Surface Condition**  
 Turned, ground & polished (TGP)



#### Tolerances



#### Standard values

Delivery condition: maximum 255 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



#### Don't see your exact dimension(s)?

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#### Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel.  
 Working hardness: 57-62 HRC.



#### Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



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via smartphone / tablet:



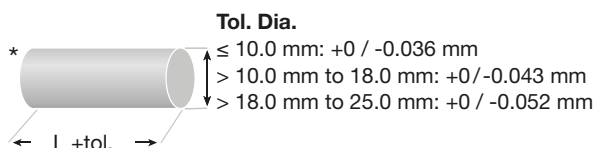
## PREMIUM D2 - DRILL MOD METRIC

## TOOL STEEL

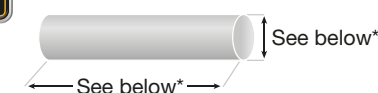
Length: 914 mm (36")

METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 3.0                     | ● |
| 4.0                     | ● |
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[DRM]: Surface Condition**

Turned, ground &amp; polished (TGP) - ISO h9

**Tolerances****Standard values**

Delivery condition: maximum 255 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |

**Don't see your exact dimension(s)?**

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**Technical Properties**

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel.

Working hardness: 57-62 HRC.

**Applications**

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.

**AISI D2 – all at a glance!**

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2013 / 2016



ABRAMS PREMIUM DECARB FREE ROUNDS - PEELED OR ROUGH-TURNED!

**ABRAMS!**  
PREMIUM STEEL



## PREMIUM D2 - DECARB FREE ROUNDS

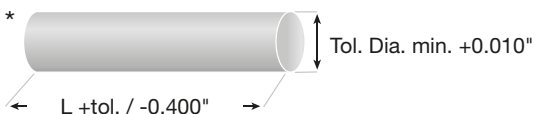
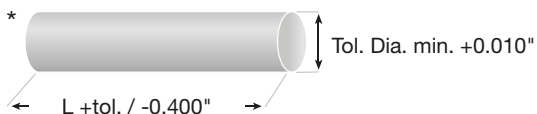
## TOOL STEEL

Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

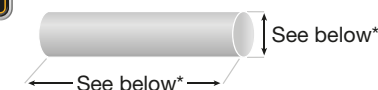
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 255 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  | V   |
|------|-----|-----|------|------|------|-----|-----|
| 1.45 | 0.1 | 0.2 | 0    | 0    | 11.0 | 0.7 | 0.7 |
| 1.6  | 0.6 | 0.6 | 0.03 | 0.03 | 13.0 | 1.0 | 1.0 |



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**[36"]** - [abrams-steel.com/D2-23](http://abrams-steel.com/D2-23)



### Technical Properties

Secondary-hardening, ledeburitic cold work steel, can be used for a wide range of applications. Low distortion, excellent wear resistance and good toughness. Temper-resistant, even at high hardening temperatures. In addition it can be nitrated without any reduction in hardness despite that it is a cold work steel.  
Working hardness: 57-62 HRC.



### Applications

Blanking tools, precision cutting tools, dies, punches, thread rolling dies, broaches, milling cutters, press tools, shear knives, deep drawing dies, cold rollings, measuring tools, woodworking tools, cold pilger mandrels, plastic molds.



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D2



# PREMIUM H10 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

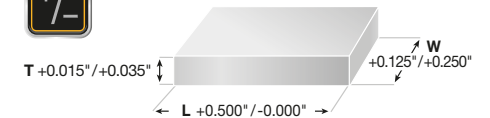
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V   |
|------|-----|------|------|------|-----|-----|-----|
| 0.28 | 0.1 | 0.15 | 0    | 0    | 2.7 | 2.5 | 0.4 |
| 0.35 | 0.4 | 0.45 | 0.03 | 0.02 | 3.2 | 3.0 | 0.7 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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### Technical Properties

Hot work steel with high toughness, heat resistance and tempering resistance. Air-hardening steel grade with good thermal conductivity. Can be water cooled.  
 Working hardness: 50-52 HRC.



### Applications

Extrusion presses, brass casting, press tools, die inserts, die casting molds, plastic molds, recipient bushes, pressure dies, press mandrels, tube extrusion mandrels, piecer plugs, press dies, block receivers, screw production, nut production, rivet production, bolts production, hot shear knives.



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via smartphone / tablet:



# PREMIUM H10 - \$mart FLAT STOCK

# TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



### Technical Properties

Hot work steel with high toughness, heat resistance and tempering resistance. Air-hardening steel grade with good thermal conductivity. Can be water cooled.  
Working hardness: 50-52 HRC.



### Applications

Extrusion presses, brass casting, press tools, die inserts, die casting molds, plastic molds, recipient bushes, pressure dies, press mandrels, tube extrusion mandrels, piecer plugs, press dies, block receivers, screw production, nut production, rivet production, bolts production, hot shear knives.



### [\$mart]: Surface Condition

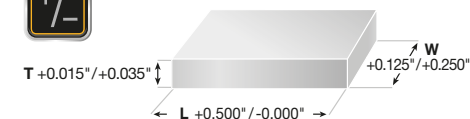
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V   |
|------|-----|------|------|------|-----|-----|-----|
| 0.28 | 0.1 | 0.15 | 0    | 0    | 2.7 | 2.5 | 0.4 |
| 0.35 | 0.4 | 0.45 | 0.03 | 0.02 | 3.2 | 3.0 | 0.7 |



### Don't see your exact dimension(s)?

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via smartphone / tablet:



# PREMIUM H10 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

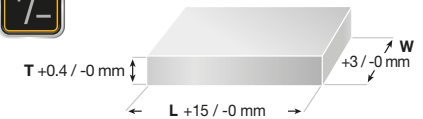
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V   |
|------|-----|------|------|------|-----|-----|-----|
| 0.28 | 0.1 | 0.15 | 0    | 0    | 2.7 | 2.5 | 0.4 |
| 0.35 | 0.4 | 0.45 | 0.03 | 0.02 | 3.2 | 3.0 | 0.7 |



### Don't see your exact dimension(s)?

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### Technical Properties

Hot work steel with high toughness, heat resistance and tempering resistance. Air-hardening steel grade with good thermal conductivity. Can be water cooled.  
 Working hardness: 50-52 HRC.



### Applications

Extrusion presses, brass casting, press tools, die inserts, die casting molds, plastic molds, recipient bushes, pressure dies, press mandrels, tube extrusion mandrels, piecer plugs, press dies, block receivers, screw production, nut production, rivet production, bolts production, hot shear knives.



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via smartphone / tablet:



## PREMIUM H10 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Hot work steel with high toughness, heat resistance and tempering resistance. Air-hardening steel grade with good thermal conductivity. Can be water cooled.  
Working hardness: 50-52 HRC.



## Applications

Extrusion presses, brass casting, press tools, die inserts, die casting molds, plastic molds, recipient bushes, pressure dies, press mandrels, tube extrusion mandrels, piecer plugs, press dies, block receivers, screw production, nut production, rivet production, bolts production, hot shear knives.



## [\$martM]: Surface Condition

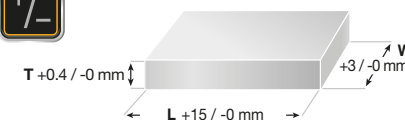
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V   |
|------|-----|------|------|------|-----|-----|-----|
| 0.28 | 0.1 | 0.15 | 0    | 0    | 2.7 | 2.5 | 0.4 |
| 0.35 | 0.4 | 0.45 | 0.03 | 0.02 | 3.2 | 3.0 | 0.7 |



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

# PREMIUM H13 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

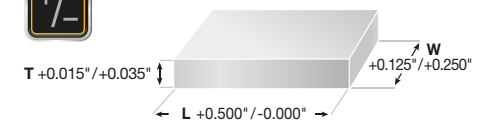
| WIDTH                     | THICKNESS |      |      |      |      |    |        |        |    |        |    |        |    |        |    |
|---------------------------|-----------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|
|                           | 5/16"     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" |
| Available Dimensions [mm] |           |      |      |      |      |    |        |        |    |        |    |        |    |        |    |
| 1"                        | ■         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |
| 1-1/4"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |
| 1-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |
| 2"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |
| 2-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |
| 3"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |
| 3-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |
| 4"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |
| 4-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |
| 5"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 5-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 6"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 6-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 7"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 7-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 8"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 8-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 9"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 9-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 10"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 10-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 11"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 11-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 12"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



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 - according to your requirements!



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### Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock.  
 Working hardness: 50-56 HRC.



### Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piecer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



### AISI H13 – all at a glance!

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via smartphone / tablet:





# PREMIUM H13 - \$mart FLAT STOCK

# TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



### Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock. Working hardness: 50-56 HRC.



### Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piecer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



### [\$mart]: Surface Condition

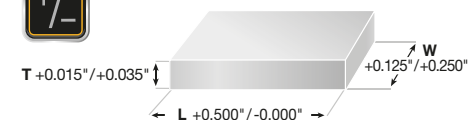
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



### Don't see your exact dimension(s)?

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A2

A8 mod. / Chipper

D2

H10

H13

# PREMIUM H13 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

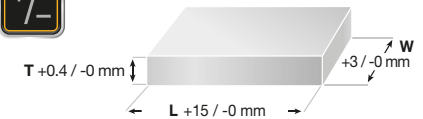
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



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### Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock.  
 Working hardness: 50-56 HRC.



### Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piercer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



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via smartphone / tablet:



## PREMIUM H13 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock. Working hardness: 50-56 HRC.



## Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piecer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



## [\$martM]: Surface Condition

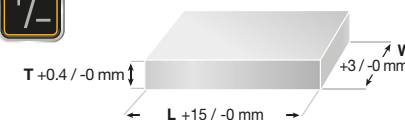
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13



ABRAMS PREMIUM DECARB FREE ROUNDS - PEELED OR ROUGH-TURNED!

**ABRAMS!**  
PREMIUM STEEL

## PREMIUM H13 - DECARB FREE ROUNDS

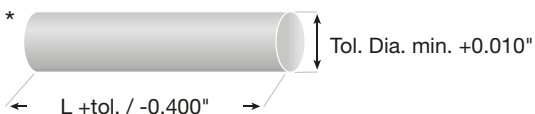
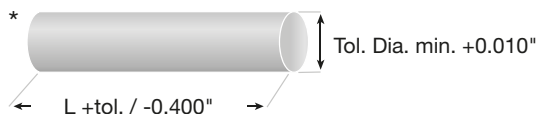
## TOOL STEEL

Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

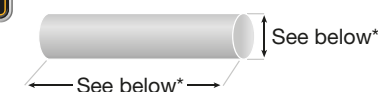
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 229 BHN  
Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



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### Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock.  
Working hardness: 50-56 HRC.



### Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piecer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

















































































































































































































































































































# PREMIUM H13 ESR - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

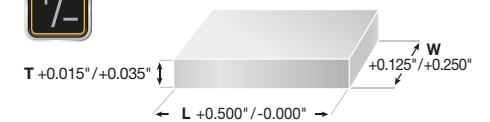
|  | THICKNESS  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 5/16"  | 3/8"  | 1/2"  | 5/8"  | 3/4"  | 1"  | 1-1/4"  | 1-1/2"  | 2"  | 2-1/2"  | 3"  | 3-1/2"  | 4"  | 4-1/2"  | 5"  | 5-1/2"  |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1"  |                         |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |
| 1-1/4"  |                         |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
| 1-1/2"  |                         |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |
| 2"  |                         |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |
| 2-1/2"  |                         |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |
| 3"  |                         |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |
| 3-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |
| 4"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |
| 4-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| 5"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 5-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8"  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8-1/2"  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9"  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9-1/2"  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10-1/2"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11-1/2"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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### Direct access to our online shop

[abrams-steel.com/H13ESR-10](http://abrams-steel.com/H13ESR-10)



### Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock. The ESR (Electro Slag Remelted) steel production guarantees pureness and homogeneity, as well as improved toughness.  
 Working hardness: 50-56 HRC.



### Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piecer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



### AISI H13 ESR – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:



## PREMIUM H13 ESR - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock. The ESR (Electro Slag Remelted) steel production guarantees pureness and homogeneity, as well as improved toughness.  
Working hardness: 50-56 HRC.



## Applications

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## [\$mart]: Surface Condition

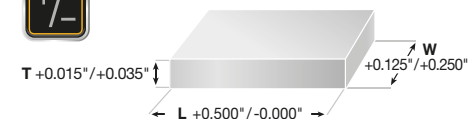
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
| 0.42 | 1.2 | 0.5  | 0.03 | 0.02 | 5.5 | 1.5 | 1.15 |



## Don't see your exact dimension(s)?

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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

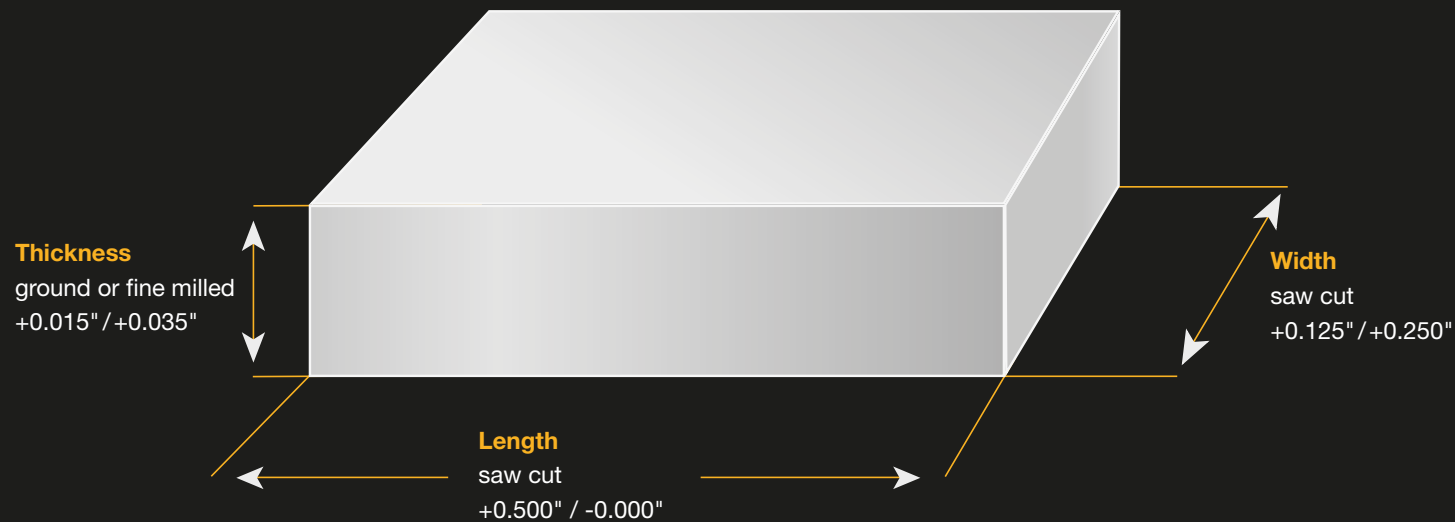
H10

H13

H13 ESR

## \$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY

Always close to your final dimensions.

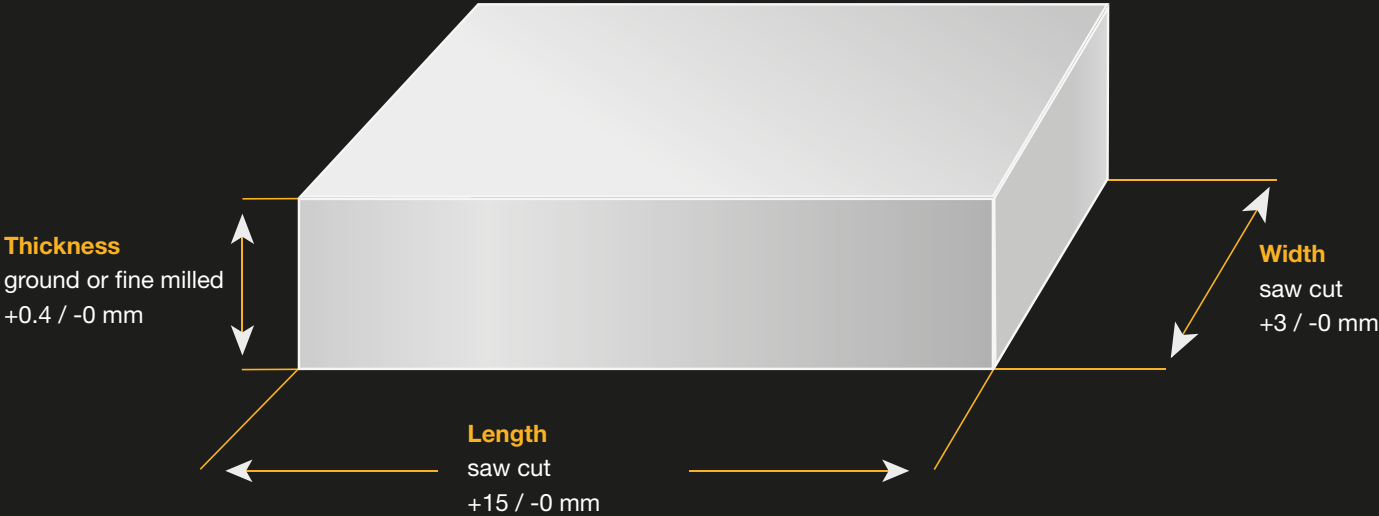


NEW TO THE CANADIAN MARKET !

METRIC

**\$mart Flat Stock:**  
**\$AVES YOU TIME - \$AVES YOU MONEY**

Always close to your final dimensions.



|                   |
|-------------------|
| A2                |
| A8 mod. / Chipper |
| D2                |
| H10               |
| H13               |
| H13 ESR           |

# PREMIUM H13 ESR - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

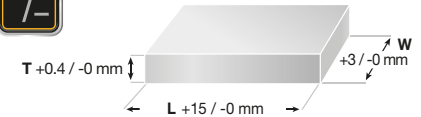
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
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### Technical Properties

Hot work steel with excellent heat resistance and high wear resistance. Good toughness and thermal conductivity. Can be water cooled and is resistant to thermal shock. The ESR (Electro Slag Remelted) steel production guarantees pureness and homogeneity, as well as improved toughness.  
 Working hardness: 50-56 HRC.



### Applications

Forging tools and dies, hot shear knives, hot extrusion tools, extrusion press tools, press tools, block receivers, die casting tools, light metal die casting, press mandrels, press dies, piercer plugs, screw production, rivet production, bolts production, ejectors, plastic molds.



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via smartphone / tablet:





## PREMIUM H13 ESR - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



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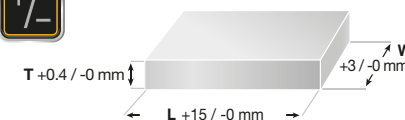
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

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| C    | Si  | Mn   | P    | S    | Cr  | Mo  | V    |
|------|-----|------|------|------|-----|-----|------|
| 0.35 | 0.8 | 0.25 | 0    | 0    | 4.8 | 1.2 | 0.85 |
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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

## PREMIUM L3 - \$mart FLAT STOCK

## TOOL STEEL

Length: 12"

### IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                 |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|---------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [mm] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



#### Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel). Working hardness: 60-64 HRC.



#### Applications

Drills, threading tools, centre lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).



#### [\$mart]: Surface Condition

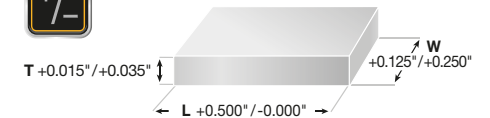
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr   | Mo  | Ni  |
|------|------|-----|-------|-------|------|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.35 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6  | 0.1 | 0.4 |



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via smartphone / tablet:



## PREMIUM L3 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel). Working hardness: 60-64 HRC.



## Applications

Drills, threading tools, centre lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).



## [\$mart]: Surface Condition

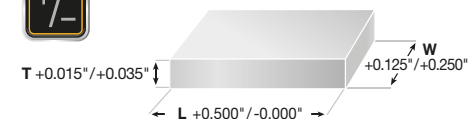
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr   | Mo  | Ni  |
|------|------|-----|-------|-------|------|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.35 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6  | 0.1 | 0.4 |



## Don't see your exact dimension(s)?

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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

## PREMIUM L3 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 300 mm

### METRIC DIMENSIONS in mm

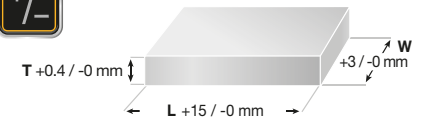
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 223 BHN  
 Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr   | Mo  | Ni  |
|------|------|-----|-------|-------|------|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.35 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6  | 0.1 | 0.4 |



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#### Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel).  
 Working hardness: 60-64 HRC.



#### Applications

Drills, threading tools, centre lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).



#### AISI L3 – all at a glance!

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via smartphone / tablet:



## PREMIUM L3 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

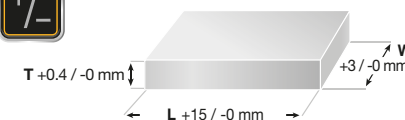
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr   | Mo  | Ni  |
|------|------|-----|-------|-------|------|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.35 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6  | 0.1 | 0.4 |



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## Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel). Working hardness: 60-64 HRC.



## Applications

Drills, threading tools, centre lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).

A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3



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PREMIUM STEEL

A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

**L3**

## PREMIUM L6 - \$mart FLAT STOCK

## TOOL STEEL

Length: 12"

### IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



#### Technical Properties

Hot work steel that can be used for a wide range of applications. With good through-hardening, tempering resistance, toughness, pressure and heat resistance. Delivery condition: annealed. Working hardness: approx. 40-54 HRC.



#### Applications

Forging dies, slides, punch heads, extruding stamps, press tools, hot shear knives, extrusion press tools, die holders, support tools, tool holders, pressure plates, armored die plates.



#### [\$mart]: Surface Condition

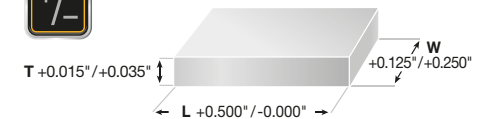
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  | V    |
|-----|-----|-----|------|------|-----|------|-----|------|
| 0.5 | 0.1 | 0.6 | 0    | 0    | 0.8 | 0.35 | 1.5 | 0.05 |
| 0.6 | 0.4 | 0.9 | 0.03 | 0.03 | 1.2 | 0.55 | 1.8 | 0.15 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



#### Contact us

+1 (331) 234-9900

sales@abrams-industries.com



#### Direct access to our online shop

abrams-steel.com/L6-10



#### AISI L6 – all at a glance!

Datasheets, online shop, ABRAMS STEEL GUIDE for alternatives: [abrams-steel.com/L6](http://abrams-steel.com/L6)

via smartphone / tablet:

















































































































































































































































































































## PREMIUM L6 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 5/16"   | 3/8"  | 1/2"  | 5/8"  | 3/4"  | 1"  | 1-1/4"  | 1-1/2"  | 2"  | 2-1/2"  | 3"  | 3-1/2"  | 4"  | 4-1/2"  | 5"  | 5-1/2"  |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1"  |                        |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |
| 1-1/4"  |                        |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
| 1-1/2"  |                        |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |
| 2"  |                        |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |
| 2-1/2"  |                        |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |
| 3"  |                        |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |
| 3-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |
| 4"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |
| 4-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| 5"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 5-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 9"  |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 9-1/2"  |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10"   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10-1/2"   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11"   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11-1/2"   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12"   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



## Technical Properties

Hot work steel that can be used for a wide range of applications. With good through-hardening, tempering resistance, toughness, pressure and heat resistance. Delivery condition: annealed. Working hardness: approx. 40-54 HRC.



## Applications

Forging dies, slides, punch heads, extruding stamps, press tools, hot shear knives, extrusion press tools, die holders, support tools, tool holders, pressure plates, armored die plates.



## [\$mart]: Surface Condition

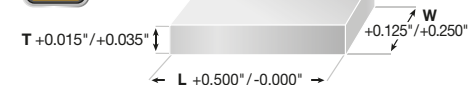
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  | V    |
|-----|-----|-----|------|------|-----|------|-----|------|
| 0.5 | 0.1 | 0.6 | 0    | 0    | 0.8 | 0.35 | 1.5 | 0.05 |
| 0.6 | 0.4 | 0.9 | 0.03 | 0.03 | 1.2 | 0.55 | 1.8 | 0.15 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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## AISI L6 – all at a glance!

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via smartphone / tablet:



## PREMIUM L6 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 300 mm

### METRIC DIMENSIONS in mm

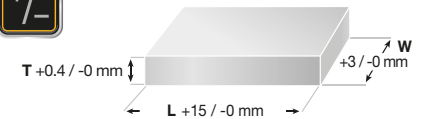
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  | V    |
|-----|-----|-----|------|------|-----|------|-----|------|
| 0.5 | 0.1 | 0.6 | 0    | 0    | 0.8 | 0.35 | 1.5 | 0.05 |
| 0.6 | 0.4 | 0.9 | 0.03 | 0.03 | 1.2 | 0.55 | 1.8 | 0.15 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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#### Technical Properties

Hot work steel that can be used for a wide range of applications. With good through-hardening, tempering resistance, toughness, pressure and heat resistance. Delivery condition: annealed. Working hardness: approx. 40-54 HRC.



#### Applications

Forging dies, slides, punch heads, extruding stamps, press tools, hot shear knives, extrusion press tools, die holders, support tools, tool holders, pressure plates, armored die plates.



#### AISI L6 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/L6](http://abrams-steel.com/L6)

via smartphone / tablet:



## PREMIUM L6 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Hot work steel that can be used for a wide range of applications. With good through-hardening, tempering resistance, toughness, pressure and heat resistance. Delivery condition: annealed. Working hardness: approx. 40-54 HRC.



## Applications

Forging dies, slides, punch heads, extruding stamps, press tools, hot shear knives, extrusion press tools, die holders, support tools, tool holders, pressure plates, armored die plates.



## [\$martM]: Surface Condition

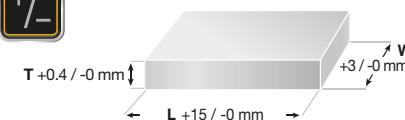
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  | V    |
|-----|-----|-----|------|------|-----|------|-----|------|
| 0.5 | 0.1 | 0.6 | 0    | 0    | 0.8 | 0.35 | 1.5 | 0.05 |
| 0.6 | 0.4 | 0.9 | 0.03 | 0.03 | 1.2 | 0.55 | 1.8 | 0.15 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6



WATCH THE MAKING OF THE  
3RD MOTIF FOR CALENDAR  
2019 / 2022



ABRAMS PREMIUM DECARB FREE ROUNDS - PEELED OR ROUGH-TURNED!

**ABRAMS!**  
PREMIUM STEEL

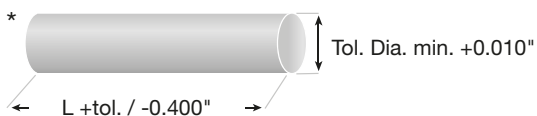
## PREMIUM L6 - DECARB FREE ROUNDS

## TOOL STEEL

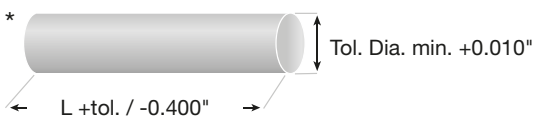
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-1/2" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



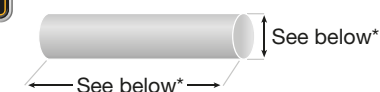
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-1/2" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 250 BHN  
Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  | V    |
|-----|-----|-----|------|------|-----|------|-----|------|
| 0.5 | 0.1 | 0.6 | 0    | 0    | 0.8 | 0.35 | 1.5 | 0.05 |
| 0.6 | 0.4 | 0.9 | 0.03 | 0.03 | 1.2 | 0.55 | 1.8 | 0.15 |



**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
Custom orders on request  
- according to your requirements.



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[36"] - abrams-steel.com/L6-23



### Technical Properties

Hot work steel that can be used for a wide range of applications. With good through-hardenability, tempering resistance, toughness, pressure and heat resistance. Delivery condition: annealed. Working hardness: approx. 40-54 HRC.



### Applications

Forging dies, slides, punch heads, extruding stamps, press tools, hot shear knives, extrusion press tools, die holders, support tools, tool holders, pressure plates, armored die plates.



### AISI L6 – all at a glance!

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ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/L6

via smartphone/tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

# PREMIUM O1 - PRECISION GROUND FLAT STOCK, REGULAR

## TOOL STEEL

Length: 18"

### IMPERIAL DIMENSIONS in inch

|       |   | THICKNESS                |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
|-------|---|--------------------------|------|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|-----|-----|-----|---|-------|-------|-------|---|-------|--|
|       |   | 1/32                     | 3/64 | 1/16 | 5/64 | 3/32 | 7/64 | 1/8 | 9/64 | 5/32 | 3/16 | 7/32 | 1/4 | 9/32 | 5/16 | 3/8 | 7/16 | 1/2 | 9/16 | 5/8 | 3/4 | 7/8 | 1 | 1-1/8 | 1-1/4 | 1-1/2 | 2 | 2-1/2 |  |
| WIDTH |   | Available Dimensions [■] |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 1/8   |   |                          |      |      |      |      | ■    |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 5/32  |   |                          |      |      |      |      |      |     |      | ■    |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 3/16  |   |                          |      |      |      |      |      |     |      |      | ■    |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 7/32  |   |                          |      |      |      |      |      |     |      |      |      | ■    |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 1/4   |   |                          | ■    |      |      | ■    |      | ■   |      | ■    | ■    |      | ■   |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 9/32  |   |                          |      |      |      |      |      |     |      |      |      |      |     | ■    |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 5/16  |   |                          |      |      |      |      |      | ■   |      |      | ■    |      | ■   |      | ■    |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 3/8   |   |                          | ■    |      |      | ■    |      | ■   |      | ■    | ■    |      | ■   |      | ■    | ■   |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 7/16  |   |                          |      |      |      |      |      |     |      |      |      |      |     |      |      |     | ■    |     |      |     |     |     |   |       |       |       |   |       |  |
| 1/2   | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     |     |     |   |       |       |       |   |       |  |
| 9/16  |   |                          |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     | ■    |     |     |     |   |       |       |       |   |       |  |
| 5/8   |   |                          | ■    |      |      |      |      | ■   |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      | ■   |     |     |   |       |       |       |   |       |  |
| 3/4   | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   |     |   |       |       |       |   |       |  |
| 7/8   |   |                          |      |      |      |      |      |     |      |      |      | ■    |     |      |      |     |      |     |      |     |     |     | ■ |       |       |       |   |       |  |
| 1     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ |       |       |       |   |       |  |
| 1 1/8 |   |                          |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       | ■     |       |   |       |  |
| 1-1/4 | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     |       | ■     |   |       |  |
| 1-1/2 | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ |       |  |
| 1-3/4 |   |                          | ■    |      |      | ■    |      | ■   |      | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     | ■   |     | ■ |       |       |       |   |       |  |
| 2     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ |       |  |
| 2-1/2 | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 3     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ |       |  |
| 3 1/2 |   |                          | ■    | ■    |      |      | ■    |     |      | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     | ■   | ■   | ■ | ■     |       |       |   |       |  |
| 4     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     | ■   | ■   | ■ | ■     | ■     | ■     | ■ |       |  |
| 4-1/2 |   |                          |      |      |      |      |      |     |      |      |      |      | ■   |      |      |     | ■    |     | ■    |     |     | ■   |   |       |       |       |   |       |  |
| 5     |   |                          | ■    |      |      | ■    |      | ■   |      | ■    | ■    |      |     |      | ■    |     |      | ■   |      | ■   |     | ■   |   | ■     |       | ■     |   |       |  |
| 5-1/2 |   |                          |      |      |      |      |      |     |      |      |      |      | ■   |      |      |     | ■    |     |      |     | ■   |     |   |       | ■     |       |   |       |  |
| 6     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    |     |      | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 7     |   |                          |      |      |      |      | ■    |     |      |      |      |      | ■   |      | ■    | ■   |      | ■   |      |     |     |     |   |       |       |       |   |       |  |
| 8     |   |                          | ■    |      | ■    |      |      |     |      | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     |     | ■ |       |       | ■     |   |       |  |
| 10    |   |                          | ■    |      | ■    |      | ■    |     |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     | ■   |   | ■     |       |       |   |       |  |
| 12    |   |                          |      |      |      |      | ■    |     |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     | ■   |   | ■     |       |       |   |       |  |
| 14    |   |                          |      |      |      |      | ■    |     |      |      | ■    |      | ■   |      |      |     |      | ■   |      |     |     |     |   |       |       |       |   |       |  |



#### [GFS reg]: Surface Condition

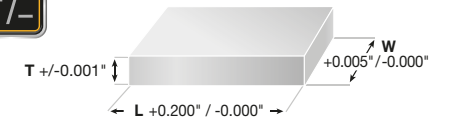
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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#### Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.



#### Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



#### AISI O1 – all at a glance!

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via smartphone / tablet:



## PREMIUM O1 - PRECISION GROUND FLAT STOCK, REGULAR

## TOOL STEEL

Length: 36"

## IMPERIAL DIMENSIONS in inch

|       |   | THICKNESS                |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
|-------|---|--------------------------|------|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|-----|-----|-----|---|-------|-------|-------|---|-------|--|
|       |   | 1/32                     | 3/64 | 1/16 | 5/64 | 3/32 | 7/64 | 1/8 | 9/64 | 5/32 | 3/16 | 7/32 | 1/4 | 9/32 | 5/16 | 3/8 | 7/16 | 1/2 | 9/16 | 5/8 | 3/4 | 7/8 | 1 | 1-1/8 | 1-1/4 | 1-1/2 | 2 | 2-1/2 |  |
| WIDTH |   | Available Dimensions [■] |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 1/8   |   |                          |      |      |      |      |      | ■   |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 5/32  |   |                          |      |      |      |      |      |     |      | ■    |      |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 3/16  |   |                          |      |      |      |      |      |     |      |      | ■    |      |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 7/32  |   |                          |      |      |      |      |      |     |      |      |      | ■    |     |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 1/4   |   |                          |      | ■    |      |      | ■    |     |      | ■    |      |      | ■   |      |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 9/32  |   |                          |      |      |      |      |      |     |      |      |      |      |     | ■    |      |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 5/16  |   |                          |      |      |      |      |      | ■   |      |      | ■    |      |     |      | ■    |     |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 3/8   |   |                          |      | ■    |      |      | ■    |     |      | ■    | ■    |      | ■   |      | ■    | ■   |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 7/16  |   |                          |      |      |      |      |      |     |      |      |      |      |     |      |      |     | ■    |     |      |     |     |     |   |       |       |       |   |       |  |
| 1/2   | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     |     |     |   |       |       |       |   |       |  |
| 9/16  |   |                          |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     | ■    |     |     |     |   |       |       |       |   |       |  |
| 5/8   |   |                          |      | ■    |      |      |      | ■   |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      | ■   |     |     |   |       |       |       |   |       |  |
| 3/4   | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   |     |   |       |       |       |   |       |  |
| 7/8   |   |                          |      |      |      |      |      |     |      |      |      | ■    |     |      |      |     |      |     |      |     |     |     | ■ |       |       |       |   |       |  |
| 1     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 1 1/8 |   |                          |      |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |     |     |     |   |       | ■     |       |   |       |  |
| 1-1/4 | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     |       | ■     |   |       |  |
| 1-1/2 | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 1-3/4 |   |                          |      | ■    |      | ■    |      | ■   |      | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      | ■   |     | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 2     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 2-1/2 | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   |      | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 3     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 3 1/2 |   |                          | ■    |      | ■    |      | ■    |     | ■    | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      | ■   |     | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 4     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 4-1/2 |   |                          |      |      |      |      |      |     |      |      |      |      | ■   |      |      |     | ■    |     | ■    |     |     | ■   |   |       |       |       |   |       |  |
| 5     |   |                          |      | ■    |      | ■    |      | ■   |      | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      | ■   | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 5-1/2 |   |                          |      |      |      |      |      |     |      |      |      |      | ■   |      |      | ■   |      |     |      |     |     |     |   |       |       |       |   |       |  |
| 6     | ■ | ■                        | ■    | ■    | ■    | ■    | ■    | ■   |      | ■    | ■    | ■    | ■   | ■    | ■    | ■   | ■    | ■   | ■    |     | ■   | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 7     |   |                          |      |      |      |      |      | ■   |      |      |      |      | ■   |      | ■    | ■   |      | ■   |      | ■   |     | ■   | ■ | ■     | ■     | ■     | ■ | ■     |  |
| 8     |   |                          |      | ■    |      | ■    |      | ■   |      | ■    | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     | ■   |   |       | ■     |       | ■ | ■     |  |
| 10    |   |                          |      | ■    |      | ■    |      | ■   |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     | ■   |   | ■     |       |       | ■ | ■     |  |
| 12    |   |                          |      |      |      |      |      | ■   |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     | ■   |   |       |       |       |   |       |  |
| 14    |   |                          |      |      |      |      |      | ■   |      |      | ■    |      | ■   |      | ■    | ■   |      | ■   |      |     |     |     | ■ |       |       |       |   |       |  |



## Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.



## Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



## [GFS reg]: Surface Condition

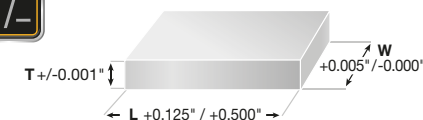
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



## Don't see your exact dimension(s)?

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via smartphone/tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

# PREMIUM O1 - PRECISION GROUND FLAT STOCK, OVERSIZE

## TOOL STEEL

Length: 18"

### IMPERIAL DIMENSIONS in inch

| WIDTH                    | THICKNESS |       |      |       |      |      |      |      |    |
|--------------------------|-----------|-------|------|-------|------|------|------|------|----|
|                          | 1/8"      | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" |
| Available Dimensions [■] |           |       |      |       |      |      |      |      |    |
| 3/16"                    |           | ■     |      |       |      |      |      |      |    |
| 1/4"                     |           |       | ■    |       |      |      |      |      |    |
| 5/16"                    |           |       |      | ■     |      |      |      |      |    |
| 3/8"                     |           |       |      |       | ■    |      |      |      |    |
| 1/2"                     | ■         | ■     | ■    | ■     | ■    | ■    |      |      |    |
| 5/8"                     |           |       |      |       |      | ■    | ■    |      |    |
| 3/4"                     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    |    |
| 1"                       | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/4"                   | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/2"                   | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-3/4"                   |           | ■     | ■    | ■     | ■    | ■    | ■    |      |    |
| 2"                       | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 2 1/2"                   | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3"                       | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3-1/2"                   |           |       | ■    | ■     | ■    |      |      |      |    |
| 4"                       | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 5"                       |           |       | ■    | ■     | ■    | ■    |      |      |    |
| 6"                       |           | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 8"                       |           |       | ■    |       | ■    |      |      |      |    |



#### Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.



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Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



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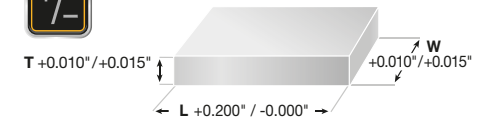
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



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via smartphone / tablet:



## PREMIUM O1 - PRECISION GROUND FLAT STOCK, OVERSIZE

## TOOL STEEL

Length: 36"

IMPERIAL DIMENSIONS in inch

| WIDTH  | THICKNESS                |       |      |       |      |      |      |      |    |
|--------|--------------------------|-------|------|-------|------|------|------|------|----|
|        | 1/8"                     | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" |
|        | Available Dimensions [■] |       |      |       |      |      |      |      |    |
| 3/16"  |                          | ■     |      |       |      |      |      |      |    |
| 1/4"   |                          |       | ■    |       |      |      |      |      |    |
| 5/16"  |                          |       |      | ■     |      |      |      |      |    |
| 3/8"   |                          |       |      |       | ■    |      |      |      |    |
| 1/2"   | ■                        | ■     | ■    | ■     | ■    | ■    |      |      |    |
| 5/8"   |                          |       |      |       |      | ■    | ■    |      |    |
| 3/4"   | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    |    |
| 1"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/4" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-3/4" |                          | ■     | ■    | ■     | ■    | ■    | ■    |      |    |
| 2"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 2 1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3-1/2" |                          |       | ■    | ■     | ■    |      |      |      |    |
| 4"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 5"     |                          |       | ■    | ■     | ■    | ■    |      |      |    |
| 6"     |                          | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 8"     |                          |       | ■    |       | ■    |      |      |      |    |



## Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.



## Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



## [GFS O/S]: Surface Condition

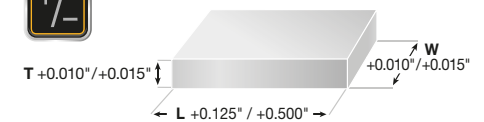
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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via smartphone/tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1



# PREMIUM O1 - PRECISION GROUND FLAT STOCK METRIC, REGULAR

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

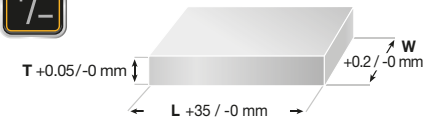
| WIDTH                     | THICKNESS |     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|---------------------------|-----------|-----|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
|                           | 1         | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 16 | 18 | 20 | 25 | 30 |
| Available Dimensions [mm] |           |     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 4                         |           |     |   |   | ■ |   |   |   |    |    |    |    |    |    |    |    |
| 5                         |           |     |   |   |   | ■ |   |   |    |    |    |    |    |    |    |    |
| 6                         |           |     |   |   |   |   | ■ |   |    |    |    |    |    |    |    |    |
| 8                         |           |     |   |   |   |   |   | ■ |    |    |    |    |    |    |    |    |
| 10                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  |    |    |    |    |    |    |    |
| 12                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  |    |    |    |    |    |    |
| 15                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 16                        |           |     |   |   |   |   |   |   |    |    |    | ■  |    |    |    |    |
| 18                        |           |     |   |   |   |   |   |   |    |    |    |    | ■  |    |    |    |
| 20                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  |    |    |
| 25                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  | ■  |    |
| 30                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    | ■  | ■  |
| 35                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  | ■  | ■  |
| 40                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  | ■  | ■  |
| 50                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  |    |    |
| 60                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  |    |    |
| 70                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 80                        | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 100                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 120                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 125                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 150                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 160                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 180                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 200                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 250                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |
| 300                       | ■         | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |    |    |



**[GFSM reg]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** ground or fine milled  
**Length:** milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



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Precision Ground Flat Stock Metric, regular acc. to DIN 59350



#### Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness.  
 Working hardness: 57-62 HRC.



#### Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calipers, guide rails, dies, punches, woodworking tools, machine knives.



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via smartphone / tablet:



## PREMIUM O1 - PRECISION GROUND FLAT STOCK METRIC, REGULAR

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |   |   |   |   |   |    |    |    |    |    |    |
|---------------------------|-----------|---|---|---|---|---|----|----|----|----|----|----|
|                           | 2         | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 16 | 18 | 20 |
| Available Dimensions [mm] |           |   |   |   |   |   |    |    |    |    |    |    |
| 4                         |           |   | ■ |   |   |   |    |    |    |    |    |    |
| 5                         |           |   |   | ■ |   |   |    |    |    |    |    |    |
| 6                         |           |   |   |   | ■ |   |    |    |    |    |    |    |
| 8                         |           |   |   |   |   | ■ |    |    |    |    |    |    |
| 10                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  |    |    |    |    |    |
| 12                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  |    |    |    |    |
| 15                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |
| 16                        |           |   |   |   |   |   |    |    |    | ■  |    |    |
| 18                        |           |   |   |   |   |   |    |    |    |    | ■  |    |
| 20                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  |
| 25                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  |
| 30                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    | ■  |
| 35                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |
| 40                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  | ■  |    |    |    |
| 50                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  | ■  |    |    |    |    |
| 60                        | ■         | ■ | ■ | ■ | ■ | ■ | ■  |    |    |    |    |    |
| 70                        | ■         | ■ | ■ | ■ | ■ | ■ |    |    |    |    |    |    |
| 80                        | ■         | ■ | ■ | ■ | ■ |   |    |    |    |    |    |    |
| 100                       | ■         | ■ | ■ | ■ | ■ |   |    |    |    |    |    |    |
| 120                       | ■         | ■ | ■ | ■ |   |   |    |    |    |    |    |    |
| 125                       | ■         | ■ | ■ |   |   |   |    |    |    |    |    |    |
| 150                       | ■         | ■ | ■ |   |   |   |    |    |    |    |    |    |
| 160                       | ■         | ■ |   |   |   |   |    |    |    |    |    |    |
| 180                       | ■         | ■ |   |   |   |   |    |    |    |    |    |    |
| 200                       | ■         | ■ |   |   |   |   |    |    |    |    |    |    |
| 250                       | ■         |   |   |   |   |   |    |    |    |    |    |    |
| 300                       | ■         |   |   |   |   |   |    |    |    |    |    |    |

Precision Ground Flat Stock Metric, regular acc. to DIN 59350



## Technical Properties

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## Applications

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## [GFSM reg]: Surface Condition

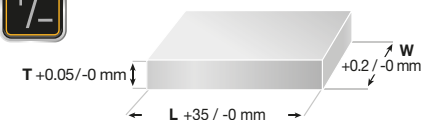
Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

# PREMIUM O1 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
|                           | 2.2       | 3.2 | 4.2 | 5.2 | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 18.3 | 20.3 | 25.3 | 30.3 | 32.3 |
| Available Dimensions [mm] |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 8.2                       |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 10.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 12.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 15.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 16.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 18.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 20.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 25.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 30.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 32.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 35.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 40.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 50.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 60.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 63.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 70.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 80.3                      |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 100.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 120.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 125.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 150.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 160.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 175.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 180.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 200.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 250.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
| 300.3                     |           |     |     |     |     |     |      |      |      |      |      |      |      |      |      |



#### [GFSM O/S]: Surface Condition

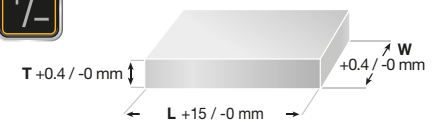
Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



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#### Technical Properties

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#### Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calipers, guide rails, dies, punches, woodworking tools, machine knives.



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via smartphone / tablet:



## PREMIUM O1 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

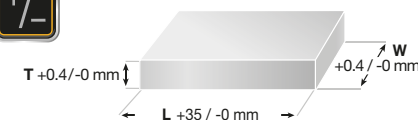
| WIDTH | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|
|       | 2.2                       | 3.2 | 4.2 | 5.2 | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 18.3 | 20.3 |
|       | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |
| 8.2   |                           |     |     |     |     | ■   |      |      |      |      |      |      |
| 10.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    |      |      |      |      |      |
| 12.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |
| 15.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    |      |      |      |
| 16.3  |                           |     |     |     |     |     |      |      |      | ■    |      |      |
| 18.3  |                           |     |     |     |     |     |      |      |      |      | ■    |      |
| 20.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      | ■    |
| 25.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      | ■    |
| 30.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |
| 32.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |
| 35.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |
| 40.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |
| 50.3  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    |      |      |      |      |      |
| 60.3  | ■                         | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |      |
| 63.3  | ■                         | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |      |
| 70.3  | ■                         | ■   | ■   | ■   | ■   | ■   |      |      |      |      |      |      |
| 80.3  | ■                         | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |
| 100.3 | ■                         | ■   | ■   | ■   |     |     |      |      |      |      |      |      |
| 120.3 | ■                         | ■   | ■   |     |     |     |      |      |      |      |      |      |
| 125.3 | ■                         | ■   | ■   |     |     |     |      |      |      |      |      |      |
| 150.3 | ■                         | ■   |     |     |     |     |      |      |      |      |      |      |
| 160.3 | ■                         | ■   |     |     |     |     |      |      |      |      |      |      |
| 175.3 | ■                         | ■   |     |     |     |     |      |      |      |      |      |      |
| 180.3 | ■                         |     |     |     |     |     |      |      |      |      |      |      |
| 200.3 | ■                         |     |     |     |     |     |      |      |      |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |

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A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

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via smartphone/tablet:





ABRAMS PREMIUM HARDENED STANDARDIZED BLANKS - GROUND OR FINE MILLED!

**ABRAMS!**  
PREMIUM STEEL

## PREMIUM O1 - HARD FLAT METRIC

## TOOL STEEL

Length: 250 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |     |     |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 | 4.7 | 5.2 | 6.2 | 7.2 | 8.2 | 9.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |     |     |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   |

Hard Flat

ALREADY HARDENED DIMENSIONS IN LENGTH OF 250 mm AND 500 mm !

Length: 500 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   |

Hardened dimensions are delivered with approx. 57 HRC, at least double tempered.



## Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.



## Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



## [HardM]: Surface Condition

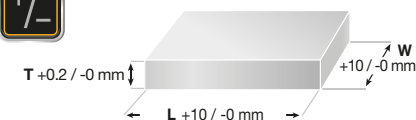
Thickness: ground or fine milled

Width: saw cut or sheared

Length: saw cut or sheared



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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## Direct access to our online shop

[250 mm] - [abrams-steel.com/O1-14](https://abrams-steel.com/O1-14)[500 mm] - [abrams-steel.com/O1-15](https://abrams-steel.com/O1-15)

## AISI O1 – all at a glance!

Datasheets, online shop,

ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/O1](https://abrams-steel.com/O1)

via smartphone / tablet:





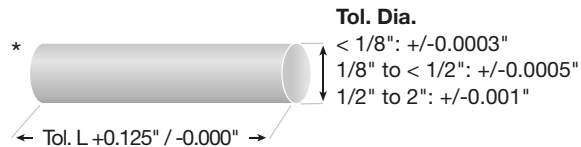
## PREMIUM O1 - DRILL ROD

## TOOL STEEL

Length: 36"

### IMPERIAL DIAMETERS in inch

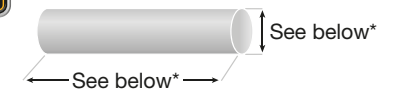
| Available Diameters [●] |   |        |   |        |   |         |   |        |   |
|-------------------------|---|--------|---|--------|---|---------|---|--------|---|
| 1/16"                   | ● | »      |   | »      |   | »       |   | »      |   |
| 5/64"                   | ● | 19/64" | ● | 33/64" | ● | 47/64"  | ● | 1-1/8" | ● |
| 3/32"                   | ● | 5/16"  | ● | 17/32" | ● | 3/4"    | ● | 1-1/4" | ● |
| 7/64"                   | ● | 21/64" | ● | 35/64" | ● | 49/64"  | ● | 1-3/8" | ● |
| 1/8"                    | ● | 11/32" | ● | 9/16"  | ● | 25/32"  | ● | 1-1/2" | ● |
| 9/64"                   | ● | 23/64" | ● | 37/64" | ● | 51/64"  | ● | 1-5/8" | ● |
| 5/32"                   | ● | 3/8"   | ● | 19/32" | ● | 13/16"  | ● | 1-3/4" | ● |
| 11/64"                  | ● | 25/64" | ● | 39/64" | ● | 7/8"    | ● | 1-7/8" | ● |
| 3/16"                   | ● | 13/32" | ● | 5/8"   | ● | 57/64"  | ● | 2"     | ● |
| 13/64"                  | ● | 27/64" | ● | 41/64" | ● | 29/32"  | ● |        |   |
| 7/32"                   | ● | 7/16"  | ● | 21/32" | ● | 15/16"  | ● |        |   |
| 15/64"                  | ● | 29/64" | ● | 43/64" | ● | 31/32"  | ● |        |   |
| 1/4"                    | ● | 15/32" | ● | 11/16" | ● | 63/64"  | ● |        |   |
| 17/64"                  | ● | 31/64" | ● | 45/64" | ● | 1"      | ● |        |   |
| 9/32"                   | ● | 1/2"   | ● | 23/32" | ● | 1-1/16" | ● |        |   |
| »                       |   | »      |   | »      |   | »       |   |        |   |



**[DR]: Surface Condition**  
 Turned, ground & polished (TGP)



#### Tolerances



#### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



#### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.



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#### Technical Properties

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.



#### Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



#### AISI O1 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/O1](http://abrams-steel.com/O1)

via smartphone / tablet:



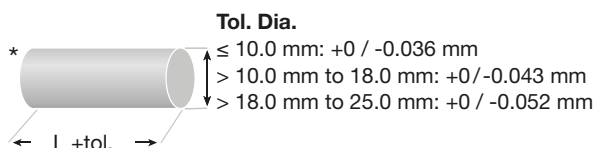
## PREMIUM O1 - DRILL ROD METRIC

## TOOL STEEL

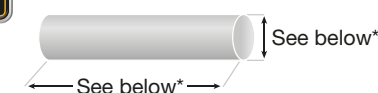
Length: 914 mm (36")

## METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 3.0                     | ● |
| 4.0                     | ● |
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[DRM]: Surface Condition**

Turned, ground &amp; polished (TGP) - ISO h9

**Tolerances****Standard values**

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).

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**Technical Properties**

Alloyed oil hardener with focus on cold work; can be used for a wide range of applications: full hardenability, high degree of dimensional stability, good cutting power and good toughness. Working hardness: 57-62 HRC.

**Applications**

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.

**AISI O1 – all at a glance!**

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
 abrams-steel.com/O1

via smartphone/tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1



**ABRAMS PREMIUM DEARB FREE ROUNDS - PEELED OR ROUGH-TURNED!**

**ABRAMS!**  
PREMIUM STEEL

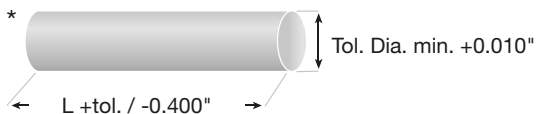
## PREMIUM O1 - DECARB FREE ROUNDS

## TOOL STEEL

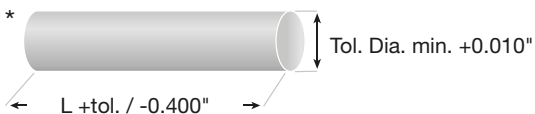
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-1/2" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



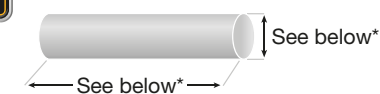
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-1/2" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



[DCF]: Surface Condition  
Peeled or rough-turned



Tolerances



Standard values

Delivery condition: maximum 229 BHN  
Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | V    | W   |
|------|------|-----|-------|-------|-----|------|-----|
| 0.9  | 0.15 | 1.0 | 0     | 0     | 0.5 | 0.05 | 0.5 |
| 1.05 | 0.35 | 1.2 | 0.035 | 0.035 | 0.7 | 0.15 | 0.7 |



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[18"] - abrams-steel.com/O1-22  
[36"] - abrams-steel.com/O1-23



## Technical Properties

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## Applications

Blanking and stamping tools (up to 0.2362" thickness), shear knives, threading tools, thread dies, reamers, chasers, measuring tools, plastic molds, rubber molds, calibers, guide rails, dies, punches, woodworking tools, machine knives.



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abrams-steel.com/O1

via smartphone/tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1
































































































































































































































































































# PREMIUM P20 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

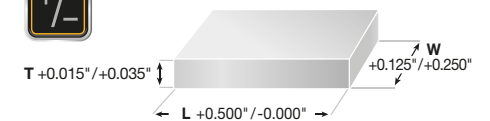
|  | THICKNESS  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 5/16"  | 3/8"  | 1/2"  | 5/8"  | 3/4"  | 1"  | 1-1/4"  | 1-1/2"  | 2"  | 2-1/2"  | 3"  | 3-1/2"  | 4"  | 4-1/2"  | 5"  | 5-1/2"  |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1"  |                         |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |
| 1-1/4"  |                         |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
| 1-1/2"  |                         |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |
| 2"  |                         |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |
| 2-1/2"  |                         |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |
| 3"  |                         |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |
| 3-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |
| 4"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |
| 4-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| 5"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 5-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8-1/2"  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 9"  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9-1/2"  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10-1/2"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11-1/2"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12"   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 225 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[abrams-steel.com/P20-10](http://abrams-steel.com/P20-10)



### Technical Properties

Cold work steel and plastic mold steel (here annealed version).  
 Good polishability and etchability. High through-hardenability and uniform component strength.  
 Working hardness: approx. 32-50 HRC.



### Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



### AISI P20 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/P20](http://abrams-steel.com/P20)

via smartphone / tablet:



## PREMIUM P20 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Cold work steel and plastic mold steel (here annealed version). Good polishability and etchability. High through-hardness and uniform component strength. Working hardness: approx. 32-50 HRC.



## Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



## [\$mart]: Surface Condition

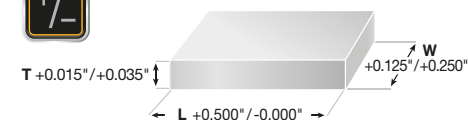
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 225 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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## AISI P20 – all at a glance!

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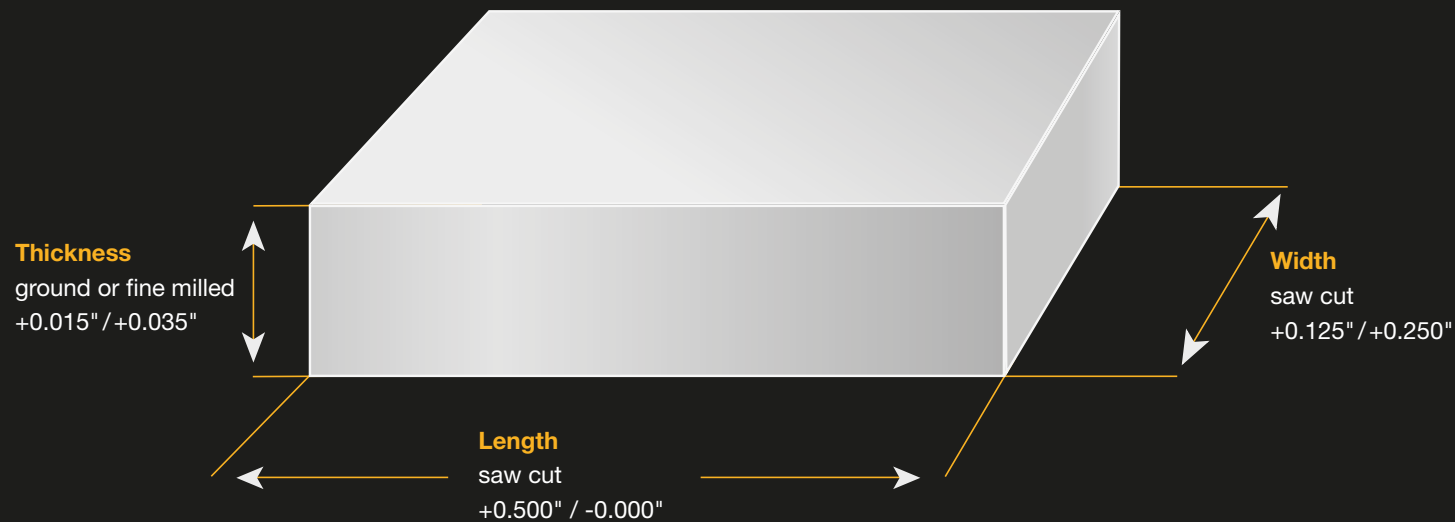
via smartphone / tablet:





## \$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY

Always close to your final dimensions.

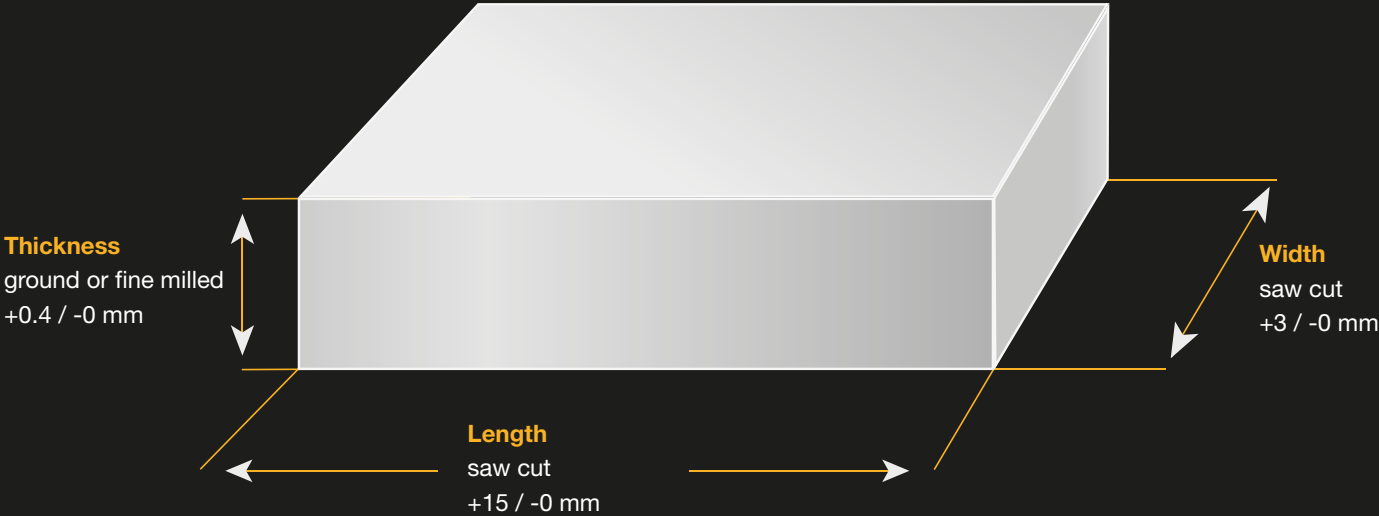


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METRIC

**\$mart Flat Stock:**  
**\$AVES YOU TIME - \$AVES YOU MONEY**

Always close to your final dimensions.



|                   |
|-------------------|
| A2                |
| A8 mod. / Chipper |
| D2                |
| H10               |
| H13               |
| H13 ESR           |
| L3                |
| L6                |
| O1                |
| P20               |

# PREMIUM P20 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

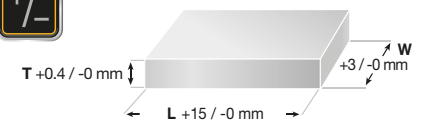
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 225 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



### Don't see your exact dimension(s)?

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### Technical Properties

Cold work steel and plastic mold steel (here annealed version).  
 Good polishability and etchability. High through-hardness and uniform component strength.  
 Working hardness: approx. 32-50 HRC.



### Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



### AISI P20 – all at a glance!

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 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:



## PREMIUM P20 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Cold work steel and plastic mold steel (here annealed version). Good polishability and etchability. High through-hardening and uniform component strength. Working hardness: approx. 32-50 HRC.



## Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



## [\$martM]: Surface Condition

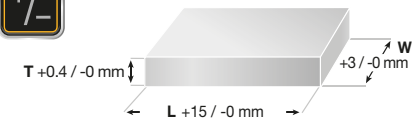
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 225 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

# PREMIUM P20 PH - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |      |      |      |      |      |      |      |      |
|-------|---------------------------|-----|------|------|------|------|------|------|------|------|
|       | 6.2                       | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 | 25.3 | 30.3 | 32.3 |
| WIDTH | Available Dimensions [mm] |     |      |      |      |      |      |      |      |      |
| 12.3  |                           |     |      | ■    |      |      |      |      |      |      |
| 16.3  |                           |     |      |      |      | ■    |      |      |      |      |
| 20.3  |                           | ■   | ■    | ■    | ■    |      | ■    |      |      |      |
| 25.3  |                           | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 30.3  |                           | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 32.3  | ■                         | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      | ■    |
| 40.3  | ■                         | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 50.3  | ■                         | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |
| 60.3  | ■                         | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |
| 63.3  | ■                         | ■   | ■    | ■    | ■    | ■    |      |      |      |      |
| 70.3  | ■                         | ■   | ■    | ■    | ■    | ■    |      |      |      |      |
| 80.3  | ■                         | ■   | ■    | ■    |      |      |      |      |      |      |
| 100.3 | ■                         | ■   | ■    |      |      |      |      |      |      |      |
| 125.3 |                           | ■   |      |      |      |      |      |      |      |      |



#### [GFSM O/S]: Surface Condition

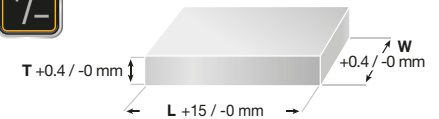
Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



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#### Technical Properties

Pre-hardened cold work steel and plastic mold steel. Good polishability and etchability. High through-hardening and uniform component strength.

Working hardness: approx. 32 HRC (delivery condition) up to 50 HRC.



#### Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



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via smartphone / tablet:




## PREMIUM P20 PH - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

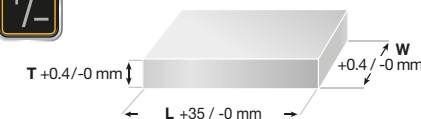
|  | THICKNESS                 |     |      |      |      |      |      |
|---|---------------------------|-----|------|------|------|------|------|
|   | 6.2                       | 8.2 | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 |
| WIDTH   | Available Dimensions [mm] |     |      |      |      |      |      |
|   | 12.3                      |     |      | ■    |      |      |      |
|   | 16.3                      |     |      |      |      | ■    |      |
|   | 20.3                      |     | ■    | ■    | ■    |      | ■    |
|   | 25.3                      |     | ■    | ■    | ■    | ■    | ■    |
|   | 30.3                      |     | ■    | ■    | ■    | ■    |      |
|   | 32.3                      | ■   | ■    | ■    | ■    | ■    |      |
|   | 40.3                      | ■   | ■    | ■    | ■    |      |      |
|   | 50.3                      | ■   | ■    | ■    |      |      |      |
|   | 60.3                      | ■   | ■    |      |      |      |      |
|   | 63.3                      | ■   | ■    |      |      |      |      |
|   | 70.3                      | ■   | ■    |      |      |      |      |
|   | 80.3                      | ■   |      |      |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |

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**Technical Properties**

Pre-hardened cold work steel and plastic mold steel. Good polishability and etchability. High through-hardenedability and uniform component strength.

Working hardness: approx. 32 HRC (delivery condition) up to 50 HRC.

**Applications**

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.

A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

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# PREMIUM P20 PH - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

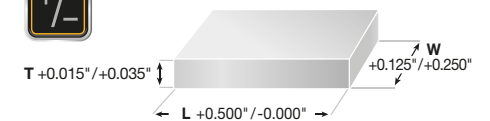
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 325 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



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### Technical Properties

Pre-hardened cold work steel and plastic mold steel. Good polishability and etchability. High through-hardening and uniform component strength.  
 Working hardness: approx. 32 HRC (delivery condition) up to 50 HRC.



### Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



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via smartphone / tablet:



## PREMIUM P20 PH - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Pre-hardened cold work steel and plastic mold steel. Good polishability and etchability. High through-hardenedability and uniform component strength.  
Working hardness: approx. 32 HRC (delivery condition) up to 50 HRC.



## Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



## [\$mart]: Surface Condition

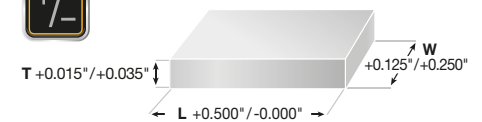
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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- according to your requirements!



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A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

# PREMIUM P20 PH - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

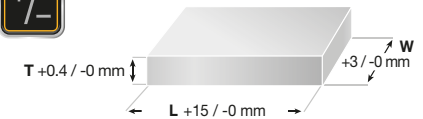
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 325 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



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### Technical Properties

Pre-hardened cold work steel and plastic mold steel. Good polishability and etchability. High through-hardening and uniform component strength.  
 Working hardness: approx. 32 HRC (delivery condition) up to 50 HRC.



### Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



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via smartphone / tablet:



## PREMIUM P20 PH - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Pre-hardened cold work steel and plastic mold steel. Good polishability and etchability. High through-hardenability and uniform component strength.  
Working hardness: approx. 32 HRC (delivery condition) up to 50 HRC.



## Applications

Mechanical engineering, jigs, base plates, assembly parts, molding frames, plastic molds, plastic processing, injection molds, die casting molds, hydroforming tools, recipient sleeves, intermediate sleeves, folding bars, tool holders, extrusion presses, tube presses, die holders, die insert.



## [\$martM]: Surface Condition

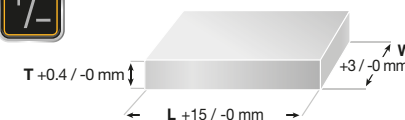
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.35 | 0.2 | 1.3 | 0     | 0     | 1.8 | 0.15 |
| 0.45 | 0.4 | 1.6 | 0.035 | 0.035 | 2.1 | 0.25 |



## Don't see your exact dimension(s)?

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A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

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L6

O1

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# PREMIUM P20+Ni - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

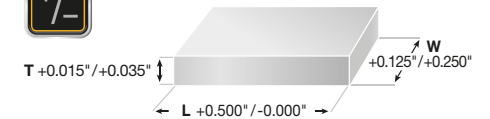
| WIDTH                     | THICKNESS |      |      |      |      |    |        |        |    |        |    |        |    |        |    |
|---------------------------|-----------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|
|                           | 5/16"     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" |
| Available Dimensions [mm] |           |      |      |      |      |    |        |        |    |        |    |        |    |        |    |
| 1"                        | ■         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |
| 1-1/4"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |
| 1-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |
| 2"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |
| 2-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |
| 3"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |
| 3-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |
| 4"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |
| 4-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |
| 5"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 5-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 6"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 6-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 7"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 7-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 8"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 8-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 9"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 9-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 10"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 10-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 11"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 11-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |
| 12"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 325 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|------|-----|-----|------|------|-----|------|-----|
| 0.35 | 0.2 | 1.3 | 0    | 0    | 1.8 | 0.15 | 0.9 |
| 0.45 | 0.4 | 1.6 | 0.03 | 0.03 | 2.1 | 0.25 | 1.2 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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### Technical Properties

Steel grade with focus on plastic mold making; nickel additives for a better through-hardenedability (constant strength), also for thicknesses >15.8" (> 400 mm).

Low sulphur steel and therefore polishable and easily grained.

Working hardness: approx. 32 HRC (delivery condition: quenched and tempered) up to 50 HRC.



### Applications

Plastic molds, molding frames, die casting molds, dies, forging tools, metal extrusion tools, tube presses, hydroforming tools.



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via smartphone / tablet:



## PREMIUM P20+Ni - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Steel grade with focus on plastic mold making; nickel additives for a better through-hardening (constant strength), also for thicknesses >15.8" (> 400 mm).

Low sulphur steel and therefore polishable and easily grained.

Working hardness: approx. 32 HRC (delivery condition: quenched and tempered) up to 50 HRC.



## Applications

Plastic molds, molding frames, die casting molds, dies, forging tools, metal extrusion tools, tube presses, hydroforming tools.



## [\$mart]: Surface Condition

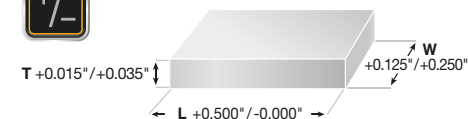
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|------|-----|-----|------|------|-----|------|-----|
| 0.35 | 0.2 | 1.3 | 0    | 0    | 1.8 | 0.15 | 0.9 |
| 0.45 | 0.4 | 1.6 | 0.03 | 0.03 | 2.1 | 0.25 | 1.2 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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## Direct access to our online shop

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## AISI P20+Ni – all at a glance!

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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

P20+Ni

# PREMIUM P20+Ni - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

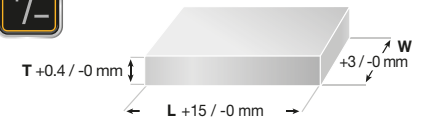
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 325 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|------|-----|-----|------|------|-----|------|-----|
| 0.35 | 0.2 | 1.3 | 0    | 0    | 1.8 | 0.15 | 0.9 |
| 0.45 | 0.4 | 1.6 | 0.03 | 0.03 | 2.1 | 0.25 | 1.2 |



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### Direct access to our online shop

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### Technical Properties

Steel grade with focus on plastic mold making; nickel additives for a better through-hardenedability (constant strength), also for thicknesses >15.8" (> 400 mm).

Low sulphur steel and therefore polishable and easily grained.

Working hardness: approx. 32 HRC (delivery condition: quenched and tempered) up to 50 HRC.



### Applications

Plastic molds, molding frames, die casting molds, dies, forging tools, metal extrusion tools, tube presses, hydroforming tools.



### AISI P20+Ni – all at a glance!

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[abrams-steel.com/P20Ni](http://abrams-steel.com/P20Ni)

via smartphone / tablet:



## PREMIUM P20+Ni - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

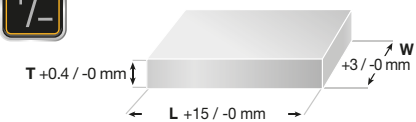
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|------|-----|-----|------|------|-----|------|-----|
| 0.35 | 0.2 | 1.3 | 0    | 0    | 1.8 | 0.15 | 0.9 |
| 0.45 | 0.4 | 1.6 | 0.03 | 0.03 | 2.1 | 0.25 | 1.2 |



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## Technical Properties

Steel grade with focus on plastic mold making; nickel additives for a better through-hardening (constant strength), also for thicknesses >15.8" (> 400 mm).

Low sulphur steel and therefore polishable and easily grained.

Working hardness: approx. 32 HRC (delivery condition: quenched and tempered) up to 50 HRC.



## Applications

Plastic molds, molding frames, die casting molds, dies, forging tools, metal extrusion tools, tube presses, hydroforming tools.



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

P20+Ni



WATCH THE MAKING OF THE 2ND MOTIF FOR CALENDAR 2016 / 2019



ABRAMS - THE POWER OF STEEL GRADE VARIETY!

**ABRAMS!**  
PREMIUM STEEL

A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

**P20+Ni**



# PREMIUM S1 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                 |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|---------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [mm] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



### Technical Properties

Steel grade with focus on cold work, with full hardenability, excellent toughness, dimensional stability and impact strength. Working hardness: 56-60 HRC.



### Applications

Blanking tools, dies, punches, forming dies, embossing tools, coining tools, tableting punches, plug-in tools, trimming tools, cold shear knives, riveting pins, hand chisels, pneumatic chisels, centre punches, ejectors, woodworking tools.



### [\$mart]: Surface Condition

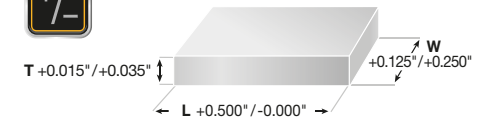
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | V   | W   |
|------|-----|------|------|------|-----|-----|-----|
| 0.55 | 0.7 | 0.15 | 0    | 0    | 0.9 | 0.1 | 1.7 |
| 0.65 | 1.0 | 0.45 | 0.03 | 0.03 | 1.2 | 0.2 | 2.2 |



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via smartphone / tablet:



## PREMIUM S1 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Steel grade with focus on cold work, with full hardenability, excellent toughness, dimensional stability and impact strength. Working hardness: 56-60 HRC.



## Applications

Blanking tools, dies, punches, forming dies, embossing tools, coining tools, tableting punches, plug-in tools, trimming tools, cold shear knives, riveting pins, hand chisels, pneumatic chisels, centre punches, ejectors, woodworking tools.



## [\$mart]: Surface Condition

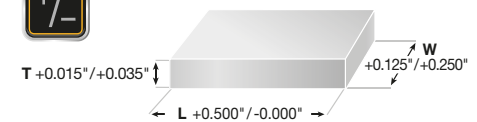
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | V   | W   |
|------|-----|------|------|------|-----|-----|-----|
| 0.55 | 0.7 | 0.15 | 0    | 0    | 0.9 | 0.1 | 1.7 |
| 0.65 | 1.0 | 0.45 | 0.03 | 0.03 | 1.2 | 0.2 | 2.2 |



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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

P20+Ni

S1

# PREMIUM S1 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

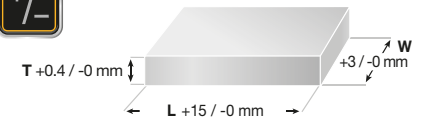
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 229 BHN  
 Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | V   | W   |
|------|-----|------|------|------|-----|-----|-----|
| 0.55 | 0.7 | 0.15 | 0    | 0    | 0.9 | 0.1 | 1.7 |
| 0.65 | 1.0 | 0.45 | 0.03 | 0.03 | 1.2 | 0.2 | 2.2 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Direct access to our online shop

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### Technical Properties

Steel grade with focus on cold work, with full hardenability, excellent toughness, dimensional stability and impact strength.  
 Working hardness: 56-60 HRC.



### Applications

Blanking tools, dies, punches, forming dies, embossing tools, coining tools, tableting punches, plug-in tools, trimming tools, cold shear knives, riveting pins, hand chisels, pneumatic chisels, centre punches, ejectors, woodworking tools.



### AISI S1 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/S1](http://abrams-steel.com/S1)

via smartphone / tablet:



## PREMIUM S1 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

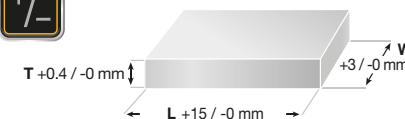
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 229 BHN

Chemical composition:

| C    | Si  | Mn   | P    | S    | Cr  | V   | W   |
|------|-----|------|------|------|-----|-----|-----|
| 0.55 | 0.7 | 0.15 | 0    | 0    | 0.9 | 0.1 | 1.7 |
| 0.65 | 1.0 | 0.45 | 0.03 | 0.03 | 1.2 | 0.2 | 2.2 |



## Don't see your exact dimension(s)?

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- according to your requirements!



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## Technical Properties

Steel grade with focus on cold work, with full hardenability, excellent toughness, dimensional stability and impact strength. Working hardness: 56-60 HRC.



## Applications

Blanking tools, dies, punches, forming dies, embossing tools, coining tools, tableting punches, plug-in tools, trimming tools, cold shear knives, riveting pins, hand chisels, pneumatic chisels, centre punches, ejectors, woodworking tools.



## AISI S1 – all at a glance!

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via smartphone / tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

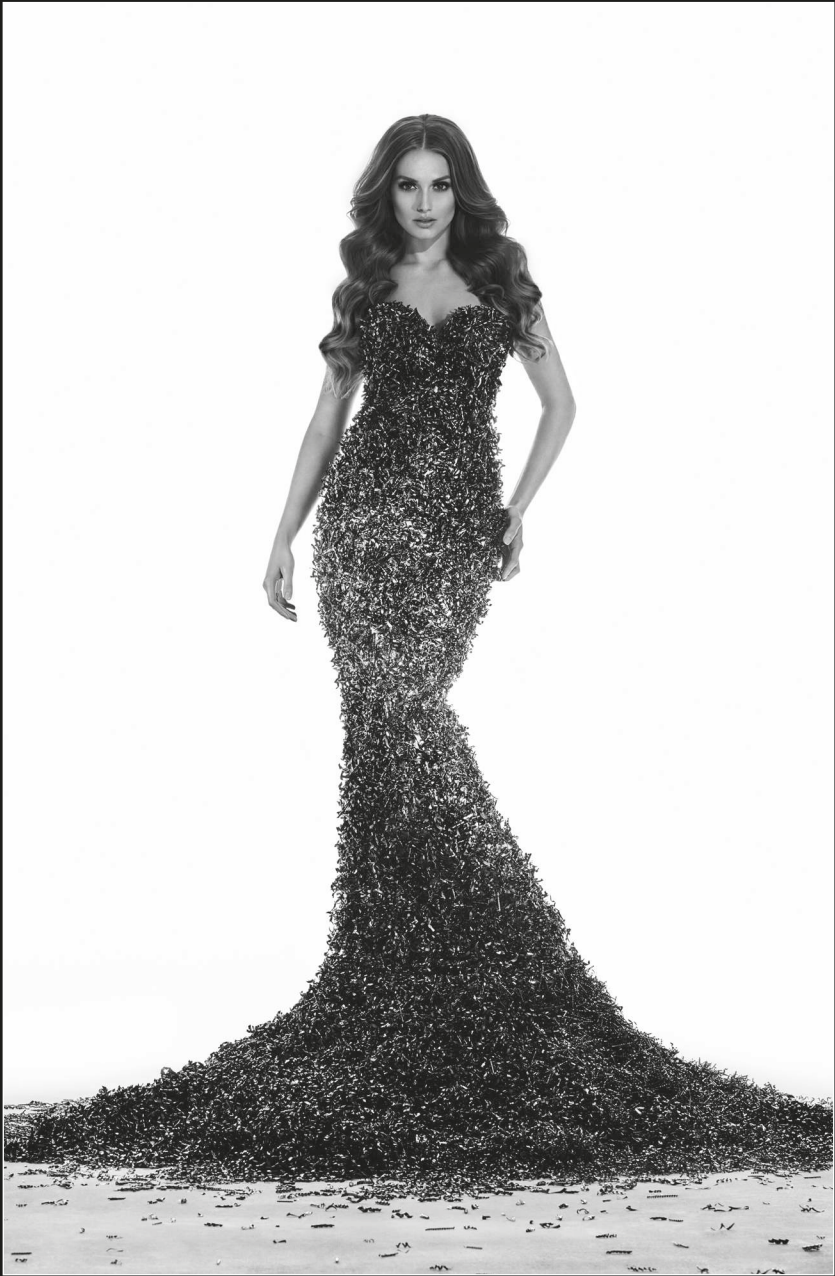
P20 PH

P20+Ni

S1



WATCH THE MAKING OF THE 3TH MOTIF FOR CALENDAR 2016 / 2019



ON REQUEST - SAW CUT - MILLED - GROUND!

|                   |
|-------------------|
| A2                |
| A8 mod. / Chipper |
| D2                |
| H10               |
| H13               |
| H13 ESR           |
| L3                |
| L6                |
| O1                |
| P20               |
| P20 PH            |
| P20+Ni            |
| S1                |




# PREMIUM S7 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

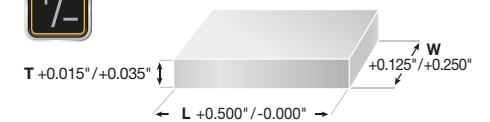
|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 225 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.45 | 0.2 | 0.2 | 0    | 0    | 3.0 | 1.3 | 0    |
| 0.55 | 1.0 | 0.9 | 0.03 | 0.03 | 3.5 | 1.8 | 0.35 |



### Don't see your exact dimension(s)?

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### Technical Properties

This tool steel is a general purpose air hardening grade having high impact and shock resistance. It has also a good resistance to softening at moderately high temperatures. This combination of properties makes it suitable for many hot-work and cold-work applications.

Working hardness: 56-60 HRC.



### Applications

Cutting tools, cold forming and bending dies, plastic molding dies, shear blades, chisels, rivet sets, punches, driver bolts.



### AISI S7 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:




## PREMIUM S7 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 13"   | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 14"   | ■                        |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 15"   | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 16"   | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 17"   | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 18"   | ■                        | ■    | ■     | ■     |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 19"   | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 20"   | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |



## Technical Properties

This tool steel is a general purpose air hardening grade having high impact and shock resistance. It has also a good resistance to softening at moderately high temperatures. This combination of properties makes it suitable for many hot-work and cold-work applications.

Working hardness: 56-60 HRC.



## Applications

Cutting tools, cold forming and bending dies, plastic molding dies, shear blades, chisels, rivet sets, punches, driver bolts.



## [\$mart]: Surface Condition

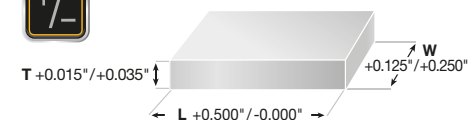
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 225 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.45 | 0.2 | 0.2 | 0    | 0    | 3.0 | 1.3 | 0    |
| 0.55 | 1.0 | 0.9 | 0.03 | 0.03 | 3.5 | 1.8 | 0.35 |



## Don't see your exact dimension(s)?

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


# PREMIUM S7 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

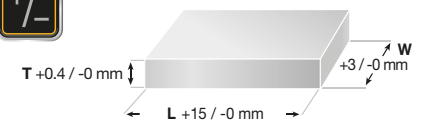
|  | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

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| 0.55 | 1.0 | 0.9 | 0.03 | 0.03 | 3.5 | 1.8 | 0.35 |



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via smartphone / tablet:













































































































































































































































































































































































## PREMIUM S7 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|  | THICKNESS   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 2.3   | 3.3   | 4.3   | 5.3   | 6.3   | 8.3   | 10.3  | 12.3  | 15.3  | 20.3  | 25.3  | 30.3  | 40.3  | 50.3  | 60.3  | 70.3  | 80.3  | 100.3   |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 33  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 43  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 53  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 63  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 73  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 83  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 93  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 103   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 123   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 143   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 153   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 163   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 183   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 203   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 223   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 243   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 253   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 263   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 283   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 303   |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 323   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |



## [\$martM]: Surface Condition

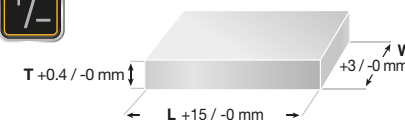
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 225 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.45 | 0.2 | 0.2 | 0    | 0    | 3.0 | 1.3 | 0    |
| 0.55 | 1.0 | 0.9 | 0.03 | 0.03 | 3.5 | 1.8 | 0.35 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



## Contact us

+1 (331) 234-9900

sales@abrams-industries.com



## Direct access to our online shop

abrams-steel.com/S7-13



## Technical Properties

This tool steel is a general purpose air hardening grade having high impact and shock resistance. It has also a good resistance to softening at moderately high temperatures. This combination of properties makes it suitable for many hot-work and cold-work applications.

Working hardness: 56-60 HRC.



## Applications

Cutting tools, cold forming and bending dies, plastic molding dies, shear blades, chisels, rivet sets, punches, driver bolts.



## AISI S7 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/S7

via smartphone / tablet:



Length: 36"

IMPERIAL DIAMETERS in inch

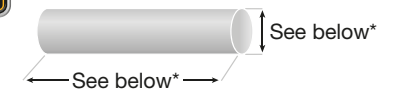
| Available Diameters [●] |   |
|-------------------------|---|
| 1/16"                   | ● |
| 3/32"                   | ● |
| 1/8"                    | ● |
| 5/32"                   | ● |
| 3/16"                   | ● |
| 7/32"                   | ● |
| 1/4"                    | ● |
| 5/16"                   | ● |
| 3/8"                    | ● |
| 7/16"                   | ● |
| 1/2"                    | ● |
| 5/8"                    | ● |
| 3/4"                    | ● |
| 7/8"                    | ● |
| 1"                      | ● |
| 1-1/4"                  | ● |
| 1-3/8"                  | ● |
| 1-1/2"                  | ● |
| 1-3/4"                  | ● |
| 2"                      | ● |



**[DR]: Surface Condition**  
Turned, ground & polished (TGP)



**Tolerances**



**Standard values**

Delivery condition: maximum 225 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.45 | 0.2 | 0.2 | 0    | 0    | 3.0 | 1.3 | 0    |
| 0.55 | 1.0 | 0.9 | 0.03 | 0.03 | 3.5 | 1.8 | 0.35 |



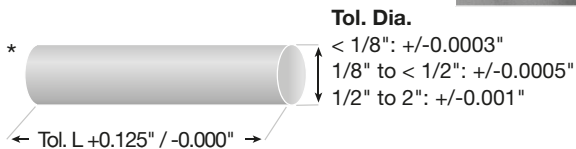
**Don't see your exact dimension(s)?**  
Any diameter is available in different lengths (e.g. round blanks).  
Custom orders on request  
- according to your requirements.



**Contact us**  
+1 (331) 234-9900  
sales@abrams-industries.com



**Direct access to our online shop**  
abrams-steel.com/S7-17



## Technical Properties

This tool steel is a general purpose air hardening grade having high impact and shock resistance. It has also a good resistance to softening at moderately high temperatures. This combination of properties makes it suitable for many hot-work and cold-work applications.  
Working hardness: 56-60 HRC.



## Applications

Cutting tools, cold forming and bending dies, plastic molding dies, shear blades, chisels, rivet sets, punches, driver bolts.



## AISI S7 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/S7

via smartphone/tablet:



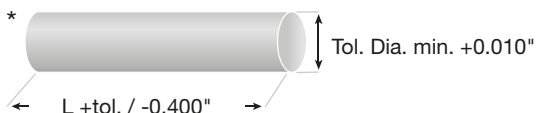
## PREMIUM S7 - DECARB FREE ROUNDS

## TOOL STEEL

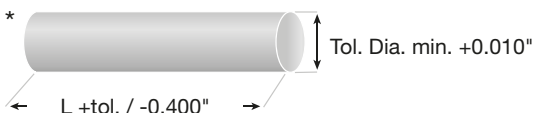
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



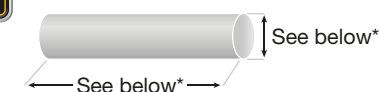
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 1/2"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 225 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr  | Mo  | V    |
|------|-----|-----|------|------|-----|-----|------|
| 0.45 | 0.2 | 0.2 | 0    | 0    | 3.0 | 1.3 | 0    |
| 0.55 | 1.0 | 0.9 | 0.03 | 0.03 | 3.5 | 1.8 | 0.35 |



**Don't see your exact dimension(s)?**

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Custom orders on request  
- according to your requirements.



**Contact us**

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**Direct access to our online shop**

[18"] - abrams-steel.com/S7-22  
[36"] - abrams-steel.com/S7-23



### Technical Properties

This tool steel is a general purpose air hardening grade having high impact and shock resistance. It has also a good resistance to softening at moderately high temperatures. This combination of properties makes it suitable for many hot-work and cold-work applications.

Working hardness: 56-60 HRC.



### Applications

Cutting tools, cold forming and bending dies, plastic molding dies, shear blades, chisels, rivet sets, punches, driver bolts.



### AISI S7 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/S7

via smartphone/tablet:



A2

A8 mod. /  
Chipper

D2

H10

H13

H13 ESR

L3

L6

O1

P20

P20 PH

P20+Ni

S1

S7



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PREMIUM QUALITY - OUR HIGHEST STANDARD!

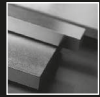
**ABRAMS!**  
PREMIUM STEEL

## FLATS !

Below are our flats in different categories in imperial as well as metric sizes.

Every item is available in different **thickness**, **width** and **length**. On request – specific to your needs!

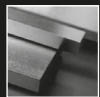
### IMPERIAL



#### Precision Ground Flat Stock, regular [GFS reg]

For example: 3/4" x 4" x 36" reg

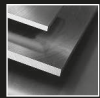
- **Thickness** ground, tol. +/-0.001"
- **Width** ground or fine milled, tol. +0.005" / -0.000"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### Precision Ground Flat Stock, oversize [GFS O/S]

For example: 3/4" x 4" x 36" O/S

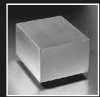
- **Thickness** ground, tol. +0.010" / +0.015"
- **Width** ground or fine milled, tol. +0.010" / +0.015"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### \$mart Flat Stock [\$mart] Standardized Precision Blanks

For example: 3/4" x 4" x 24"

- **Thickness** ground or fine milled, tol. +0.015" / +0.035"
- **Width** saw cut, tol. +0.125" / +0.250"
- **Length** saw cut, tol. +0.500" / -0.000"



#### EDM Block hardened [EDM]

For example: 1/2" x 4" x 4"

- **Thickness** ground or fine milled, tol. +0.010" / -0.000"
- Square dimension ground or fine milled, tol. min. +0.0125"
- Grain structure is perpendicular in relation to top & bottom.

### METRIC



#### Precision Ground Flat Stock Metric, regular [GFSM reg] acc. to DIN\* 59350

For example: 20.0 x 100.0 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.05 / -0 mm
  - **Width** ground or fine milled, tol. +0.2 / -0 mm
  - **Length** milled or saw cut, tol. +35 / -0 mm
- Exception: AISI 1045: **T** +0.25 / -0 mm; **W** +0.4 / -0 mm



#### Precision Ground Flat Stock Metric, oversize [GFSM O/S]

For example: 20.3 x 100.3 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** ground or fine milled, tol. +0.4 / -0 mm
- **Length** milled or saw cut, tol. +35 / -0 mm



#### \$mart Flat Stock Metric [\$martM] Standardized Precision Blanks Metric

For example: 20.3 x 103 x 600 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** saw cut, tol. +3 / -0 mm
- **Length** saw cut, tol. +15 / -0 mm



#### Hard Flat Metric [HardM] Hardened Standardized Blanks Metric

For example: 10.2 x 250 x 500 mm

- **Thickness** ground or fine milled, tol. +0.2 / -0 mm
- **Width** saw cut or sheared, tol. +10 / -0 mm
- **Length** saw cut or sheared, tol. +10 / -0 mm

Flatness tolerance: +0.2 / -0 mm across the item (aimed for)

### \*DIN: DEUTSCHE INDUSTRIE NORM (GERMAN INDUSTRY STANDARD) !

Precision ground flat stock is a bar with a sharp-edged, rectangular or square cross-section made of tool steel with finely machined, decarburization-free longitudinal surfaces. In Germany, it is standardized in DIN 59350. Precision ground flat stock is used primarily as a semi-finished product in machine, tool, fixture and mold construction.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)



## ROUNDS !

Below are our rounds in different categories in imperial as well as metric sizes.

Any item is available in different **diameters** and / or **length**. On request – specific to your needs!

### IMPERIAL



#### Drill Rod [DR]

##### Precision Round Bars

**For example: DR 3/4" x 36"**

Turned, ground & polished (TGP)

- Tol. Dia. < 1/8":  $\pm 0.0003$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/8" to < 1/2":  $\pm 0.0005$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/2" to 2":  $\pm 0.001$ ", L  $+0.125$ " /  $-0.000$ "



#### Cold Finished Rounds [CF]

##### Precision Round Bars

**For example: CF 3/4" x 36"**

Drawn, smooth turned, ground, or ground and polished

- Tol. Dia. < 1/2":  $\pm 0.0015$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1/2" to < 1-1/2":  $\pm 0.0025$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1-1/2" to 4":  $\pm 0.004$ ", L  $\pm$ tol. /  $-0.400$ "

These are maximum tolerances. For more exact tolerances call our sales team.



#### Decarb Free Rounds [DCF]

##### Oversize Round Bars

**For example: DCF 3/4" x 36"**

Peeled or rough-turned

- Tol. Dia. min.  $+0.010$ ", L  $\pm$ tol. /  $-0.400$ "
- Exception: 4XX Series stainless steel, tol. Dia.  $\pm$ tol. /  $-0.000$ ", L  $\pm$ tol. /  $-0.400$ "

These steel rounds are oversized to finish to nominal diameter.

### METRIC



#### Drill Rod Metric [DRM]

##### Precision Round Bars Metric

**For example: DRM 10.0 mm x 914 mm (36")**

Turned, ground & polished (TGP) - ISO h9

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.



#### Cold Finished Rounds Metric [CFM]

##### Precision Round Bars Metric

**For example: CFM 10.0 mm x 914 mm (36")**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.

### STEEL CATEGORIES !

Steel grades are classified by their **technical properties** and/or by their intended use.

For example: Cold work steel, hot work steel, plastic mold steel, high speed steel, corrosion resistant steel or case hardening steel.

Steel grades are often assigned to several classification groups.

For more details on our shapes see: [us.abrams-industries.com/product-overview](https://us.abrams-industries.com/product-overview)



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4TH MOTIF FOR CALENDAR  
2019 / 2022



ABRAMS PREMIUM TOOL STEEL!

**ABRAMS!**  
PREMIUM STEEL

## TOOL STEEL II

## STEEL GRADE - AISI

|                    |  |  |   |   |   |   |   |  |   |  |   |  |  |     |  |       |    |   |   |   |  |   |   |  |   |  |
|--------------------|--|--|---|---|---|---|---|--|---|--|---|--|--|-----|--|-------|----|---|---|---|--|---|---|--|---|--|
| PREMIUM Toolox 33  |  |  |   |   | ✓ | ✓ |   |  |   |  |   |  |  | 330 |  | 163.1 | 36 | ✓ |   | ✓ |  |   |   |  |   |  |
| PREMIUM Toolox 44  |  |  |   |   | ✓ | ✓ |   |  |   |  |   |  |  | 418 |  | 205.9 | 45 | ✓ |   | ✓ |  |   |   |  |   |  |
| PREMIUM W1         |  |  |   |   |   |   |   |  | ✓ |  |   |  |  | 200 |  | 97.9  | 65 | ✓ |   |   |  |   |   |  |   |  |
| PREMIUM 1018 / A36 |  |  | ✓ |   |   |   |   |  |   |  | ✓ |  |  | 162 |  | 72.5  | 60 | ✓ |   |   |  |   |   |  |   |  |
| PREMIUM 1045       |  |  |   | ✓ |   |   |   |  |   |  |   |  |  | 190 |  | 94.2  | 54 | ✓ |   |   |  |   |   |  |   |  |
| PREMIUM 2990 mod.  |  |  |   |   | ✓ | ✓ |   |  |   |  |   |  |  | 250 |  | 123.2 | 63 | ✓ |   | ✓ |  |   |   |  |   |  |
| PREMIUM 420 ESR    |  |  |   |   | ✓ | ✓ |   |  |   |  |   |  |  | 241 |  | 118.2 | 55 |   |   | ✓ |  | ✓ | ✓ |  |   |  |
| PREMIUM 420 LC     |  |  |   |   | ✓ | ✓ | ✓ |  |   |  |   |  |  | 330 |  | 163.1 | 35 |   |   | ✓ |  | ✓ |   |  |   |  |
| PREMIUM 420FM      |  |  |   |   | ✓ | ✓ | ✓ |  |   |  |   |  |  | 330 |  | 163.1 | 48 |   |   | ✓ |  | ✓ |   |  |   |  |
| PREMIUM 5120       |  |  |   |   | ✓ | ✓ | ✓ |  |   |  |   |  |  | 217 |  | 104.4 | 60 | ✓ |   | ✓ |  |   |   |  | ✓ |  |
| PREMIUM 52100 / L1 |  |  |   |   |   | ✓ | ✓ |  |   |  |   |  |  | 223 |  | 108.7 | 64 | ✓ |   |   |  |   |   |  |   |  |
| PREMIUM 6F7 ESR    |  |  |   |   |   | ✓ | ✓ |  |   |  |   |  |  | 260 |  | 127.6 | 54 | ✓ | ✓ | ✓ |  |   |   |  |   |  |

## IMPERIAL

Precision Ground Flat Stock, regular [GFS reg]  
Precision Ground Flat Stock, oversize [GFS O/S]  
\$mart Flat Stock [\$mart] - Standardized Precision Blanks  
EDM Block hardened [EDM]  
Drill Rod [DR] - Precision Round Bars  
Cold Finished Rounds [CF] - Precision Round Bars  
Decarb Free Rounds [DCF] - Oversize Round Bars

## METRIC

Precision Ground Flat Stock Metric, regular [GFSM reg] - acc. to DIN\* 59350  
Precision Ground Flat Stock Metric, oversize [GFSM O/S]  
\$mart Flat Stock Metric [\$martM] - Standardized Precision Blanks Metric  
Hard Flat Metric [HardM] - Hardened Standardized Blanks Metric  
Drill Rod Metric [DRM] - Precision Round Bars Metric  
Cold Finished Rounds Metric [CFM] - Precision Round Bars Metric  
\*DIN: Deutsche Industrie Norm (German Industry Standard)

# PREMIUM Toolox 33 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |       |      |       |      |      |      |      |    |        |        |
|---------|--------------------------|-------|------|-------|------|------|------|------|----|--------|--------|
|         | 3/16"                    | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" |
|         | Available Dimensions [■] |       |      |       |      |      |      |      |    |        |        |
| 1"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 1-1/4"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |
| 1-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 2"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 2-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 3"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 3-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 4"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 4-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 5"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 5-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 6"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 6-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 7"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 7-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 8"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 8-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 9"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 9-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 10"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 10-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 11"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 11-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 12"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |



### Technical Properties

Quenched and tempered low alloy tool steel with good machinability, high toughness and low residual stresses. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition). Further heat treatment is not intended.  
Working hardness without nitriding: approx. 30-36 HRC (delivery condition).



### Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.

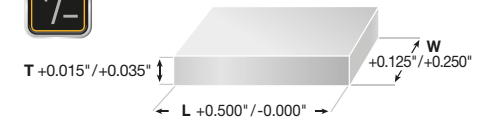


### [\$mart]: Surface Condition

Thickness: ground or fine milled  
Width: saw cut  
Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 330 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr  | Mo  | Ni  | V    |
|------|-----|-----|------|-------|-----|-----|-----|------|
| 0.22 | 0.6 | 0.8 | 0    | 0     | 1.0 | 0.3 | 0   | 0.1  |
| 0.24 | 1.1 | 0.8 | 0.01 | 0.003 | 1.2 | 0.3 | 1.0 | 0.11 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
Custom orders on request  
- according to your requirements!



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### Direct access to our online shop

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### AIISI Toolox 33 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/T33

via smartphone / tablet:



## PREMIUM Toolox 33 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS |       |      |       |      |      |      |      |    |        |        |
|---------|-----------|-------|------|-------|------|------|------|------|----|--------|--------|
|         | 3/16"     | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" |
| 1"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 1-1/4"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 1-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 2"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 2-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 3"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 3-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 4"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 4-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 5"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 5-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 6"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 6-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 7"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 7-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 8"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 8-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 9"      | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 9-1/2"  | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 10"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 10-1/2" | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 11"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 11-1/2" | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 12"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 13"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 14"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 15"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 16"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 17"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 18"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 19"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |
| 20"     | ■         | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |



## [\$mart]: Surface Condition

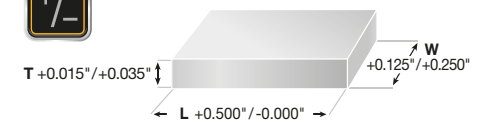
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 330 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr  | Mo  | Ni  | V    |
|------|-----|-----|------|-------|-----|-----|-----|------|
| 0.22 | 0.6 | 0.8 | 0    | 0     | 1.0 | 0.3 | 0   | 0.1  |
| 0.24 | 1.1 | 0.8 | 0.01 | 0.003 | 1.2 | 0.3 | 1.0 | 0.11 |



## Don't see your exact dimension(s)?

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## Technical Properties

Quenched and tempered low alloy tool steel with good machinability, high toughness and low residual stresses. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition). Further heat treatment is not intended.

Working hardness without nitriding: approx. 30-36 HRC (delivery condition).



## Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



## AISI Toolox 33 – all at a glance!

Datasheets, online shop,

ABRAMS STEEL GUIDE for alternatives:

abrams-steel.com/T33

via smartphone/tablet:





# PREMIUM Toolox 33 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

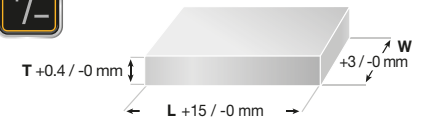
|       | THICKNESS                 |     |     |     |     |      |      |      |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|
|       | 3.3                       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |      |      |      |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 330 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr  | Mo  | Ni  | V    |
|------|-----|-----|------|-------|-----|-----|-----|------|
| 0.22 | 0.6 | 0.8 | 0    | 0     | 1.0 | 0.3 | 0   | 0.1  |
| 0.24 | 1.1 | 0.8 | 0.01 | 0.003 | 1.2 | 0.3 | 1.0 | 0.11 |



### Don't see your exact dimension(s)?

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### Technical Properties

Quenched and tempered low alloy tool steel with good machinability, high toughness and low residual stresses. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition). Further heat treatment is not intended.

Working hardness without nitriding: approx. 30-36 HRC (delivery condition).



### Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



### AISI Toolox 33 – all at a glance!

Datasheets, online shop,  
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via smartphone / tablet:



## PREMIUM Toolox 33 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH | THICKNESS                 |     |     |     |     |      |      |      |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|
|       | 3.3                       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 |
|       | Available Dimensions [mm] |     |     |     |     |      |      |      |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## [\$martM]: Surface Condition

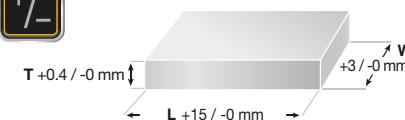
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 330 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr  | Mo  | Ni  | V    |
|------|-----|-----|------|-------|-----|-----|-----|------|
| 0.22 | 0.6 | 0.8 | 0    | 0     | 1.0 | 0.3 | 0   | 0.1  |
| 0.24 | 1.1 | 0.8 | 0.01 | 0.003 | 1.2 | 0.3 | 1.0 | 0.11 |



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## Technical Properties

Quenched and tempered low alloy tool steel with good machinability, high toughness and low residual stresses. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition). Further heat treatment is not intended.

Working hardness without nitriding: approx. 30-36 HRC (delivery condition).



## Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



## AISI Toolox 33 – all at a glance!

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**ABRAMS!**  
PREMIUM STEEL

# PREMIUM Toolox 44 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |       |      |       |      |      |      |      |    |        |        |    |
|---------|--------------------------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 3/16"                    | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [■] |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



### Technical Properties

Low-alloyed tool steel with high-impact toughness, quenched and tempered up to approx. 45 HRC. Machinable with suitable tools because of its low carbide content. Good dimensional and shape stability. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition).

Working hardness: approx. 45 HRC (delivery condition).



### Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



### [\$mart]: Surface Condition

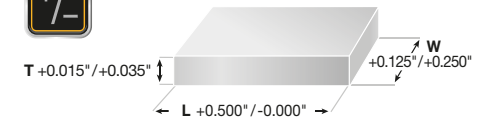
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 418 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni  | V    |
|------|-----|-----|------|-------|------|-----|-----|------|
| 0.32 | 0.6 | 0.8 | 0    | 0     | 1.35 | 0.8 | 0   | 0.14 |
| 0.32 | 1.1 | 0.8 | 0.01 | 0.003 | 1.35 | 0.8 | 1.0 | 0.14 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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via smartphone/tablet:



## PREMIUM Toolox 44 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |       |      |       |      |      |      |      |    |        |        |    |
|---------|--------------------------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 3/16"                    | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [■] |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 13"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 14"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 15"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 16"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 17"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 18"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 19"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 20"     | ■                        | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



## [\$mart]: Surface Condition

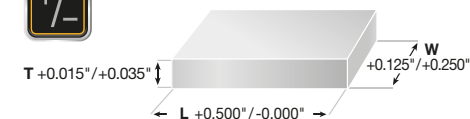
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 418 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni  | V    |
|------|-----|-----|------|-------|------|-----|-----|------|
| 0.32 | 0.6 | 0.8 | 0    | 0     | 1.35 | 0.8 | 0   | 0.14 |
| 0.32 | 1.1 | 0.8 | 0.01 | 0.003 | 1.35 | 0.8 | 1.0 | 0.14 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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## Technical Properties

Low-alloyed tool steel with high-impact toughness, quenched and tempered up to approx. 45 HRC. Machinable with suitable tools because of its low carbide content. Good dimensional and shape stability. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition).

Working hardness: approx. 45 HRC (delivery condition).



## Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



## AISI Toolox 44 – all at a glance!

Datasheets, online shop,

ABRAMS STEEL GUIDE for alternatives:

abrams-steel.com/T44

via smartphone/tablet:



# PREMIUM Toolox 44 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

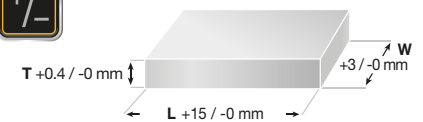
| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 418 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni  | V    |
|------|-----|-----|------|-------|------|-----|-----|------|
| 0.32 | 0.6 | 0.8 | 0    | 0     | 1.35 | 0.8 | 0   | 0.14 |
| 0.32 | 1.1 | 0.8 | 0.01 | 0.003 | 1.35 | 0.8 | 1.0 | 0.14 |



### Don't see your exact dimension(s)?

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### Direct access to our online shop

[abrams-steel.com/T44-12](http://abrams-steel.com/T44-12)



### Technical Properties

Low-alloyed tool steel with high-impact toughness, quenched and tempered up to approx. 45 HRC. Machinable with suitable tools because of its low carbide content. Good dimensional and shape stability. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapor Deposition).

Working hardness: approx. 45 HRC (delivery condition).



### Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



### AISI Toolox 44 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/T44](http://abrams-steel.com/T44)

via smartphone/tablet:





## PREMIUM Toolox 44 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## [\$martM]: Surface Condition

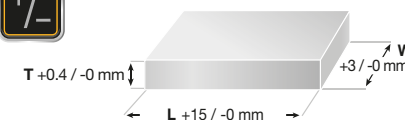
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 418 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni  | V    |
|------|-----|-----|------|-------|------|-----|-----|------|
| 0.32 | 0.6 | 0.8 | 0    | 0     | 1.35 | 0.8 | 0   | 0.14 |
| 0.32 | 1.1 | 0.8 | 0.01 | 0.003 | 1.35 | 0.8 | 1.0 | 0.14 |



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## Technical Properties

Low-alloyed tool steel with high-impact toughness, quenched and tempered up to approx. 45 HRC. Machinable with suitable tools because of its low carbide content. Good dimensional and shape stability. Can easily be polished, grained, eroded, etched, sliced, welded, and coated with PVD (Physical Vapor Deposition).

Working hardness: approx. 45 HRC (delivery condition).



## Applications

Mechanical engineering, machine parts, guide rails, base plates, assembly parts, press brake tools, plate forming tools, wear parts, plastic molds, molding frames, forming tools, rubber molds, die casting molds.



## AISI Toolox 44 – all at a glance!

Datasheets, online shop,  
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via smartphone/tablet:





ABRAMS PREMIUM DRILL ROD - PRECISION ROUND BARS (TGP)!

**ABRAMS!**  
PREMIUM STEEL

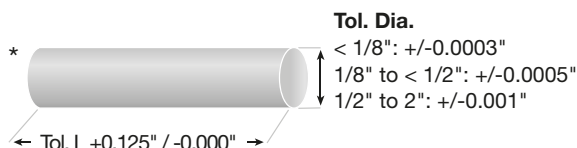
## PREMIUM W1 - DRILL ROD

## TOOL STEEL

Length: 36"

## IMPERIAL DIAMETERS in inch

| Available Diameters[●] |   |        |   |        |   |         |   |          |   |
|------------------------|---|--------|---|--------|---|---------|---|----------|---|
| 1/16"                  | ● | »      |   | »      |   | »       |   | »        |   |
| 5/64"                  | ● | 19/64" | ● | 33/64" | ● | 13/16"  | ● | 1-7/16"  | ● |
| 3/32"                  | ● | 5/16"  | ● | 17/32" | ● | 27/32"  | ● | 1-1/2"   | ● |
| 7/64"                  | ● | 21/64" | ● | 9/16"  | ● | 7/8"    | ● | 1-9/16"  | ● |
| 1/8"                   | ● | 11/32" | ● | 37/64" | ● | 57/64"  | ● | 1-5/8"   | ● |
| 9/64"                  | ● | 23/64" | ● | 19/32" | ● | 29/32"  | ● | 1-11/16" | ● |
| 5/32"                  | ● | 3/8"   | ● | 5/8"   | ● | 15/16"  | ● | 1-3/4"   | ● |
| 11/64"                 | ● | 25/64" | ● | 21/32" | ● | 31/32"  | ● | 1-13/16" | ● |
| 3/16"                  | ● | 13/32" | ● | 43/64" | ● | 63/64"  | ● | 1-7/8"   | ● |
| 13/64"                 | ● | 27/64" | ● | 11/16" | ● | 1"      | ● | 2"       | ● |
| 7/32"                  | ● | 7/16"  | ● | 23/32" | ● | 1-1/16" | ● |          |   |
| 15/64"                 | ● | 29/64" | ● | 47/64" | ● | 1-1/8"  | ● |          |   |
| 1/4"                   | ● | 15/32" | ● | 3/4"   | ● | 1-3/16" | ● |          |   |
| 17/64"                 | ● | 31/64" | ● | 49/64" | ● | 1-1/4"  | ● |          |   |
| 9/32"                  | ● | 1/2"   | ● | 25/32" | ● | 1-3/8"  | ● |          |   |
| »                      |   | »      |   | »      |   | »       |   |          |   |



## Technical Properties

W1 is a water-hardening tool steel with a moderate wear resistance that is easy to machine. Its high carbon content results in a keen cutting edge. In essence, W1 is a simple high carbon steel and can easily be hardened by heating and quenching in water.

Working hardness: 55-65 HRC.



## Applications

Cutting tools, knives, razor blades, broaching tools, tools for screw cutting, embossing taps, cutlery, chisels, drawing dies, tools for hardest stones, shafts, pins.

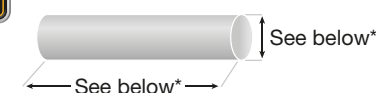


## [DR]: Surface Condition

Turned, ground & polished (TGP)



## Tolerances



## Standard values

Delivery condition: maximum 200 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | Mo  | V   | W   |
|------|------|-----|-------|-------|-----|-----|-----|-----|
| 0.9  | 0.1  | 0.3 | 0     | 0     | 0   | 0   | 0   | 0   |
| 1.05 | 0.25 | 0.4 | 0.025 | 0.025 | 0.2 | 0.1 | 0.1 | 0.2 |



## Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
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## AISI W1 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
 abrams-steel.com/W1

via smartphone/tablet:



Toolox 33

Toolox 44




















































































































































































































































W1

# PREMIUM 1018 / A36 - PRECISION GROUND FLAT STOCK, REGULAR

## TOOL STEEL

Length: 24"

### IMPERIAL DIMENSIONS in inch

|  | THICKNESS  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 1/16"  | 3/32"   | 1/8"  | 5/32"   | 3/16"   | 1/4"  | 5/16"   | 3/8"  | 7/16"   | 1/2"  | 5/8"  | 3/4"  | 7/8"  | 1"  | 1-1/8"  | 1-1/4"  | 1-1/2"  | 2"  | 2-1/4"  | 2-1/2"  |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3/16"   |  |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1/4"  |  |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5/16"   |  |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3/8"  |  |   |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |
| 7/16"   |  |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |
| 1/2"  |                         |    |    |    |    |    |    |    |   |    |   |   |   |   |   |   |   |   |   |   |
| 5/8"  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3/4"  |                         |    |    |    |    |    |    |    |   |    |    |    |   |   |   |   |   |   |   |   |
| 7/8"  |  |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |   |   |
| 1"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |   |   |   |   |
| 1-1/8"  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |
| 1-1/4"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |  |   |   |   |   |
| 1-1/2"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 2"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |  |   |
| 2-1/4"  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |
| 2-1/2"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |  |
| 3"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 3 1/2"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 4"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 5"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 6"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 7"  |  |   |   |   |   |   |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 8"  |                         |    |    |    |    |    |    |    |   |    |    |    |    |    |   |   |    |    |   |   |
| 9"  |  |   |   |   |   |   |  |  |   |  |  |  |  |  |   |   |  |  |   |   |
| 10"   |                       |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |  |   |   |
| 12"   |                       |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |  |   |   |



[GFS reg]: Surface Condition

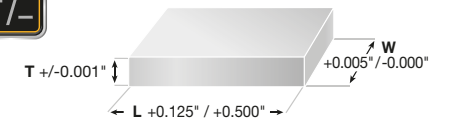
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



Tolerances



Standard values

Delivery condition: maximum 162 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    |
|------|-----|-----|------|------|
| 0    | 0   | 0.6 | 0    | 0    |
| 0.29 | 0.4 | 1.2 | 0.04 | 0.05 |



Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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#### Technical Properties

This grade is one of the commonly used low carbon steels. It has good weldability, surface hardening quality, higher mechanical properties and a very good machinability. Working hardness: 50-60 HRC.



#### Applications

Gears, pinions, ratchets, worms, pins, chain pins, machine parts, tools and mold components.



AISI 1018 / A36 – all at a glance!

Datasheets, online shop,

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via smartphone / tablet:



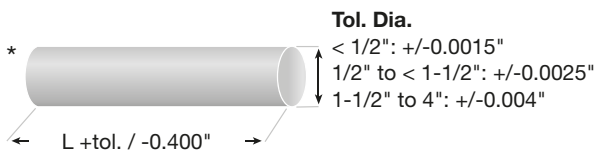
## PREMIUM 1018 / A36 - COLD FINISHED ROUNDS

## TOOL STEEL

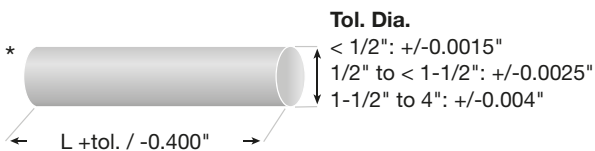
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

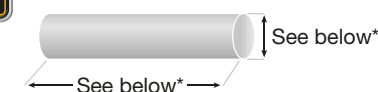
|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

**[CF]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished

**Tolerances****Standard values**

Delivery condition: maximum 162 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    |
|------|-----|-----|------|------|
| 0    | 0   | 0.6 | 0    | 0    |
| 0.29 | 0.4 | 1.2 | 0.04 | 0.05 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
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 - according to your requirements.

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[18"] - abrams-steel.com/1018-A36-19  
 [36"] - abrams-steel.com/1018-A36-20

**Technical Properties**

This grade is one of the commonly used low carbon steels. It has good weldability, surface hardening quality, higher mechanical properties and a very good machinability.  
 Working hardness: 50-60 HRC.

**Applications**

Gears, pinions, ratchets, worms, pins, chain pins, machine parts, tools and mold components.

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via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 / A36

# PREMIUM 1045 - PRECISION GROUND FLAT STOCK METRIC, REGULAR

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

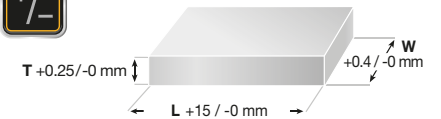
| WIDTH                     | THICKNESS |   |   |   |    |    |    |    |    |    |    |    |
|---------------------------|-----------|---|---|---|----|----|----|----|----|----|----|----|
|                           | 4         | 5 | 6 | 8 | 10 | 12 | 15 | 16 | 20 | 25 | 30 | 32 |
| Available Dimensions [mm] |           |   |   |   |    |    |    |    |    |    |    |    |
| 10                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 12                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 15                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 16                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 20                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 25                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 30                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 32                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 40                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 50                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 60                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 63                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 70                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 80                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 90                        |           |   |   |   |    |    |    |    |    |    |    |    |
| 100                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 120                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 125                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 140                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 150                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 160                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 175                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 180                       |           |   |   |   |    |    |    |    |    |    |    |    |
| 200                       |           |   |   |   |    |    |    |    |    |    |    |    |



**[GFSM reg]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** ground or fine milled  
**Length:** milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 190 BHN  
 Chemical composition:

| C    | Si   | Mn  | P    | S    |
|------|------|-----|------|------|
| 0.42 | 0.15 | 0.6 | 0    | 0    |
| 0.5  | 0.4  | 0.8 | 0.03 | 0.03 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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#### Direct access to our online shop

[abrams-steel.com/1045-6](http://abrams-steel.com/1045-6)

Precision Ground Flat Stock Metric, regular acc. to DIN 59350



#### Technical Properties

Unalloyed tool steel with excellent machining properties for unhardened parts e.g. fixture construction, due to its carbon proportion (0.45%) it can be hardened, but has a low depth of hardening. Shallow depth case-hardening steel with a hard surface and a tough core.

Working hardness: approx. 190 BHN (annealed) up to 54 HRC (surface hardness).



#### Applications

Mechanical engineering, construction materials, jigs, base plates, molding frames, small dies, hand tools, simple knives, sledges, pliers, forks, hatchets, axes, shears, screwdrivers, chisels.



#### AISI 1045 – all at a glance!

Datasheets, online shop,  
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via smartphone / tablet:



## PREMIUM 1045 - PRECISION GROUND FLAT STOCK METRIC, REGULAR

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

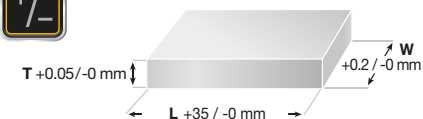
|       | THICKNESS                 |   |   |   |    |    |    |    |    |
|-------|---------------------------|---|---|---|----|----|----|----|----|
|       | 4                         | 5 | 6 | 8 | 10 | 12 | 15 | 16 | 20 |
| WIDTH | Available Dimensions [mm] |   |   |   |    |    |    |    |    |
| 10    |                           |   |   |   | ■  |    |    |    |    |
| 12    |                           |   |   |   |    | ■  |    |    |    |
| 15    |                           |   |   |   |    |    | ■  |    |    |
| 16    |                           |   |   |   |    |    |    | ■  |    |
| 20    | ■                         | ■ | ■ | ■ | ■  | ■  | ■  | ■  | ■  |
| 25    | ■                         | ■ | ■ | ■ | ■  | ■  | ■  | ■  | ■  |
| 30    | ■                         | ■ | ■ | ■ | ■  | ■  | ■  | ■  | ■  |
| 32    | ■                         | ■ | ■ | ■ | ■  | ■  | ■  | ■  |    |
| 40    | ■                         | ■ | ■ | ■ | ■  | ■  | ■  |    |    |
| 50    | ■                         | ■ | ■ | ■ | ■  | ■  |    |    |    |
| 60    | ■                         | ■ | ■ | ■ | ■  |    |    |    |    |
| 63    | ■                         | ■ | ■ | ■ |    |    |    |    |    |
| 70    | ■                         | ■ | ■ | ■ |    |    |    |    |    |
| 80    | ■                         | ■ | ■ |   |    |    |    |    |    |
| 90    | ■                         | ■ | ■ |   |    |    |    |    |    |
| 100   | ■                         | ■ | ■ |   |    |    |    |    |    |
| 125   | ■                         |   |   |   |    |    |    |    |    |

**[GFSM reg]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 190 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    |
|------|------|-----|------|------|
| 0.42 | 0.15 | 0.6 | 0    | 0    |
| 0.5  | 0.4  | 0.8 | 0.03 | 0.03 |

**Don't see your exact dimension(s)?**

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Precision Ground Flat Stock Metric, regular acc. to DIN 59350

**Technical Properties**

Unalloyed tool steel with excellent machining properties for unhardened parts e.g. fixture construction, due to its carbon proportion (0.45%) it can be hardened, but has a low depth of hardening. Shallow depth case-hardening steel with a hard surface and a tough core.

Working hardness: approx. 190 BHN (annealed) up to 54 HRC (surface hardness).

**Applications**

Mechanical engineering, construction materials, jigs, base plates, molding frames, small dies, hand tools, simple knives, sledges, pliers, forks, hatchets, axes, shears, screwdrivers, chisels.

**AISI 1045 – all at a glance!**

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# PREMIUM 2990 mod. - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

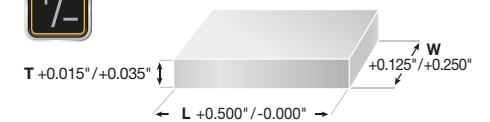
| WIDTH                     | THICKNESS |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------------------------|-----------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                           | 5/16"     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [mm] |           |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                        | ■         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition: (+additives):

| C   | Cr  | Mo  | V    |
|-----|-----|-----|------|
| 1.0 | 8.0 | 1.8 | 0.15 |
| 1.0 | 8.0 | 2.7 | 0.5  |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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### Direct access to our online shop

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### Technical Properties

An all-rounder amongst the cold work steels: high toughness, good pressure resistance, excellent compression strength, excellent wear and tempering resistance. It is secondary-hardened and has a good dimensional stability, good erosion quality and excellent nitridability.

Working hardness: approx. 57-63 HRC.



### Applications

Blanking tools, stamping tools, precision cutting tools, dies, punches, thread rolling tools, cold pilger mandrels, plastic molds, cold rollings, cold extrusion tools, cold forming tools, deep drawing dies, woodworking tools, embossing tools, bending tools, machine knives, circular shear knives, machine parts.



### AISI 2990 mod. – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/2990mod](http://abrams-steel.com/2990mod)

via smartphone/tablet:



## PREMIUM 2990 mod. - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

An all-rounder amongst the cold work steels: high toughness, good pressure resistance, excellent compression strength, excellent wear and tempering resistance. It is secondary-hardened and has a good dimensional stability, good erosion quality and excellent nitridability.

Working hardness: approx. 57-63 HRC.



## Applications

Blanking tools, stamping tools, precision cutting tools, dies, punches, thread rolling tools, cold pilger mandrels, plastic molds, cold rollings, cold extrusion tools, cold forming tools, deep drawing dies, woodworking tools, embossing tools, bending tools, machine knives, circular shear knives, machine parts.



## [\$mart]: Surface Condition

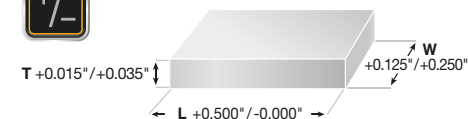
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition: (+additives):

| C   | Cr  | Mo  | V    |
|-----|-----|-----|------|
| 1.0 | 8.0 | 1.8 | 0.15 |
| 1.0 | 8.0 | 2.7 | 0.5  |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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- according to your requirements!



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via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

# PREMIUM 2990 mod. - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

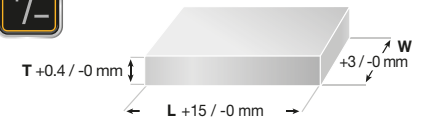
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition: (+additives):

| C   | Cr  | Mo  | V    |
|-----|-----|-----|------|
| 1.0 | 8.0 | 1.8 | 0.15 |
| 1.0 | 8.0 | 2.7 | 0.5  |



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### Technical Properties

An all-rounder amongst the cold work steels: high toughness, good pressure resistance, excellent compression strength, excellent wear and tempering resistance. It is secondary-hardened and has a good dimensional stability, good erosion quality and excellent nitridability.

Working hardness: approx. 57-63 HRC.



### Applications

Blanking tools, stamping tools, precision cutting tools, dies, punches, thread rolling tools, cold pilger mandrels, plastic molds, cold rollings, cold extrusion tools, cold forming tools, deep drawing dies, woodworking tools, embossing tools, bending tools, machine knives, circular shear knives, machine parts.



### AISI 2990 mod. – all at a glance!

Datasheets, online shop,  
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via smartphone / tablet:



## PREMIUM 2990 mod. - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

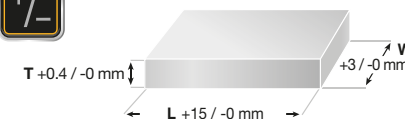
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition: (+additives):

| C   | Cr  | Mo  | V    |
|-----|-----|-----|------|
| 1.0 | 8.0 | 1.8 | 0.15 |
| 1.0 | 8.0 | 2.7 | 0.5  |



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## Technical Properties

An all-rounder amongst the cold work steels: high toughness, good pressure resistance, excellent compression strength, excellent wear and tempering resistance. It is secondary-hardened and has a good dimensional stability, good erosion quality and excellent nitridability.

Working hardness: approx. 57-63 HRC.



## Applications

Blanking tools, stamping tools, precision cutting tools, dies, punches, thread rolling tools, cold pilger mandrels, plastic molds, cold rollings, cold extrusion tools, cold forming tools, deep drawing dies, woodworking tools, embossing tools, bending tools, machine knives, circular shear knives, machine parts.

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.



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WATCH THE MAKING OF THE 11TH MOTIF FOR CALENDAR 2016 / 2019



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**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 420 ESR - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

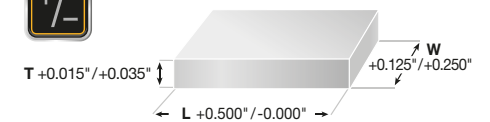
| WIDTH                     | THICKNESS |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------------------------|-----------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                           | 5/16"     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [mm] |           |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                        | ■         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                        | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                    | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   |
|------|-----|-----|------|------|------|
| 0.36 | 0   | 0   | 0    | 0    | 12.5 |
| 0.42 | 1.0 | 1.0 | 0.03 | 0.03 | 14.5 |



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### Technical Properties

Corrosion-resistant cold work steel and plastic mold steel, good machinability, good hardenability and excellent polishing properties. Low distortion through-hardening steel with high hardness and high wear resistance. The ESR (Electro Slag Remelted Steel) steel production process provides for maximum polishability.

Working hardness: 50-55 HRC.



### Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



### AISI 420 ESR – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420ESR](http://abrams-steel.com/420ESR)

via smartphone / tablet:





## PREMIUM 420 ESR - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Corrosion-resistant cold work steel and plastic mold steel, good machinability, good hardenability and excellent polishing properties. Low distortion through-hardening steel with high hardness and high wear resistance. The ESR (Electro Slag Remelted Steel) steel production process provides for maximum polishability.

Working hardness: 50-55 HRC.



## Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



## [\$mart]: Surface Condition

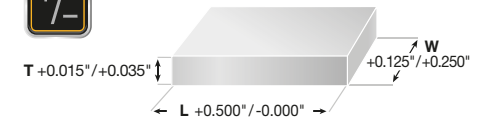
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   |
|------|-----|-----|------|------|------|
| 0.36 | 0   | 0   | 0    | 0    | 12.5 |
| 0.42 | 1.0 | 1.0 | 0.03 | 0.03 | 14.5 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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## AISI 420 ESR – all at a glance!

Datasheets, online shop,

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via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

# PREMIUM 420 ESR - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

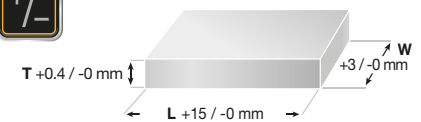
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   |
|------|-----|-----|------|------|------|
| 0.36 | 0   | 0   | 0    | 0    | 12.5 |
| 0.42 | 1.0 | 1.0 | 0.03 | 0.03 | 14.5 |



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### Technical Properties

Corrosion-resistant cold work steel and plastic mold steel, good machinability, good hardenability and excellent polishing properties. Low distortion through-hardening steel with high hardness and high wear resistance. The ESR (Electro Slag Remelted Steel) steel production process provides for maximum polishability.

Working hardness: 50-55 HRC.



### Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



### AISI 420 ESR – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420ESR](http://abrams-steel.com/420ESR)

via smartphone / tablet:



## PREMIUM 420 ESR - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

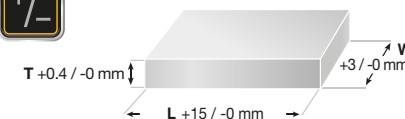
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   |
|------|-----|-----|------|------|------|
| 0.36 | 0   | 0   | 0    | 0    | 12.5 |
| 0.42 | 1.0 | 1.0 | 0.03 | 0.03 | 14.5 |



## Don't see your exact dimension(s)?

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## Technical Properties

Corrosion-resistant cold work steel and plastic mold steel, good machinability, good hardenability and excellent polishing properties. Low distortion through-hardening steel with high hardness and high wear resistance. The ESR (Electro Slag Remelted Steel) steel production process provides for maximum polishability.

Working hardness: 50-55 HRC.



## Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR



## AISI 420 ESR – all at a glance!

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via smartphone/tablet:





WATCH THE MAKING OF THE CALENDAR 2019 / 2022

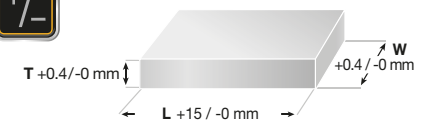
## PREMIUM 420 LC - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 500 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |      |      |      |      |
|-------|---------------------------|-----|------|------|------|------|
|       | 6.2                       | 8.2 | 10.3 | 15.3 | 20.3 | 25.3 |
| WIDTH | Available Dimensions [mm] |     |      |      |      |      |
| 20.3  | ■                         | ■   | ■    |      |      |      |
| 25.3  | ■                         | ■   | ■    | ■    |      |      |
| 30.3  | ■                         | ■   | ■    | ■    | ■    |      |
| 40.3  | ■                         | ■   | ■    | ■    | ■    | ■    |
| 50.3  | ■                         | ■   | ■    | ■    | ■    |      |
| 60.3  | ■                         | ■   | ■    | ■    | ■    |      |
| 80.3  | ■                         | ■   | ■    |      |      |      |
| 100.3 | ■                         | ■   | ■    |      |      |      |
| 125.3 | ■                         | ■   |      |      |      |      |
| 150.3 | ■                         |     |      |      |      |      |

**[GFSM O/S]: Surface Condition****Thickness:** ground or fine milled**Width:** ground or fine milled**Length:** milled or saw cut**Tolerances****Standard values**

Delivery condition: maximum 330 BHN

Chemical composition: (+additives):

| C    | Si  | Mn  | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|
| 0.05 | 0.2 | 0.9 | 0.12 | 12.5 | 0.4  |
| 0.05 | 0.3 | 1.0 | 0.12 | 13.0 | 0.45 |

**Don't see your exact dimension(s)?**

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**Technical Properties**

Prehardened, corrosion resistant plastic mold steel.

Magnetizable, excellent machinability and good weldability.

Resistant to humid conditions. Further heat treatment is not intended.

Working hardness: approx. 33 HRC (reference value for delivery condition).

**Applications**

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

**AISI 420 LC – all at a glance!**

Datasheets, online shop,

ABRAMS STEEL GUIDE for alternatives:

abrams-steel.com/420LC

via smartphone/tablet:




# PREMIUM 420 LC - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

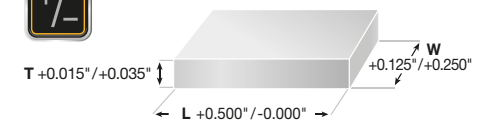
|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 330 BHN  
 Chemical composition: (+additives):

| C    | Si  | Mn  | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|
| 0.05 | 0.2 | 0.9 | 0.12 | 12.5 | 0.4  |
| 0.05 | 0.3 | 1.0 | 0.12 | 13.0 | 0.45 |



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### Direct access to our online shop

[abrams-steel.com/420LC-10](http://abrams-steel.com/420LC-10)



### Technical Properties

Prehardened, corrosion resistant plastic mold steel.  
 Magnetizable, excellent machinability and good weldability.  
 Resistant to humid conditions. Further heat treatment is not intended.  
 Working hardness: approx. 33 HRC (reference value for delivery condition).



### Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



### AISI 420 LC – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420LC](http://abrams-steel.com/420LC)

via smartphone / tablet:




## PREMIUM 420 LC - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 13"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 14"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 15"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 16"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 17"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 18"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 19"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 20"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    |      |      |      |    |        |        |    |        |    |        |    |        |    |        |



## Technical Properties

Prehardened, corrosion resistant plastic mold steel.  
Magnetizable, excellent machinability and good weldability.  
Resistant to humid conditions. Further heat treatment is not intended.  
Working hardness: approx. 33 HRC (reference value for delivery condition).



## Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



## [\$mart]: Surface Condition

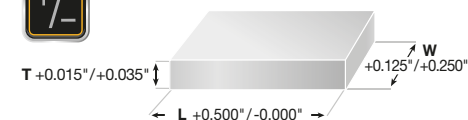
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 330 BHN

Chemical composition: (+additives):

| C    | Si  | Mn  | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|
| 0.05 | 0.2 | 0.9 | 0.12 | 12.5 | 0.4  |
| 0.05 | 0.3 | 1.0 | 0.12 | 13.0 | 0.45 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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## AISI 420 LC – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

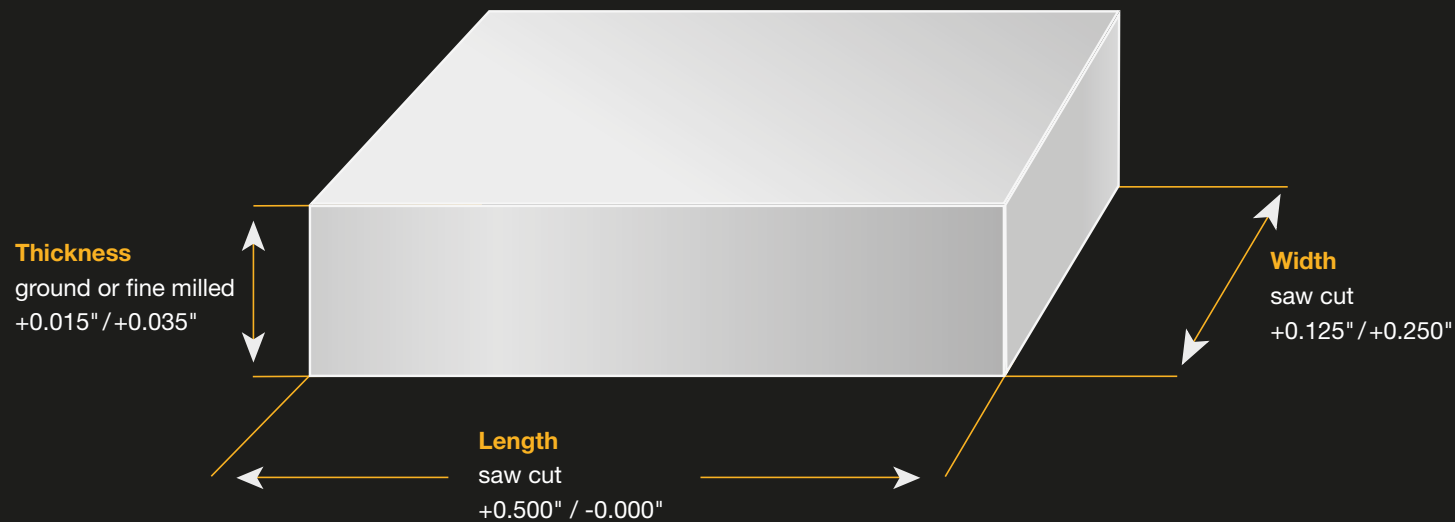
420 ESR

420 LC



## \$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY

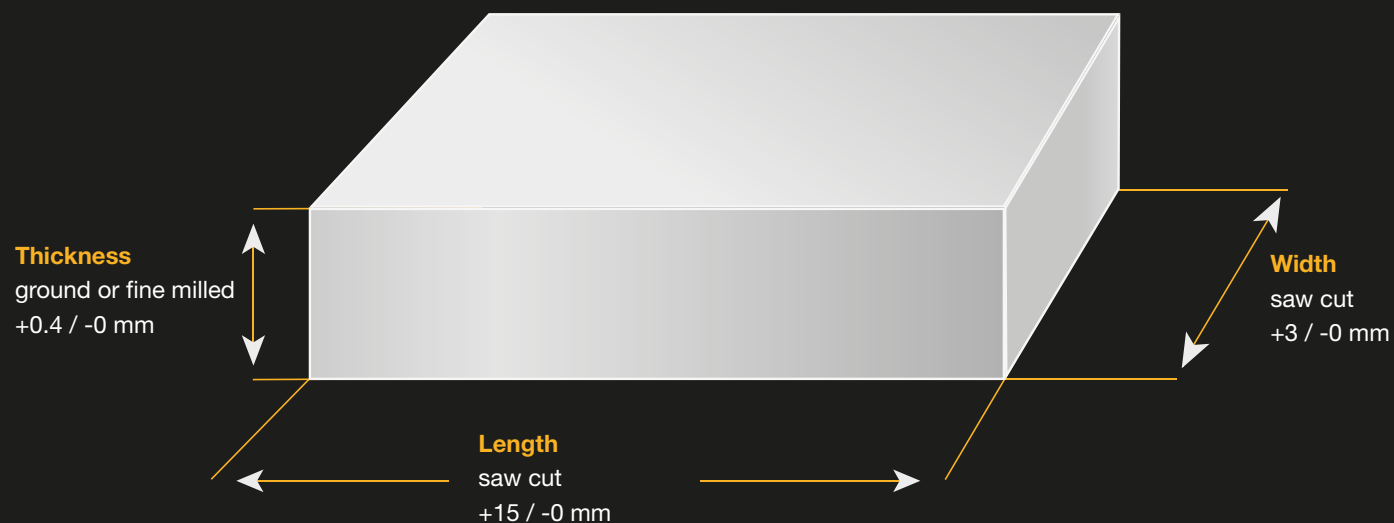
Always close to your final dimensions.



**NEW TO THE CANADIAN MARKET !****METRIC**

# **\$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY**

Always close to your final dimensions.

**ABRAMS – \$AVES TIME AND MONEY!****ABRAMS!**  
PREMIUM STEEL

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR


**420 LC**

# PREMIUM 420 LC - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

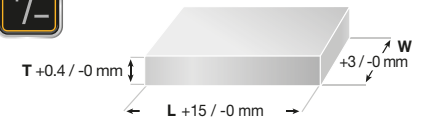
|  | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 330 BHN  
 Chemical composition: (+additives):

| C    | Si  | Mn  | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|
| 0.05 | 0.2 | 0.9 | 0.12 | 12.5 | 0.4  |
| 0.05 | 0.3 | 1.0 | 0.12 | 12.5 | 0.45 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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### Technical Properties

Prehardened, corrosion resistant plastic mold steel.  
 Magnetizable, excellent machinability and good weldability.  
 Resistant to humid conditions. Further heat treatment is not intended.  
 Working hardness: approx. 33 HRC (reference value for delivery condition).



### Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



### AISI 420 LC – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420LC](http://abrams-steel.com/420LC)

via smartphone / tablet:




## PREMIUM 420 LC - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|  | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    |      |      |      |      |      |      |      |      |      |       |



## Technical Properties

Prehardened, corrosion resistant plastic mold steel.  
Magnetizable, excellent machinability and good weldability.  
Resistant to humid conditions. Further heat treatment is not intended.  
Working hardness: approx. 33 HRC (reference value for delivery condition).



## Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



## [\$martM]: Surface Condition

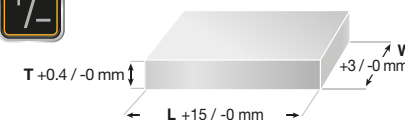
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 330 BHN

Chemical composition: (+additives):

| C    | Si  | Mn  | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|
| 0.05 | 0.2 | 0.9 | 0.12 | 12.5 | 0.4  |
| 0.05 | 0.3 | 1.0 | 0.12 | 12.5 | 0.45 |



## Don't see your exact dimension(s)?

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Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

# PREMIUM 420FM - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 500 mm

### METRIC DIMENSIONS in mm

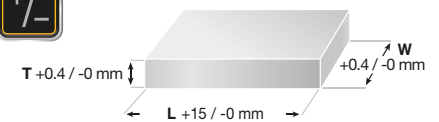
| WIDTH                     | THICKNESS |     |      |      |      |      |      |
|---------------------------|-----------|-----|------|------|------|------|------|
|                           | 6.2       | 8.2 | 10.3 | 15.3 | 20.3 | 25.3 | 30.3 |
| Available Dimensions [mm] |           |     |      |      |      |      |      |
| 20.3                      | ■         | ■   | ■    | ■    | ■    |      |      |
| 25.3                      | ■         | ■   | ■    | ■    | ■    | ■    |      |
| 30.3                      | ■         | ■   | ■    | ■    | ■    | ■    | ■    |
| 40.3                      | ■         | ■   | ■    | ■    | ■    | ■    | ■    |
| 50.3                      | ■         | ■   | ■    | ■    | ■    |      |      |
| 60.3                      | ■         | ■   | ■    | ■    | ■    |      |      |
| 80.3                      | ■         | ■   | ■    |      |      |      |      |
| 100.3                     | ■         | ■   | ■    |      |      |      |      |
| 125.3                     | ■         | ■   |      |      |      |      |      |
| 150.3                     | ■         |     |      |      |      |      |      |



**[GFSM O/S]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** ground or fine milled  
**Length:** milled or saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 330 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.28 | 0   | 0   | 0    | 0.05 | 15.0 | 0   |
| 0.38 | 1.0 | 1.4 | 0.03 | 0.1  | 17.0 | 1.0 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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 - according to your requirements!



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#### Technical Properties

Pre-hardened, corrosion-resistant plastic mold steel. Magnetizable with good machinability. Resistant to humid conditions. Further heat treatment is not intended.  
 Working hardness: approx. 33 HRC (delivery condition) up to 48 HRC.



#### Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



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via smartphone / tablet:



## PREMIUM 420FM - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

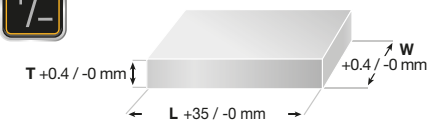
|       | THICKNESS                 |      |      |      |
|-------|---------------------------|------|------|------|
|       | 8.2                       | 10.3 | 15.3 | 20.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |
| 20.3  | ■                         | ■    | ■    | ■    |
| 25.3  | ■                         | ■    | ■    | ■    |
| 30.3  | ■                         | ■    | ■    |      |
| 40.3  | ■                         | ■    |      |      |
| 50.3  | ■                         | ■    |      |      |
| 60.3  | ■                         |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 330 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.28 | 0   | 0   | 0    | 0.05 | 15.0 | 0   |
| 0.38 | 1.0 | 1.4 | 0.03 | 0.1  | 17.0 | 1.0 |

**Don't see your exact dimension(s)?**

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**Technical Properties**

Pre-hardened, corrosion-resistant plastic mold steel. Magnetizable with good machinability. Resistant to humid conditions. Further heat treatment is not intended.

Working hardness: approx. 33 HRC (delivery condition) up to 48 HRC.

**Applications**

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

**AISI 420FM – all at a glance!**

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ABRAMS STEEL GUIDE for alternatives:  
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via smartphone/tablet:




# PREMIUM 420FM - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |  |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|--|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" |  |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |  |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |  |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |  |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |  |



### Technical Properties

Pre-hardened, corrosion-resistant plastic mold steel. Magnetizable with good machinability. Resistant to humid conditions. Further heat treatment is not intended.  
Working hardness: approx. 33 HRC (delivery condition) up to 48 HRC.



### Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



### [\$mart]: Surface Condition

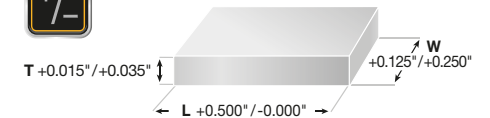
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 330 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.28 | 0   | 0   | 0    | 0.05 | 15.0 | 0   |
| 0.38 | 1.0 | 1.4 | 0.03 | 0.1  | 17.0 | 1.0 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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## PREMIUM 420FM - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |
|---------|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|
|         | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" |
|         | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |
| 1"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 2"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 3"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 4"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 5"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 6"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 7"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 8"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 9"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 10"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 10-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 11"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 11-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 12"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 13"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 14"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 15"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 16"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 17"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 18"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 19"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |
| 20"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |



## Technical Properties

Pre-hardened, corrosion-resistant plastic mold steel. Magnetizable with good machinability. Resistant to humid conditions. Further heat treatment is not intended.  
Working hardness: approx. 33 HRC (delivery condition) up to 48 HRC.



## Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



## [\$mart]: Surface Condition

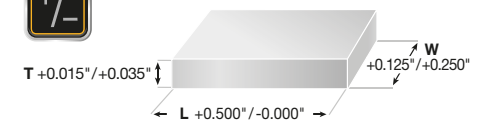
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 330 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.28 | 0   | 0   | 0    | 0.05 | 15.0 | 0   |
| 0.38 | 1.0 | 1.4 | 0.03 | 0.1  | 17.0 | 1.0 |



## Don't see your exact dimension(s)?

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Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

# PREMIUM 420FM - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

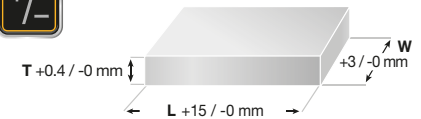
| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 330 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.28 | 0   | 0   | 0    | 0.05 | 15.0 | 0   |
| 0.38 | 1.0 | 1.4 | 0.03 | 0.1  | 17.0 | 1.0 |



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### Technical Properties

Pre-hardened, corrosion-resistant plastic mold steel. Magnetizable with good machinability. Resistant to humid conditions. Further heat treatment is not intended.  
 Working hardness: approx. 33 HRC (delivery condition) up to 48 HRC.



### Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



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via smartphone / tablet:



## PREMIUM 420FM - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH | THICKNESS                 |     |     |     |     |      |      |      |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|
|       | 3.3                       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 |
|       | Available Dimensions [mm] |     |     |     |     |      |      |      |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## Technical Properties

Pre-hardened, corrosion-resistant plastic mold steel. Magnetizable with good machinability. Resistant to humid conditions. Further heat treatment is not intended.  
Working hardness: approx. 33 HRC (delivery condition) up to 48 HRC.



## Applications

Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembly parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.



## [\$martM]: Surface Condition

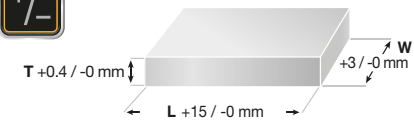
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 330 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.28 | 0   | 0   | 0    | 0.05 | 15.0 | 0   |
| 0.38 | 1.0 | 1.4 | 0.03 | 0.1  | 17.0 | 1.0 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
Custom orders on request  
- according to your requirements!



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Datasheets, online shop,  
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abrams-steel.com/420FM

via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

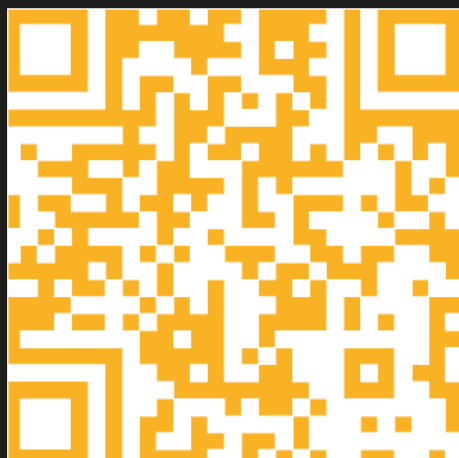
1045

2990 mod.

420 ESR

420 LC

420FM



WATCH THE MAKING OF THE 2ND MOTIF FOR CALENDAR 2019 / 2022



ABRAMS - PERFECTION FROM TIP TO TOE!

**ABRAMS**  
PREMIUM STEEL

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM



ABRAMS - THE POWER OF STEEL GRADE VARIETY!

**ABRAMS!**  
PREMIUM STEEL

## PREMIUM 5120 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## TOOL STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

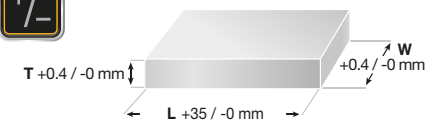
|       | THICKNESS                 |      |      |      |      |      |
|-------|---------------------------|------|------|------|------|------|
|       | 8.2                       | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |
| 15.3  |                           |      |      | ■    |      |      |
| 20.3  | ■                         | ■    | ■    | ■    | ■    | ■    |
| 25.3  | ■                         | ■    | ■    | ■    | ■    | ■    |
| 30.3  | ■                         | ■    | ■    | ■    | ■    |      |
| 32.3  | ■                         | ■    | ■    | ■    | ■    |      |
| 40.3  | ■                         | ■    | ■    |      |      |      |
| 50.3  | ■                         | ■    |      |      |      |      |
| 60.3  | ■                         |      |      |      |      |      |
| 70.3  | ■                         |      |      |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  |
|------|------|-----|------|------|-----|
| 0.18 | 0.15 | 1.1 | 0    | 0    | 1.0 |
| 0.24 | 0.35 | 1.4 | 0.03 | 0.03 | 1.3 |

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**Technical Properties**

Cold work steel and plastic mold steel. High surface hardness with high core toughness. Excellent machinability, good cold hobbing and polishing properties. The even component strength is a result of the combination of hardened surface and high core toughness.

Surface working hardness: 58-60 HRC.

**Applications**

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin mold tools, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

**AISI 5120 – all at a glance!**

Datasheets, online shop,

ABRAMS STEEL GUIDE for alternatives:

abrams-steel.com/5120

via smartphone/tablet:





# PREMIUM 5120 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |
|---------|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



### Technical Properties

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### [\$mart]: Surface Condition

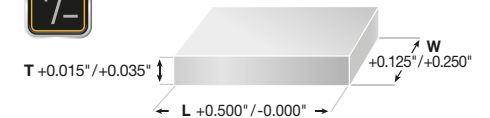
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  |
|------|------|-----|------|------|-----|
| 0.18 | 0.15 | 1.1 | 0    | 0    | 1.0 |
| 0.24 | 0.35 | 1.4 | 0.03 | 0.03 | 1.3 |



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






































































































































































































































































































































































## PREMIUM 5120 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 3/32"   | 1/8"  | 3/16"   | 7/32"   | 1/4"  | 5/16"   | 3/8"  | 1/2"  | 5/8"  | 3/4"  | 1"  | 1-1/4"  | 1-1/2"  | 2"  |   |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1"  |                        |    |    |    |    |  |  |  |  |  |  |   |   |   |   |
| 1-1/4"  |                        |    |    |    |    |  |  |  |  |  |  |  |   |   |   |
| 1-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |   |   |
| 2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |   |
| 2-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 3"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 3-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 4"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 4-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 5"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 5-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 6"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 6-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 7"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 7-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 8"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 8-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 9"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 9-1/2"  |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 10"   |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 10-1/2"   |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 11"   |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 11-1/2"   |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 12"   |                        |    |    |    |    |  |  |  |  |  |  |  |  |  |  |
| 13"   |                      |  |  |  |  |   |   |   |   |   |   |   |   |   |   |



## Technical Properties

Cold work steel and plastic mold steel. High surface hardness with high core toughness. Excellent machinability, good cold hobbing and polishing properties. The even component strength is a result of the combination of hardened surface and high core toughness.

Surface working hardness: 58-60 HRC.



## Applications

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin mold tools, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.



## [\$mart]: Surface Condition

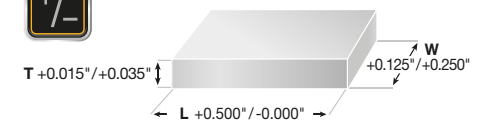
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  |
|------|------|-----|------|------|-----|
| 0.18 | 0.15 | 1.1 | 0    | 0    | 1.0 |
| 0.24 | 0.35 | 1.4 | 0.03 | 0.03 | 1.3 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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- according to your requirements!



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abrams-steel.com/5120

via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

# PREMIUM 5120 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

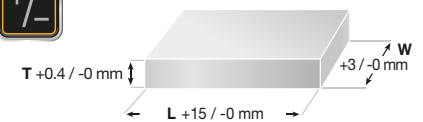
| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 217 BHN  
 Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  |
|------|------|-----|------|------|-----|
| 0.18 | 0.15 | 1.1 | 0    | 0    | 1.0 |
| 0.24 | 0.35 | 1.4 | 0.03 | 0.03 | 1.3 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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### Technical Properties

Cold work steel and plastic mold steel. High surface hardness with high core toughness. Excellent machinability, good cold hobbing and polishing properties. The even component strength is a result of the combination of hardened surface and high core toughness.  
 Surface working hardness: 58-60 HRC.



### Applications

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin mold tools, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.



### AISI 5120 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/5120](http://abrams-steel.com/5120)

via smartphone / tablet:



## PREMIUM 5120 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH | THICKNESS                 |     |     |     |     |      |      |      |      |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|       | 3.3                       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
|       | Available Dimensions [mm] |     |     |     |     |      |      |      |      |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## Technical Properties

Cold work steel and plastic mold steel. High surface hardness with high core toughness. Excellent machinability, good cold hobbing and polishing properties. The even component strength is a result of the combination of hardened surface and high core toughness.

Surface working hardness: 58-60 HRC.



## Applications

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin mold tools, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.



## [\$martM]: Surface Condition

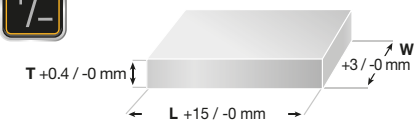
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  |
|------|------|-----|------|------|-----|
| 0.18 | 0.15 | 1.1 | 0    | 0    | 1.0 |
| 0.24 | 0.35 | 1.4 | 0.03 | 0.03 | 1.3 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120



WATCH THE MAKING OF THE 8TH MOTIF FOR CALENDAR 2016 / 2019



ON REQUEST - SAW CUT - MILLED - GROUND!

Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 52100 / L1 - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

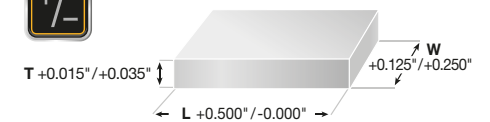
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 223 BHN  
 Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | Mo  | Ni  |
|------|------|-----|-------|-------|-----|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.4 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6 | 0.1 | 0.4 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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 - according to your requirements!



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### Direct access to our online shop

[abrams-steel.com/52100-L1-10](http://abrams-steel.com/52100-L1-10)



### Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel).  
 Working hardness: 60-64 HRC.



### Applications

Drills, threading tools, center lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).



### AISI 52100 / L1 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/52100-L1](http://abrams-steel.com/52100-L1)

via smartphone/tablet:





## PREMIUM 52100 / L1 - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel).  
Working hardness: 60-64 HRC.



## Applications

Drills, threading tools, center lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).



## [\$mart]: Surface Condition

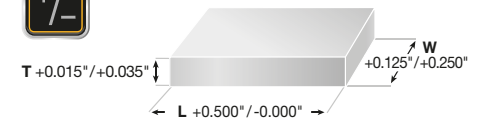
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | Mo  | Ni  |
|------|------|-----|-------|-------|-----|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.4 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6 | 0.1 | 0.4 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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## AISI 52100 / L1 – all at a glance!

Datasheets, online shop,

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via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

52100 /  
L1

# PREMIUM 52100 / L1 - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

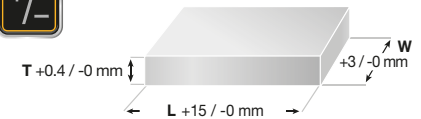
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 223 BHN  
 Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | Mo  | Ni  |
|------|------|-----|-------|-------|-----|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.4 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6 | 0.1 | 0.4 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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[abrams-steel.com/52100-L1-12](http://abrams-steel.com/52100-L1-12)



### Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel).  
 Working hardness: 60-64 HRC.



### Applications

Drills, threading tools, center lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).



### AISI 52100 / L1 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/52100-L1](http://abrams-steel.com/52100-L1)

via smartphone/tablet:



## PREMIUM 52100 / L1 - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

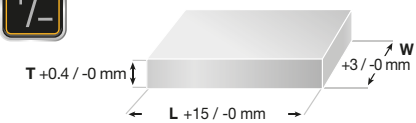
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C    | Si   | Mn  | P     | S     | Cr  | Mo  | Ni  |
|------|------|-----|-------|-------|-----|-----|-----|
| 0.95 | 0.15 | 0.2 | 0     | 0     | 1.4 | 0   | 0   |
| 1.1  | 0.35 | 0.4 | 0.025 | 0.025 | 1.6 | 0.1 | 0.4 |



## Don't see your exact dimension(s)?

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## Technical Properties

An all-purpose medium alloyed cold work tool steel with high hardenability, but low depth of hardening, good wear resistance and toughness. This steel grade belongs to the group of AISI L1 (roller bearing and ball bearing steel).  
Working hardness: 60-64 HRC.



## Applications

Drills, threading tools, center lathes, milling cutters, reamers, small die plates, pressure rollers, cold rollings, measuring tools, cold pilger rollings, cold pilger jaws, gauges, mandrels, woodworking tools, cold extrusion tools, flanging rollers, shear knives, roller bearings, ball bearings (medium to large size).

Toolox 33

Toolox 44

W1

1018 / A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

52100 / L1



## AISI 52100 / L1 – all at a glance!

Datasheets, online shop,  
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via smartphone/tablet:





WATCH THE MAKING OF THE 1ST MOTIF FOR CALENDAR 2016 / 2019



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

52100 /  
L1

# PREMIUM 6F7 ESR - \$mart FLAT STOCK

# TOOL STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



### Technical Properties

Steel grade with focus on cold work, high toughness (nickel content), good through-hardenedability (even for large cross sections), as well as high impact strength and pressure resistance. Polishable, etchable and erodible. For very special purity and homogeneity we recommend AISI 6F7 ESR. Working hardness: 50-54 HRC.



### Applications

Cutting tools, cutlery punches, embossing tools, bending tools, cold hobbing tools, pressure bars, billet shear knives, cold shear knives, plastic molds, hot press tools, light metal processing, heavy metal processing, drawing jaws, reinforcements.



### [\$mart]: Surface Condition

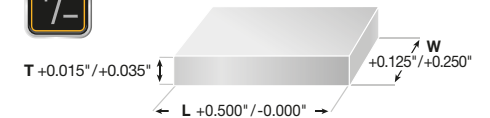
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



### Tolerances



### Standard values

Delivery condition: maximum 260 BHN

Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|-----|-----|-----|------|------|-----|------|-----|
| 0.4 | 0.1 | 0.2 | 0    | 0    | 1.2 | 0.15 | 3.8 |
| 0.5 | 0.4 | 0.5 | 0.03 | 0.03 | 1.5 | 0.35 | 4.3 |



### Don't see your exact dimension(s)?

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### Contact us

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sales@abrams-industries.com



### Direct access to our online shop

abrams-steel.com/6F7ESR-10



### AISI 6F7 ESR – all at a glance!

Datasheets, online shop, ABRAMS STEEL GUIDE for alternatives: [abrams-steel.com/6F7ESR](http://abrams-steel.com/6F7ESR)

via smartphone / tablet:



## PREMIUM 6F7 ESR - \$mart FLAT STOCK

## TOOL STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Steel grade with focus on cold work, high toughness (nickel content), good through-hardness (even for large cross sections), as well as high impact strength and pressure resistance. Polishable, etchable and erodible. For very special purity and homogeneity we recommend AISI 6F7 ESR. Working hardness: 50-54 HRC.



## Applications

Cutting tools, cutlery punches, embossing tools, bending tools, cold hobbing tools, pressure bars, billet shear knives, cold shear knives, plastic molds, hot press tools, light metal processing, heavy metal processing, drawing jaws, reinforcements.



## [\$mart]: Surface Condition

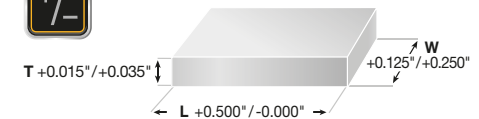
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 260 BHN

Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|-----|-----|-----|------|------|-----|------|-----|
| 0.4 | 0.1 | 0.2 | 0    | 0    | 1.2 | 0.15 | 3.8 |
| 0.5 | 0.4 | 0.5 | 0.03 | 0.03 | 1.5 | 0.35 | 4.3 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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abrams-steel.com/6F7ESR

via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

52100 /  
L1

6F7 ESR



# PREMIUM 6F7 ESR - \$mart FLAT STOCK METRIC

# TOOL STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

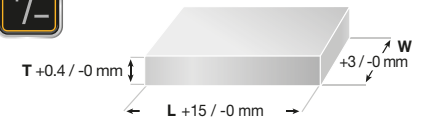
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 260 BHN  
 Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|-----|-----|-----|------|------|-----|------|-----|
| 0.4 | 0.1 | 0.2 | 0    | 0    | 1.2 | 0.15 | 3.8 |
| 0.5 | 0.4 | 0.5 | 0.03 | 0.03 | 1.5 | 0.35 | 4.3 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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 - according to your requirements!



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[abrams-steel.com/6F7ESR-12](http://abrams-steel.com/6F7ESR-12)



### Technical Properties

Steel grade with focus on cold work, high toughness (nickel content), good through-hardening (even for large cross sections), as well as high impact strength and pressure resistance. Polishable, etchable and erodible. For very special purity and homogeneity we recommend AISI 6F7 ESR. Working hardness: 50-54 HRC.



### Applications

Cutting tools, cutlery punches, embossing tools, bending tools, cold hobbing tools, pressure bars, billet shear knives, cold shear knives, plastic molds, hot press tools, light metal processing, heavy metal processing, drawing jaws, reinforcements.



### AISI 6F7 ESR – all at a glance!

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[abrams-steel.com/6F7ESR](http://abrams-steel.com/6F7ESR)

via smartphone / tablet:



## PREMIUM 6F7 ESR - \$mart FLAT STOCK METRIC

## TOOL STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

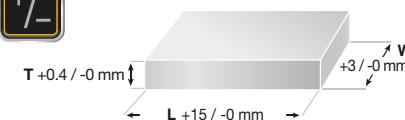
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 260 BHN

Chemical composition:

| C   | Si  | Mn  | P    | S    | Cr  | Mo   | Ni  |
|-----|-----|-----|------|------|-----|------|-----|
| 0.4 | 0.1 | 0.2 | 0    | 0    | 1.2 | 0.15 | 3.8 |
| 0.5 | 0.4 | 0.5 | 0.03 | 0.03 | 1.5 | 0.35 | 4.3 |



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## Technical Properties

Steel grade with focus on cold work, high toughness (nickel content), good through-hardness (even for large cross sections), as well as high impact strength and pressure resistance. Polishable, etchable and erodible. For very special purity and homogeneity we recommend AISI 6F7 ESR. Working hardness: 50-54 HRC.



## Applications

Cutting tools, cutlery punches, embossing tools, bending tools, cold hobbing tools, pressure bars, billet shear knives, cold shear knives, plastic molds, hot press tools, light metal processing, heavy metal processing, drawing jaws, reinforcements.



## AISI 6F7 ESR – all at a glance!

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abrams-steel.com/6F7ESR

via smartphone/tablet:



Toolox 33

Toolox 44

W1

1018 /  
A36

1045

2990 mod.

420 ESR

420 LC

420FM

5120

52100 /  
L1

6F7 ESR



WATCH THE MAKING OF THE 10TH MOTIF FOR CALENDAR 2019 / 2022



USE UP TO 40% LESS MATERIAL WITH OUR \$MART FLAT STOCK!

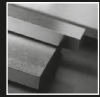
**ABRAMS!**  
PREMIUM STEEL

## FLATS !

Below are our flats in different categories in imperial as well as metric sizes.

Every item is available in different **thickness**, **width** and **length**. On request – specific to your needs!

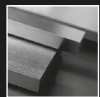
### IMPERIAL



#### Precision Ground Flat Stock, regular [GFS reg]

For example: 3/4" x 4" x 36" reg

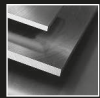
- **Thickness** ground, tol. +/-0.001"
- **Width** ground or fine milled, tol. +0.005" / -0.000"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### Precision Ground Flat Stock, oversize [GFS O/S]

For example: 3/4" x 4" x 36" O/S

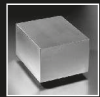
- **Thickness** ground, tol. +0.010" / +0.015"
- **Width** ground or fine milled, tol. +0.010" / +0.015"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### \$mart Flat Stock [\$mart] Standardized Precision Blanks

For example: 3/4" x 4" x 24"

- **Thickness** ground or fine milled, tol. +0.015" / +0.035"
- **Width** saw cut, tol. +0.125" / +0.250"
- **Length** saw cut, tol. +0.500" / -0.000"



#### EDM Block hardened [EDM]

For example: 1/2" x 4" x 4"

- **Thickness** ground or fine milled, tol. +0.010" / -0.000"
- Square dimension ground or fine milled, tol. min. +0.0125"
- Grain structure is perpendicular in relation to top & bottom.

### METRIC



#### Precision Ground Flat Stock Metric, regular [GFSM reg] acc. to DIN\* 59350

For example: 20.0 x 100.0 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.05 / -0 mm
  - **Width** ground or fine milled, tol. +0.2 / -0 mm
  - **Length** milled or saw cut, tol. +35 / -0 mm
- Exception: AISI 1045: **T** +0.25 / -0 mm; **W** +0.4 / -0 mm



#### Precision Ground Flat Stock Metric, oversize [GFSM O/S]

For example: 20.3 x 100.3 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** ground or fine milled, tol. +0.4 / -0 mm
- **Length** milled or saw cut, tol. +35 / -0 mm



#### \$mart Flat Stock Metric [\$martM] Standardized Precision Blanks Metric

For example: 20.3 x 103 x 600 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** saw cut, tol. +3 / -0 mm
- **Length** saw cut, tol. +15 / -0 mm



#### Hard Flat Metric [HardM] Hardened Standardized Blanks Metric

For example: 10.2 x 250 x 500 mm

- **Thickness** ground or fine milled, tol. +0.2 / -0 mm
- **Width** saw cut or sheared, tol. +10 / -0 mm
- **Length** saw cut or sheared, tol. +10 / -0 mm

Flatness tolerance: +0.2 / -0 mm across the item (aimed for)

### \*DIN: DEUTSCHE INDUSTRIE NORM (GERMAN INDUSTRY STANDARD) !

Precision ground flat stock is a bar with a sharp-edged, rectangular or square cross-section made of tool steel with finely machined, decarburization-free longitudinal surfaces. In Germany, it is standardized in DIN 59350. Precision ground flat stock is used primarily as a semi-finished product in machine, tool, fixture and mold construction.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)



## ROUNDS !

Below are our rounds in different categories in imperial as well as metric sizes.

Any item is available in different **diameters** and / or **length**. On request – specific to your needs!

### IMPERIAL



#### Drill Rod [DR]

##### Precision Round Bars

**For example: DR 3/4" x 36"**

Turned, ground & polished (TGP)

- Tol. Dia. < 1/8":  $\pm 0.0003$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/8" to < 1/2":  $\pm 0.0005$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/2" to 2":  $\pm 0.001$ ", L  $+0.125$ " /  $-0.000$ "



#### Cold Finished Rounds [CF]

##### Precision Round Bars

**For example: CF 3/4" x 36"**

Drawn, smooth turned, ground, or ground and polished

- Tol. Dia. < 1/2":  $\pm 0.0015$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1/2" to < 1-1/2":  $\pm 0.0025$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1-1/2" to 4":  $\pm 0.004$ ", L  $\pm$ tol. /  $-0.400$ "

These are maximum tolerances. For more exact tolerances call our sales team.



#### Decarb Free Rounds [DCF]

##### Oversize Round Bars

**For example: DCF 3/4" x 36"**

Peeled or rough-turned

- Tol. Dia. min.  $+0.010$ ", L  $\pm$ tol. /  $-0.400$ "
- Exception: 4XX Series stainless steel, tol. Dia.  $\pm$ tol. /  $-0.000$ ", L  $\pm$ tol. /  $-0.400$ "

These steel rounds are oversized to finish to nominal diameter.

### METRIC



#### Drill Rod Metric [DRM]

##### Precision Round Bars Metric

**For example: DRM 10.0 mm x 914 mm (36")**

Turned, ground & polished (TGP) - ISO h9

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.



#### Cold Finished Rounds Metric [CFM]

##### Precision Round Bars Metric

**For example: CFM 10.0 mm x 914 mm (36")**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.

### STEEL CATEGORIES !

Steel grades are classified by their **technical properties** and/or by their intended use.

For example: Cold work steel, hot work steel, plastic mold steel, high speed steel, corrosion resistant steel or case hardening steel.

Steel grades are often assigned to several classification groups.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)



WATCH THE MAKING OF  
THE CATWALK MOTIF FOR  
CALENDAR 2011 / 2013



ABRAMS PREMIUM HIGH SPEED STEEL!

**ABRAMS!**  
PREMIUM STEEL



## HIGH SPEED STEEL

### STEEL GRADE - AISI

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|



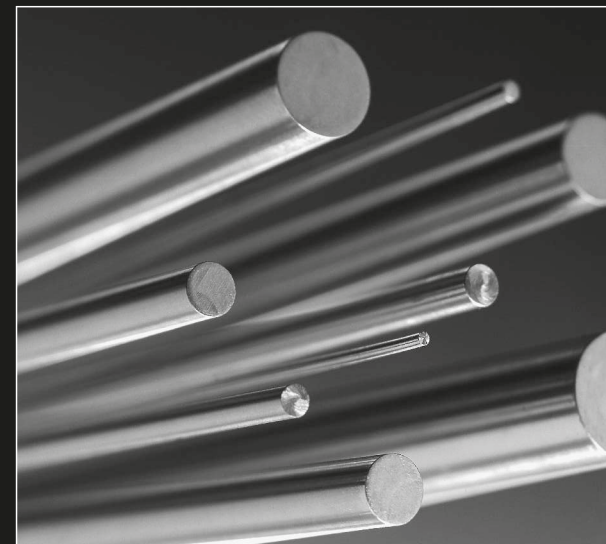
### IMPERIAL

Precision Ground Flat Stock, regular [GFS reg]  
 Precision Ground Flat Stock, oversize [GFS O/S]  
 \$mart Flat Stock [\$mart] - Standardized Precision Blanks  
 EDM Block hardened [EDM]  
 Drill Rod [DR] - Precision Round Bars  
 Cold Finished Rounds [CF] - Precision Round Bars  
 Decarb Free Rounds [DCF] - Oversize Round Bars



### METRIC

Precision Ground Flat Stock Metric, regular [GFSM reg] - acc. to DIN\* 59350  
 Precision Ground Flat Stock Metric, oversize [GFSM O/S]  
 \$mart Flat Stock Metric [\$martM] - Standardized Precision Blanks Metric  
 Hard Flat Metric [HardM] - Hardened Standardized Blanks Metric  
 Drill Rod Metric [DRM] - Precision Round Bars Metric  
 Cold Finished Rounds Metric [CFM] - Precision Round Bars Metric  
 \*DIN: Deutsche Industrie Norm (German Industry Standard)



ABRAMS - THE POWER OF STEEL GRADE VARIETY!

**ABRAMS!**  
 PREMIUM STEEL

# PREMIUM HSS M2 - \$mart FLAT STOCK

# HIGH SPEED STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

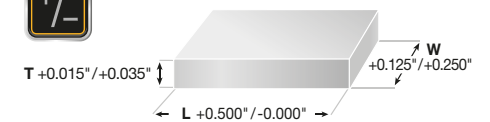
| WIDTH   | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |
|---------|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 270 BHN  
 Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 0.86 | 0    | 0   | 0    | 0    | 3.8 | 4.7 | 1.7 | 5.9 |
| 0.94 | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.2 | 2.1 | 6.7 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



### Contact us

+1 (331) 234-9900  
[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[abrams-steel.com/M2-10](http://abrams-steel.com/M2-10)



### Technical Properties

This high speed steel is the most frequently used among the high speed steels. Its composition allows it to be used for a wide range of applications. High impact toughness, good compression strength, excellent wear resistance.  
 Working hardness: 62-65 HRC.



### Applications

Machining tools, milling cutters, twist drills, screw taps, reamers, broaching tools, rotary knives, planer knives, gear shaper cutters, circular saw segments, metal saws, woodworking tools, screw dies, countersinks, chasers, cold extrusion punches, precision cutting tools, dies, punches, plastic molds with high wear resistance.



### AISI M2 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/M2](http://abrams-steel.com/M2)

via smartphone/tablet:









































































































































































































































































































































































## PREMIUM HSS M2 - \$mart FLAT STOCK

## HIGH SPEED STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS   |   |   |   |   |   |   |   |   |   |   |        |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|--------|---|---|---|
|   | 3/32"   | 1/8"  | 3/16"   | 7/32"   | 1/4"  | 5/16"   | 3/8"  | 1/2"  | 5/8"  | 3/4"  | 1"  | 1-1/4" | 1-1/2"  | 2"  |   |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |        |   |   |   |
| 1"  |                        |    |    |    |    |    |    |    |    |    |    |        |   |   |   |
| 1-1/4"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |   |   |
| 1-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |   |
| 2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 2-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 3"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 3-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 4"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 4-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 5"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 5-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 6"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 6-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 7"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 7-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 8"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 8-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 9"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 9-1/2"  |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 10"   |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 10-1/2"   |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 11"   |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 11-1/2"   |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 12"   |                        |    |    |    |    |    |    |    |    |    |    |        |    |    |    |
| 13"   |                      |  |  |  |  |  |  |  |  |  |  |        |  |  |  |
| 14"   |                      |  |  |  |  |  |  |  |  |  |  |        |  | <   |   |



## [\$mart]: Surface Condition

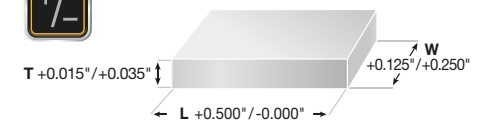
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 0.86 | 0    | 0   | 0    | 0    | 3.8 | 4.7 | 1.7 | 5.9 |
| 0.94 | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.2 | 2.1 | 6.7 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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sales@abrams-industries.com



## Direct access to our online shop

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## Technical Properties

This high speed steel is the most frequently used among the high speed steels. Its composition allows it to be used for a wide range of applications. High impact toughness, good compression strength, excellent wear resistance.

Working hardness: 62-65 HRC.



## Applications

Machining tools, milling cutters, twist drills, screw taps, reamers, broaching tools, rotary knives, planer knives, gear shaper cutters, circular saw segments, metal saws, woodworking tools, screw dies, countersinks, chasers, cold extrusion punches, precision cutting tools, dies, punches, plastic molds with high wear resistance.



## AISI M2 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/M2

via smartphone / tablet:



HSS M2

# PREMIUM HSS M2 - \$mart FLAT STOCK METRIC

# HIGH SPEED STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

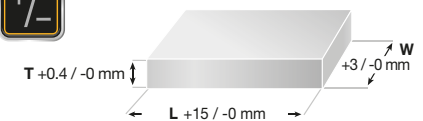
| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 270 BHN  
 Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 0.86 | 0    | 0   | 0    | 0    | 3.8 | 4.7 | 1.7 | 5.9 |
| 0.94 | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.2 | 2.1 | 6.7 |



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### Applications

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### AISI M2 – all at a glance!

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[abrams-steel.com/M2](http://abrams-steel.com/M2)

via smartphone/tablet:



## PREMIUM HSS M2 - \$mart FLAT STOCK METRIC

## HIGH SPEED STEEL

Length: 600 mm

### METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



#### Technical Properties

This high speed steel is the most frequently used among the high speed steels. Its composition allows it to be used for a wide range of applications. High impact toughness, good compression strength, excellent wear resistance.  
Working hardness: 62-65 HRC.



#### Applications

Machining tools, milling cutters, twist drills, screw taps, reamers, broaching tools, rotary knives, planer knives, gear shaper cutters, circular saw segments, metal saws, woodworking tools, screw dies, countersinks, chasers, cold extrusion punches, precision cutting tools, dies, punches, plastic molds with high wear resistance.



#### [\$martM]: Surface Condition

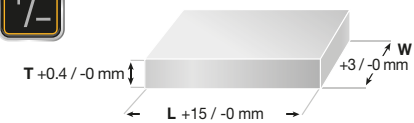
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 0.86 | 0    | 0   | 0    | 0    | 3.8 | 4.7 | 1.7 | 5.9 |
| 0.94 | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.2 | 2.1 | 6.7 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
Custom orders on request  
- according to your requirements!



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#### AISI M2 – all at a glance!

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via smartphone / tablet:



HSS M2





ABRAMS PREMIUM DRILL ROD - PRECISION ROUND BARS (TGP)!

**ABRAMS!**  
PREMIUM STEEL

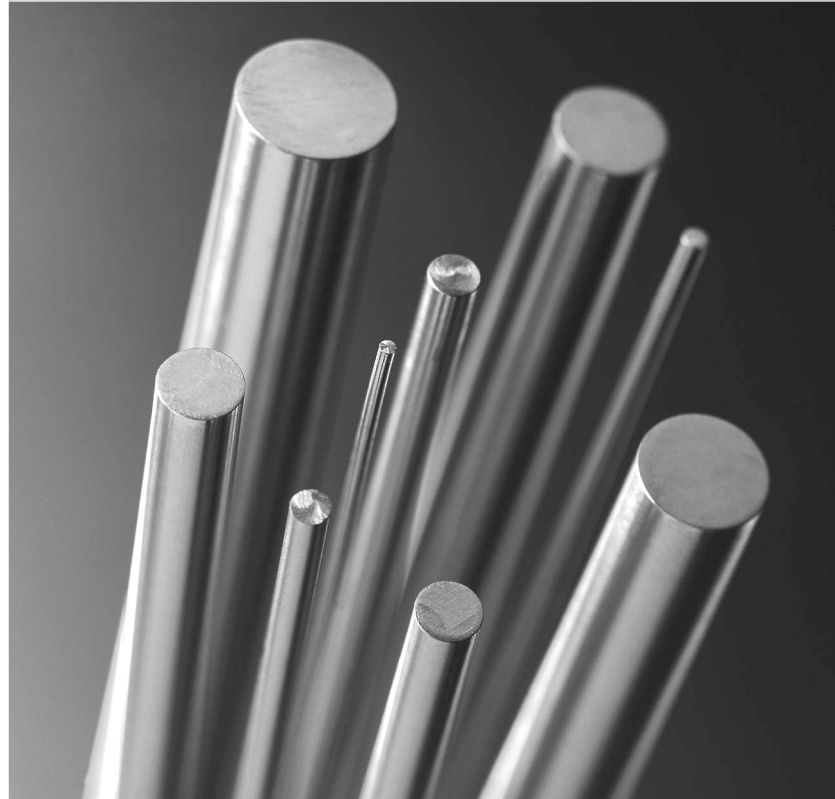
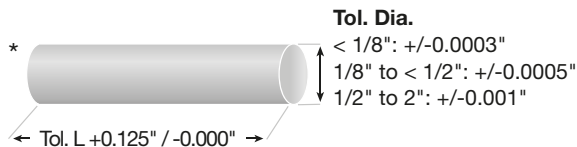
## PREMIUM HSS M2 - DRILL ROD

## HIGH SPEED STEEL

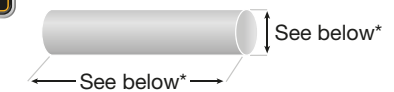
Length: 36"

## IMPERIAL DIAMETERS in inch

| Available Diameters [●] |   |
|-------------------------|---|
| 1/16"                   | ● |
| 5/64"                   | ● |
| 3/32"                   | ● |
| 7/64"                   | ● |
| 1/8"                    | ● |
| 5/32"                   | ● |
| 3/16"                   | ● |
| 1/4"                    | ● |
| 5/16"                   | ● |
| 3/8"                    | ● |
| 7/16"                   | ● |
| 1/2"                    | ● |
| 5/8"                    | ● |
| 3/4"                    | ● |
| 1"                      | ● |

**[DR]: Surface Condition**

Turned, ground &amp; polished (TGP)

**Tolerances****Standard values**

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 0.86 | 0    | 0   | 0    | 0    | 3.8 | 4.7 | 1.7 | 5.9 |
| 0.94 | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.2 | 2.1 | 6.7 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).

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- according to your requirements.

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**Technical Properties**

This high speed steel is the most frequently used among the high speed steels. Its composition allows it to be used for a wide range of applications. High impact toughness, good compression strength, excellent wear resistance.

Working hardness: 62-65 HRC.

**Applications**

Machining tools, milling cutters, twist drills, screw taps, reamers, broaching tools, rotary knives, planer knives, gear shaper cutters, circular saw segments, metal saws, woodworking tools, screw dies, countersinks, chasers, cold extrusion punches, precision cutting tools, dies, punches, plastic molds with high wear resistance.

**AISI M2 – all at a glance!**

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone/tablet:



HSS M2



# PREMIUM HSS PM M4 HC - \$mart FLAT STOCK

# HIGH SPEED STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

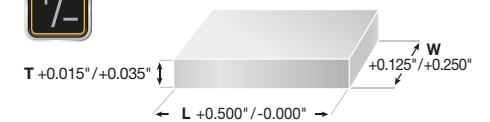
| WIDTH                    | THICKNESS |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|--------------------------|-----------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                          | 5/16"     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [■] |           |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                       | ■         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                      | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                  | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                      | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                  | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                      | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 270 BHN  
 Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 1.25 | 0    | 0   | 0    | 0    | 3.8 | 4.2 | 3.7 | 5.2 |
| 1.4  | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.0 | 4.2 | 6.0 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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### Technical Properties

High speed steel based on powder metallurgy with better wear and pressure resistance than AISI M2, due to a very clean and homogeneous microstructure with evenly spread carbides optimizing wear resistance.  
 Working hardness: 62-65 HRC.



### Applications

Stamping tools, precision cutting tools, machining tools, broaching tools, rotary knives, woodworking tools, gear shaper cutters, circular saw segments, metal saws, screw dies, countersinks, chasers, cold extrusion punches, deep drawing dies, plastic molds with high wear resistance.



### AISI PM M4 HC – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/PMM4HC](http://abrams-steel.com/PMM4HC)

via smartphone/tablet:



## PREMIUM HSS PM M4 HC - \$mart FLAT STOCK

## HIGH SPEED STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

High speed steel based on powder metallurgy with better wear and pressure resistance than AISI M2, due to a very clean and homogeneous microstructure with evenly spread carbides optimizing wear resistance.  
Working hardness: 62-65 HRC.



## Applications

Stamping tools, precision cutting tools, machining tools, broaching tools, rotary knives, woodworking tools, gear shaper cutters, circular saw segments, metal saws, screw dies, countersinks, chasers, cold extrusion punches, deep drawing dies, plastic molds with high wear resistance.



## [\$mart]: Surface Condition

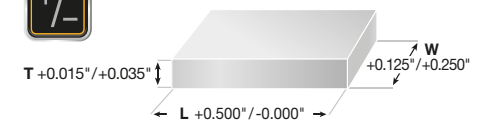
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 1.25 | 0    | 0   | 0    | 0    | 3.8 | 4.2 | 3.7 | 5.2 |
| 1.4  | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.0 | 4.2 | 6.0 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
Custom orders on request  
- according to your requirements!



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via smartphone / tablet:



HSS M2

HSS PM  
M4 HC

# PREMIUM HSS PM M4 HC - \$mart FLAT STOCK METRIC

# HIGH SPEED STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

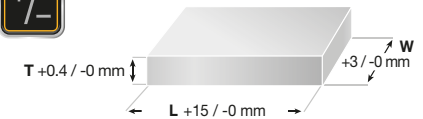
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 270 BHN  
 Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 1.25 | 0    | 0   | 0    | 0    | 3.8 | 4.2 | 3.7 | 5.2 |
| 1.4  | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.0 | 4.2 | 6.0 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



### Contact us

+1 (331) 234-9900  
[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[abrams-steel.com/PMM4HC-12](http://abrams-steel.com/PMM4HC-12)



### Technical Properties

High speed steel based on powder metallurgy with better wear and pressure resistance than AISI M2, due to a very clean and homogeneous microstructure with evenly spread carbides optimizing wear resistance.  
 Working hardness: 62-65 HRC.



### Applications

Stamping tools, precision cutting tools, machining tools, broaching tools, rotary knives, woodworking tools, gear shaper cutters, circular saw segments, metal saws, screw dies, countersinks, chasers, cold extrusion punches, deep drawing dies, plastic molds with high wear resistance.



### AISI PM M4 HC – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/PMM4HC](http://abrams-steel.com/PMM4HC)

via smartphone/tablet:



## PREMIUM HSS PM M4 HC - \$mart FLAT STOCK METRIC

## HIGH SPEED STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

High speed steel based on powder metallurgy with better wear and pressure resistance than AISI M2, due to a very clean and homogeneous microstructure with evenly spread carbides optimizing wear resistance.  
Working hardness: 62-65 HRC.



## Applications

Stamping tools, precision cutting tools, machining tools, broaching tools, rotary knives, woodworking tools, gear shaper cutters, circular saw segments, metal saws, screw dies, countersinks, chasers, cold extrusion punches, deep drawing dies, plastic molds with high wear resistance.



## [\$martM]: Surface Condition

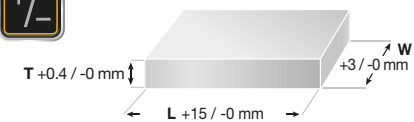
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si   | Mn  | P    | S    | Cr  | Mo  | V   | W   |
|------|------|-----|------|------|-----|-----|-----|-----|
| 1.25 | 0    | 0   | 0    | 0    | 3.8 | 4.2 | 3.7 | 5.2 |
| 1.4  | 0.45 | 0.4 | 0.03 | 0.03 | 4.5 | 5.0 | 4.2 | 6.0 |



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via smartphone/tablet:



HSS M2

HSS PM  
M4 HC



WATCH THE MAKING OF THE 6TH MOTIF FOR CALENDAR 2016 / 2019



ABRAMS PREMIUM DRILL BITS!

**ABRAMS!**  
PREMIUM STEEL

## FLATS !

Below are our flats in different categories in imperial as well as metric sizes.

Every item is available in different **thickness**, **width** and **length**. On request – specific to your needs!

### IMPERIAL



#### Precision Ground Flat Stock, regular [GFS reg]

For example: 3/4" x 4" x 36" reg

- **Thickness** ground, tol. +/-0.001"
- **Width** ground or fine milled, tol. +0.005" / -0.000"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### Precision Ground Flat Stock, oversize [GFS O/S]

For example: 3/4" x 4" x 36" O/S

- **Thickness** ground, tol. +0.010" / +0.015"
- **Width** ground or fine milled, tol. +0.010" / +0.015"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### \$mart Flat Stock [\$mart] Standardized Precision Blanks

For example: 3/4" x 4" x 24"

- **Thickness** ground or fine milled, tol. +0.015" / +0.035"
- **Width** saw cut, tol. +0.125" / +0.250"
- **Length** saw cut, tol. +0.500" / -0.000"



#### EDM Block hardened [EDM]

For example: 1/2" x 4" x 4"

- **Thickness** ground or fine milled, tol. +0.010" / -0.000"
- Square dimension ground or fine milled, tol. min. +0.0125"
- Grain structure is perpendicular in relation to top & bottom.

### METRIC



#### Precision Ground Flat Stock Metric, regular [GFSM reg] acc. to DIN\* 59350

For example: 20.0 x 100.0 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.05 / -0 mm
  - **Width** ground or fine milled, tol. +0.2 / -0 mm
  - **Length** milled or saw cut, tol. +35 / -0 mm
- Exception: AISI 1045: **T** +0.25 / -0 mm; **W** +0.4 / -0 mm



#### Precision Ground Flat Stock Metric, oversize [GFSM O/S]

For example: 20.3 x 100.3 x 1,000 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** ground or fine milled, tol. +0.4 / -0 mm
- **Length** milled or saw cut, tol. +35 / -0 mm



#### \$mart Flat Stock Metric [\$martM] Standardized Precision Blanks Metric

For example: 20.3 x 103 x 600 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** saw cut, tol. +3 / -0 mm
- **Length** saw cut, tol. +15 / -0 mm



#### Hard Flat Metric [HardM] Hardened Standardized Blanks Metric

For example: 10.2 x 250 x 500 mm

- **Thickness** ground or fine milled, tol. +0.2 / -0 mm
- **Width** saw cut or sheared, tol. +10 / -0 mm
- **Length** saw cut or sheared, tol. +10 / -0 mm

Flatness tolerance: +0.2 / -0 mm across the item (aimed for)

### \*DIN: DEUTSCHE INDUSTRIE NORM (GERMAN INDUSTRY STANDARD) !

Precision ground flat stock is a bar with a sharp-edged, rectangular or square cross-section made of tool steel with finely machined, decarburization-free longitudinal surfaces. In Germany, it is standardized in DIN 59350. Precision ground flat stock is used primarily as a semi-finished product in machine, tool, fixture and mold construction.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)



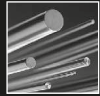


## ROUNDS !

Below are our rounds in different categories in imperial as well as metric sizes.

Any item is available in different **diameters** and / or **length**. On request – specific to your needs!

### IMPERIAL



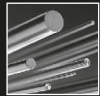
#### Drill Rod [DR]

##### Precision Round Bars

**For example: DR 3/4" x 36"**

Turned, ground & polished (TGP)

- Tol. Dia. < 1/8":  $\pm 0.0003$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/8" to < 1/2":  $\pm 0.0005$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/2" to 2":  $\pm 0.001$ ", L  $+0.125$ " /  $-0.000$ "



#### Cold Finished Rounds [CF]

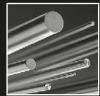
##### Precision Round Bars

**For example: CF 3/4" x 36"**

Drawn, smooth turned, ground, or ground and polished

- Tol. Dia. < 1/2":  $\pm 0.0015$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1/2" to < 1-1/2":  $\pm 0.0025$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1-1/2" to 4":  $\pm 0.004$ ", L  $\pm$ tol. /  $-0.400$ "

These are maximum tolerances. For more exact tolerances call our sales team.



#### Decarb Free Rounds [DCF]

##### Oversize Round Bars

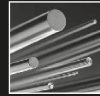
**For example: DCF 3/4" x 36"**

Peeled or rough-turned

- Tol. Dia. min.  $+0.010$ ", L  $\pm$ tol. /  $-0.400$ "
- Exception: 4XX Series stainless steel, tol. Dia.  $\pm$ tol. /  $-0.000$ ", L  $\pm$ tol. /  $-0.400$ "

These steel rounds are oversized to finish to nominal diameter.

### METRIC



#### Drill Rod Metric [DRM]

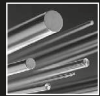
##### Precision Round Bars Metric

**For example: DRM 10.0 mm x 914 mm (36")**

Turned, ground & polished (TGP) - ISO h9

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.



#### Cold Finished Rounds Metric [CFM]

##### Precision Round Bars Metric

**For example: CFM 10.0 mm x 914 mm (36")**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.

### STEEL CATEGORIES !

Steel grades are classified by their **technical properties** and/or by their **intended use**.

For example: Cold work steel, hot work steel, plastic mold steel, high speed steel, corrosion resistant steel or case hardening steel.

Steel grades are often assigned to several classification groups.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)



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9TH MOTIF FOR CALENDAR  
2019 / 2022



ABRAMS PREMIUM STAINLESS STEEL!

**ABRAMS!**  
PREMIUM STEEL

**STAINLESS STEEL,**  
corrosion resistant  
acid resistant**STEEL GRADE - AISI**

|                    |  |  |  |   |   |   |   |  |  |  |   |   |   |     |    |       |     |   |   |   |  |   |   |  |  |
|--------------------|--|--|--|---|---|---|---|--|--|--|---|---|---|-----|----|-------|-----|---|---|---|--|---|---|--|--|
| PREMIUM 303        |  |  |  |   | ✓ | ✓ |   |  |  |  | ✓ | ✓ |   | 250 |    | 116.0 | 20  |   |   |   |  | ✓ | ✓ |  |  |
| PREMIUM 304        |  |  |  |   | ✓ | ✓ |   |  |  |  | ✓ | ✓ |   | 215 |    | 100.0 | <20 |   |   |   |  | ✓ | ✓ |  |  |
| PREMIUM 314        |  |  |  |   | ✓ | ✓ |   |  |  |  |   |   |   | 223 |    | 109.5 | <20 |   |   |   |  | ✓ | ✓ |  |  |
| PREMIUM 316L / 316 |  |  |  |   | ✓ | ✓ |   |  |  |  | ✓ | ✓ |   | 215 |    | 100.0 | <20 |   |   |   |  | ✓ | ✓ |  |  |
| PREMIUM 316Ti      |  |  |  |   | ✓ | ✓ |   |  |  |  |   | ✓ |   | 215 |    | 100.0 | <20 |   |   |   |  | ✓ | ✓ |  |  |
| PREMIUM 410        |  |  |  |   | ✓ | ✓ |   |  |  |  | ✓ |   | ✓ | 252 |    | 123.2 | 31  |   | ✓ |   |  | ✓ | ✓ |  |  |
| PREMIUM 420        |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |   | ✓ | ✓ | 241 | 50 | 118.2 | 55  |   |   | ✓ |  | ✓ | ✓ |  |  |
| PREMIUM 420 mod.   |  |  |  |   | ✓ | ✓ |   |  |  |  |   | ✓ |   | 252 |    | 123.2 | 47  |   | ✓ |   |  | ✓ | ✓ |  |  |
| PREMIUM 420RM      |  |  |  |   | ✓ | ✓ |   |  |  |  |   |   |   | 325 |    | 159.5 | 48  |   |   | ✓ |  | ✓ | ✓ |  |  |
| PREMIUM 430F       |  |  |  |   | ✓ | ✓ |   |  |  |  |   |   |   | 270 |    | 124.7 | 26  |   |   |   |  | ✓ | ✓ |  |  |
| PREMIUM 431        |  |  |  |   | ✓ | ✓ |   |  |  |  | ✓ |   | ✓ | 331 |    | 152.2 | 47  | ✓ | ✓ |   |  | ✓ | ✓ |  |  |
| PREMIUM 440B       |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |   | ✓ |   | 265 | 53 | 134.1 | 58  | ✓ |   | ✓ |  | ✓ | ✓ |  |  |
| PREMIUM 440C       |  |  |  |   | ✓ | ✓ |   |  |  |  | ✓ |   | ✓ | 285 |    | 139.9 | 60  | ✓ |   |   |  | ✓ | ✓ |  |  |

**IMPERIAL**

Precision Ground Flat Stock, regular [GFS reg]  
Precision Ground Flat Stock, oversize [GFS O/S]  
\$mart Flat Stock [\$mart] - Standardized Precision Blanks  
EDM Block hardened [EDM]  
Drill Rod [DR] - Precision Round Bars  
Cold Finished Rounds [CF] - Precision Round Bars  
Decarb Free Rounds [DCF] - Oversize Round Bars

**METRIC**

Precision Ground Flat Stock Metric, regular [GFSM reg] - acc. to DIN\* 59350  
Precision Ground Flat Stock Metric, oversize [GFSM O/S]  
\$mart Flat Stock Metric [\$martM] - Standardized Precision Blanks Metric  
Hard Flat Metric [HardM] - Hardened Standardized Blanks Metric  
Drill Rod Metric [DRM] - Precision Round Bars Metric  
Cold Finished Rounds Metric [CFM] - Precision Round Bars Metric  
\*DIN: Deutsche Industrie Norm (German Industry Standard)

**ABRAMS - THE POWER OF STEEL GRADE VARIETY!****ABRAMS!**  
PREMIUM STEEL

# PREMIUM 303 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

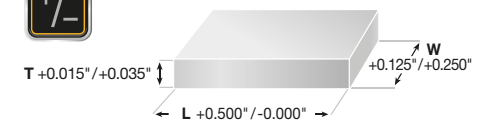
| WIDTH                    | THICKNESS |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|--------------------------|-----------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                          | 3/8"      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [■] |           |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                       | ■         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                   | ■         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C   | Si  | Mn  | P     | S    | Cr   | Ni   | Cu  | N    |
|-----|-----|-----|-------|------|------|------|-----|------|
| 0   | 0   | 0   | 0     | 0.15 | 17.0 | 8.0  | 0   | 0    |
| 0.1 | 1.0 | 2.0 | 0.045 | 0.35 | 19.0 | 10.0 | 1.0 | 0.11 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



### Contact us

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[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[abrams-steel.com/303-10](http://abrams-steel.com/303-10)



### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with additional sulphur content that allows excellent milling, however, not forgeable, non-weldable (cracking), limited polishing properties. Average mechanical properties, non-magnetizable and conditionally acid resistant.

Working hardness: 215-250 BHN (delivery condition).



### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



### AISI 303 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/303](http://abrams-steel.com/303)

via smartphone/tablet:



## PREMIUM 303 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 3/8"                     | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with additional sulphur content that allows excellent milling, however, not forgeable, non-weldable (cracking), limited polishing properties. Average mechanical properties, non-magnetizable and conditionally acid resistant.

Working hardness: 215-250 BHN (delivery condition).



## Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



## [\$mart]: Surface Condition

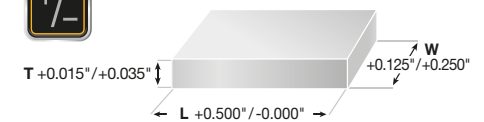
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C   | Si  | Mn  | P     | S    | Cr   | Ni   | Cu  | N    |
|-----|-----|-----|-------|------|------|------|-----|------|
| 0   | 0   | 0   | 0     | 0.15 | 17.0 | 8.0  | 0   | 0    |
| 0.1 | 1.0 | 2.0 | 0.045 | 0.35 | 19.0 | 10.0 | 1.0 | 0.11 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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# PREMIUM 303 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

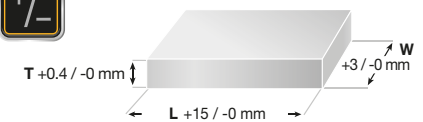
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C   | Si  | Mn  | P     | S    | Cr   | Ni   | Cu  | N    |
|-----|-----|-----|-------|------|------|------|-----|------|
| 0   | 0   | 0   | 0     | 0.15 | 17.0 | 8.0  | 0   | 0    |
| 0.1 | 1.0 | 2.0 | 0.045 | 0.35 | 19.0 | 10.0 | 1.0 | 0.11 |



### Don't see your exact dimension(s)?

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### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with additional sulphur content that allows excellent milling, however, not forgeable, non-weldable (cracking), limited polishing properties. Average mechanical properties, non-magnetizable and conditionally acid resistant.

Working hardness: 215-250 BHN (delivery condition).



### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



### AISI 303 – all at a glance!

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via smartphone / tablet:



## PREMIUM 303 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

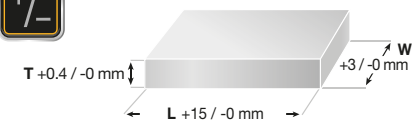
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 250 BHN

Chemical composition:

| C   | Si  | Mn  | P     | S    | Cr   | Ni   | Cu  | N    |
|-----|-----|-----|-------|------|------|------|-----|------|
| 0   | 0   | 0   | 0     | 0.15 | 17.0 | 8.0  | 0   | 0    |
| 0.1 | 1.0 | 2.0 | 0.045 | 0.35 | 19.0 | 10.0 | 1.0 | 0.11 |



## Don't see your exact dimension(s)?

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## Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with additional sulphur content that allows excellent milling, however, not forgeable, non-weldable (cracking), limited polishing properties. Average mechanical properties, non-magnetizable and conditionally acid resistant.

Working hardness: 215-250 BHN (delivery condition).



## Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



## AISI 303 – all at a glance!

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## PREMIUM 303 - COLD FINISHED ROUNDS

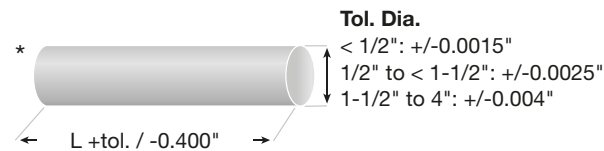
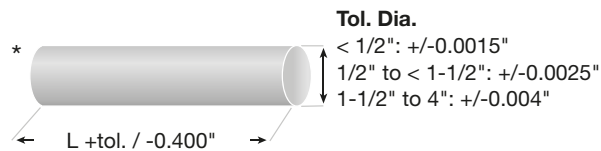
## STAINLESS STEEL

Length: **18"**

Length: **36"** **IMPERIAL DIAMETERS in inch**

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with additional sulphur content that allows excellent milling, however, not forgeable, non-weldable (cracking), limited polishing properties. Average mechanical properties, non-magnetizable and conditionally acid resistant.

Working hardness: 215-250 BHN (delivery condition).



### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.

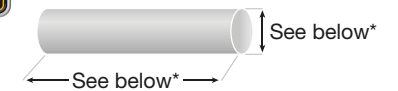


### [CF]: Surface Condition

Drawn, smooth turned, ground, or ground and polished



### Tolerances



### Standard values

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C   | Si  | Mn  | P     | S    | Cr   | Ni   | Cu  | N    |
|-----|-----|-----|-------|------|------|------|-----|------|
| 0   | 0   | 0   | 0     | 0.15 | 17.0 | 8.0  | 0   | 0    |
| 0.1 | 1.0 | 2.0 | 0.045 | 0.35 | 19.0 | 10.0 | 1.0 | 0.11 |



### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
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 [36"] - [abrams-steel.com/303-20](http://abrams-steel.com/303-20)



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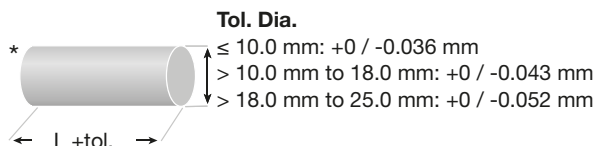
## PREMIUM 303 - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

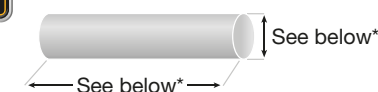
Length: 914 mm (36")

METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 4.0                     | ● |
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[CFM]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

**Tolerances****Standard values**

Delivery condition: maximum 250 BHN  
 Chemical composition:

| C   | Si  | Mn  | P     | S    | Cr   | Ni   | Cu  | N    |
|-----|-----|-----|-------|------|------|------|-----|------|
| 0   | 0   | 0   | 0     | 0.15 | 17.0 | 8.0  | 0   | 0    |
| 0.1 | 1.0 | 2.0 | 0.045 | 0.35 | 19.0 | 10.0 | 1.0 | 0.11 |

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**Technical Properties**

Corrosion resistant austenitic stainless chrome-nickel-steel with additional sulphur content that allows excellent milling, however, not forgeable, non-weldable (cracking), limited polishing properties. Average mechanical properties, non-magnetizable and conditionally acid resistant.

Working hardness: 215-250 BHN (delivery condition).

**Applications**

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.

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WATCH THE MAKING OF THE 7TH MOTIF FOR CALENDAR 2013 / 2016



ABRAMS PREMIUM CORROSION RESISTANT STEEL!

**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 304 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

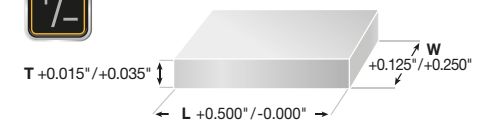
|         | THICKNESS                 |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|---------------------------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 3/8"                      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [mm] |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|------|-----|-----|-------|-------|------|------|------|
| 0    | 0   | 0   | 0     | 0     | 17.5 | 8.0  | 0    |
| 0.07 | 1.0 | 2.0 | 0.045 | 0.015 | 19.5 | 10.5 | 0.11 |



### Don't see your exact dimension(s)?

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### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetizable and limited machining properties. Average mechanical properties, and conditionally acid resistant.  
 Working hardness: 195-215 BHN (delivery condition).



### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



### AISI 304 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone/tablet:





## PREMIUM 304 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

### IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 3/8"                     | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



#### [\$mart]: Surface Condition

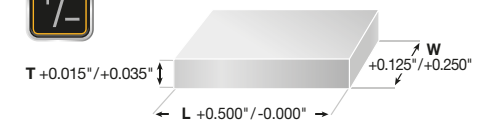
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 215 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|------|-----|-----|-------|-------|------|------|------|
| 0    | 0   | 0   | 0     | 0     | 17.5 | 8.0  | 0    |
| 0.07 | 1.0 | 2.0 | 0.045 | 0.015 | 19.5 | 10.5 | 0.11 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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#### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetizable and limited machining properties. Average mechanical properties, and conditionally acid resistant.

Working hardness: 195-215 BHN (delivery condition).



#### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



#### AISI 304 – all at a glance!

Datasheets, online shop, ABRAMS STEEL GUIDE for alternatives: [abrams-steel.com/304](http://abrams-steel.com/304)

via smartphone/tablet:

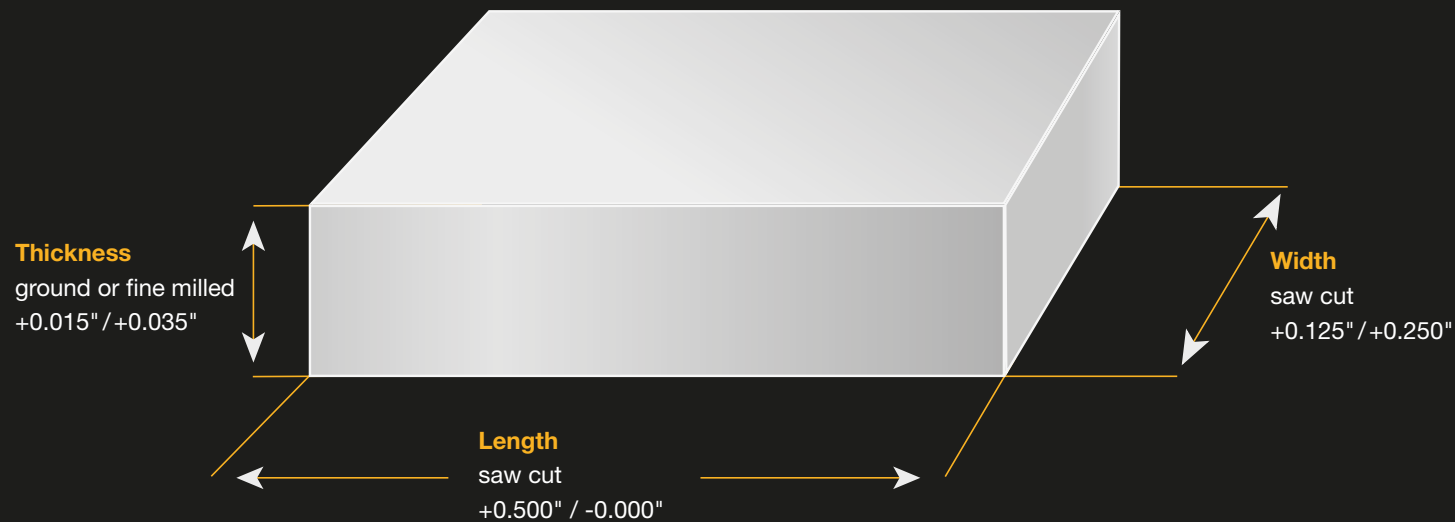


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IMPERIAL

## \$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY

Always close to your final dimensions.





NEW TO THE CANADIAN MARKET !

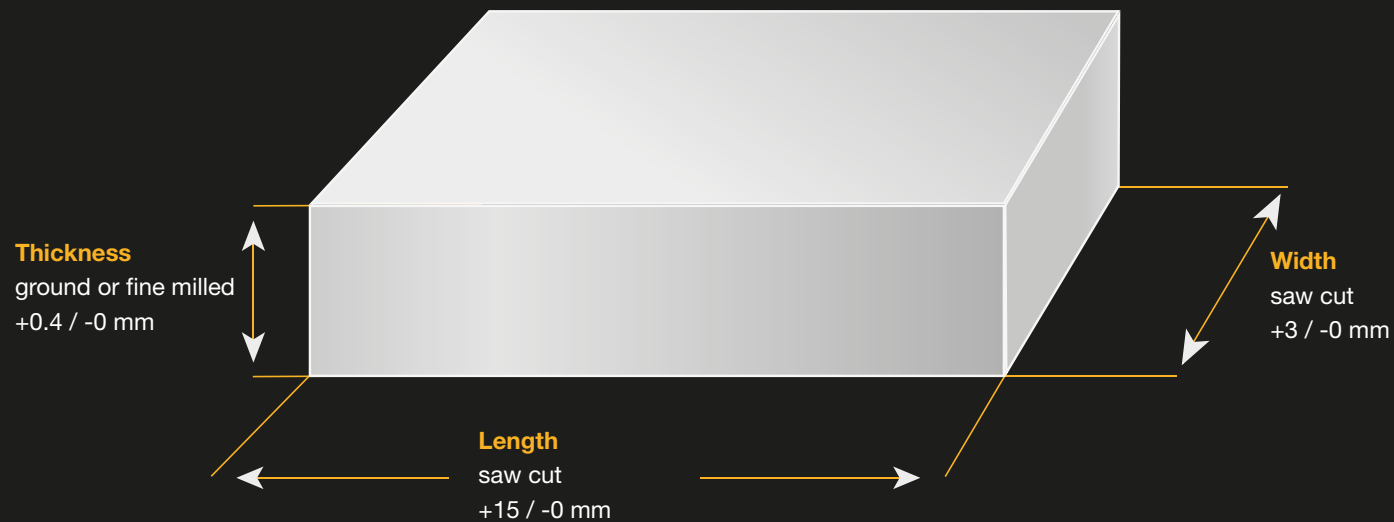
METRIC

303

304

# \$mart Flat Stock: \$AVES YOU TIME - \$AVES YOU MONEY

Always close to your final dimensions.



ABRAMS – \$AVES TIME AND MONEY!

**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 304 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

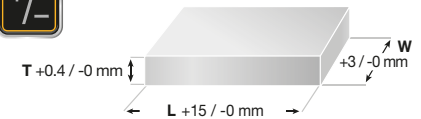
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|------|-----|-----|-------|-------|------|------|------|
| 0    | 0   | 0   | 0     | 0     | 17.5 | 8.0  | 0    |
| 0.07 | 1.0 | 2.0 | 0.045 | 0.015 | 19.5 | 10.5 | 0.11 |



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### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetizable and limited machining properties. Average mechanical properties, and conditionally acid resistant.  
 Working hardness: 195-215 BHN (delivery condition).



### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



### AISI 304 – all at a glance!

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via smartphone/tablet:



## PREMIUM 304 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

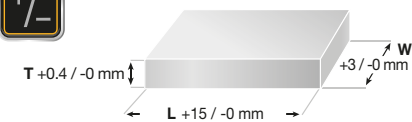
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 215 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|------|-----|-----|-------|-------|------|------|------|
| 0    | 0   | 0   | 0     | 0     | 17.5 | 8.0  | 0    |
| 0.07 | 1.0 | 2.0 | 0.045 | 0.015 | 19.5 | 10.5 | 0.11 |



## Don't see your exact dimension(s)?

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## Technical Properties

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Working hardness: 195-215 BHN (delivery condition).



## Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



## ! AISI 304 – all at a glance!

Datasheets, online shop,  
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via smartphone/tablet:



## PREMIUM 304 - COLD FINISHED ROUNDS

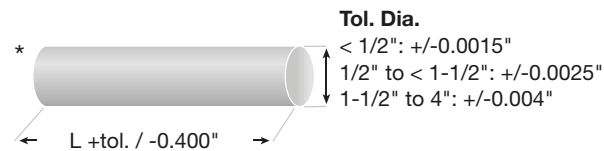
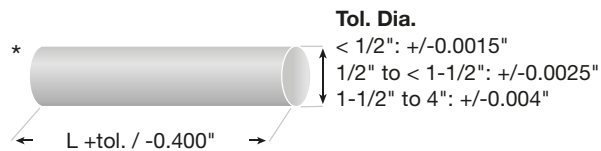
## STAINLESS STEEL

Length: **18"**

Length: **36"** **IMPERIAL DIAMETERS in inch**

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

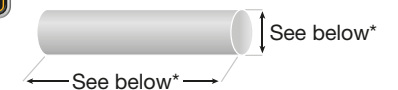


### [CF]: Surface Condition

Drawn, smooth turned, ground, or ground and polished



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|------|-----|-----|-------|-------|------|------|------|
| 0    | 0   | 0   | 0     | 0     | 17.5 | 8.0  | 0    |
| 0.07 | 1.0 | 2.0 | 0.045 | 0.015 | 19.5 | 10.5 | 0.11 |



### Don't see your exact dimension(s)?

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 - according to your requirements.



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[18"] - [abrams-steel.com/304-19](http://abrams-steel.com/304-19)  
 [36"] - [abrams-steel.com/304-20](http://abrams-steel.com/304-20)



### Technical Properties

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetizable and limited machining properties. Average mechanical properties, and conditionally acid resistant.  
 Working hardness: 195-215 BHN (delivery condition).



### Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.



### AISI 304 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/304](http://abrams-steel.com/304)

via smartphone/tablet:



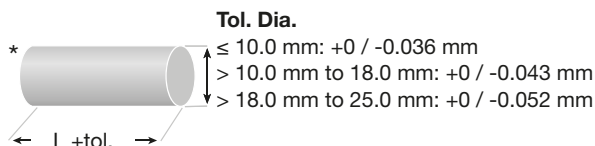
## PREMIUM 304 - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

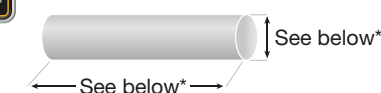
Length: 914 mm (36")

## METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 3.0                     | ● |
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[CFM]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

**Tolerances****Standard values**

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|------|-----|-----|-------|-------|------|------|------|
| 0    | 0   | 0   | 0     | 0     | 17.5 | 8.0  | 0    |
| 0.07 | 1.0 | 2.0 | 0.045 | 0.015 | 19.5 | 10.5 | 0.11 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.

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**Technical Properties**

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetizable and limited machining properties. Average mechanical properties, and conditionally acid resistant.  
 Working hardness: 195-215 BHN (delivery condition).

**Applications**

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, kitchen equipment, decoration, construction fittings.

**AISI 304 – all at a glance!**

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:



303

304

# PREMIUM 314 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

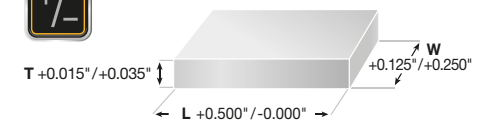
| WIDTH                    | THICKNESS |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|--------------------------|-----------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                          | 3/8"      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [■] |           |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                       | ■         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                   | ■         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 223 BHN  
 Chemical composition:

| C   | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|-----|-----|-----|-------|-------|------|------|------|
| 0   | 1.5 | 0   | 0     | 0     | 24.0 | 19.0 | 0    |
| 0.2 | 2.5 | 2.0 | 0.045 | 0.015 | 26.0 | 22.0 | 0.11 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Technical Properties

Heat-resistant, austenitic chromium-nickel steel, that provides good resistance to oxidation at high temperatures. Good resistance properties as well as excellent chemical resistance at high temperatures up to 2012°F. Very good corrosion resistance. Working hardness: approx. 223 BHN (delivery condition).



### Applications

Apparatus engineering for high temperature application, automotive industry, chemical industry, oil industry, chains for the cement and concrete industry, mechanical engineering, furnace construction, enamel grates, fire pits, heat conductors.



### AISI 314 – all at a glance!

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via smartphone/tablet:



## PREMIUM 314 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

### IMPERIAL DIMENSIONS in inch

| WIDTH                    | THICKNESS |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|--------------------------|-----------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                          | 3/8"      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [■] |           |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                       | ■         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                   | ■         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



#### Technical Properties

Heat-resistant, austenitic chromium-nickel steel, that provides good resistance to oxidation at high temperatures. Good resistance properties as well as excellent chemical resistance at high temperatures up to 2012°F. Very good corrosion resistance. Working hardness: approx. 223 BHN (delivery condition).



#### Applications

Apparatus engineering for high temperature application, automotive industry, chemical industry, oil industry, chains for the cement and concrete industry, mechanical engineering, furnace construction, enamel grates, fire pits, heat conductors.



#### [\$mart]: Surface Condition

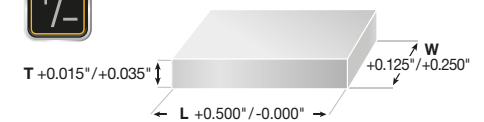
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C   | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|-----|-----|-----|-------|-------|------|------|------|
| 0   | 1.5 | 0   | 0     | 0     | 24.0 | 19.0 | 0    |
| 0.2 | 2.5 | 2.0 | 0.045 | 0.015 | 26.0 | 22.0 | 0.11 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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#### AISI 314 – all at a glance!

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abrams-steel.com/314

via smartphone / tablet:





# PREMIUM 314 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

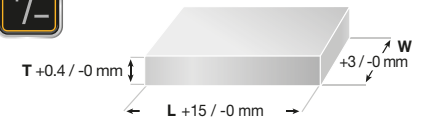
|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 223 BHN  
 Chemical composition:

| C   | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|-----|-----|-----|-------|-------|------|------|------|
| 0   | 1.5 | 0   | 0     | 0     | 24.0 | 19.0 | 0    |
| 0.2 | 2.5 | 2.0 | 0.045 | 0.015 | 26.0 | 22.0 | 0.11 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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### Technical Properties

Heat-resistant, austenitic chromium-nickel steel, that provides good resistance to oxidation at high temperatures. Good resistance properties as well as excellent chemical resistance at high temperatures up to 2012°F. Very good corrosion resistance. Working hardness: approx. 223 BHN (delivery condition).



### Applications

Apparatus engineering for high temperature application, automotive industry, chemical industry, oil industry, chains for the cement and concrete industry, mechanical engineering, furnace construction, enamel grates, fire pits, heat conductors.



### AISI 314 – all at a glance!

Datasheets, online shop,  
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via smartphone/tablet:



## PREMIUM 314 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Heat-resistant, austenitic chromium-nickel steel, that provides good resistance to oxidation at high temperatures. Good resistance properties as well as excellent chemical resistance at high temperatures up to 2012°F. Very good corrosion resistance. Working hardness: approx. 223 BHN (delivery condition).



## Applications

Apparatus engineering for high temperature application, automotive industry, chemical industry, oil industry, chains for the cement and concrete industry, mechanical engineering, furnace construction, enamel grates, fire pits, heat conductors.



## [\$martM]: Surface Condition

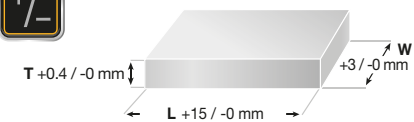
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 223 BHN

Chemical composition:

| C   | Si  | Mn  | P     | S     | Cr   | Ni   | N    |
|-----|-----|-----|-------|-------|------|------|------|
| 0   | 1.5 | 0   | 0     | 0     | 24.0 | 19.0 | 0    |
| 0.2 | 2.5 | 2.0 | 0.045 | 0.015 | 26.0 | 22.0 | 0.11 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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## AISI 314 – all at a glance!

Datasheets, online shop, ABRAMS STEEL GUIDE for alternatives: [abrams-steel.com/314](http://abrams-steel.com/314)

via smartphone/tablet:



# PREMIUM 316L / 316 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

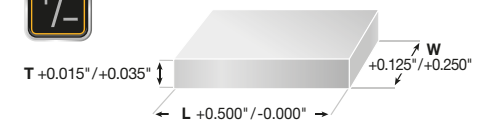
|         | THICKNESS                 |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|---------------------------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 3/8"                      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [mm] |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni   | N   |
|------|-----|-----|------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0    | 0.015 | 16.5 | 2.0 | 10.0 | 0   |
| 0.03 | 1.0 | 2.0 | 0.04 | 0.03  | 18.5 | 2.5 | 13.0 | 0.1 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Direct access to our online shop

[abrams-steel.com/316L-316-10](http://abrams-steel.com/316L-316-10)



### Technical Properties

Stainless, austenitic chromium-nickel-molybdenum steel.  
 Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetizable.  
 Working hardness: approx. 215 BHN (delivery condition).



### Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.



### AISI 316L / 316 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/316L-316](http://abrams-steel.com/316L-316)

via smartphone/tablet:



## PREMIUM 316L / 316 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

### IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|-----------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 3/8"      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| 1"      | ■         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



#### Technical Properties

Stainless, austenitic chromium-nickel-molybdenum steel.  
Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetizable. Working hardness: approx. 215 BHN (delivery condition).



#### Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.



#### [\$mart]: Surface Condition

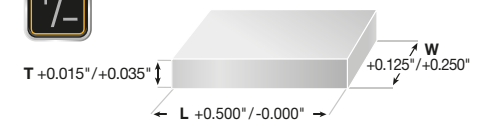
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 215 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni   | N   |
|------|-----|-----|------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0    | 0.015 | 16.5 | 2.0 | 10.0 | 0   |
| 0.03 | 1.0 | 2.0 | 0.04 | 0.03  | 18.5 | 2.5 | 13.0 | 0.1 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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#### AISI 316L / 316 – all at a glance!

Datasheets, online shop,

ABRAMS STEEL GUIDE for alternatives:

abrams-steel.com/316L-316

via smartphone/tablet:



303

304

314

316L / 316

# PREMIUM 316L / 316 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

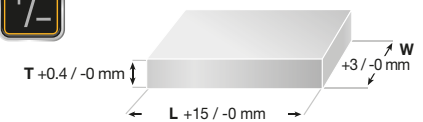
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni   | N   |
|------|-----|-----|------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0    | 0.015 | 16.5 | 2.0 | 10.0 | 0   |
| 0.03 | 1.0 | 2.0 | 0.04 | 0.03  | 18.5 | 2.5 | 13.0 | 0.1 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Direct access to our online shop

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### Technical Properties

Stainless, austenitic chromium-nickel-molybdenum steel.  
 Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetizable.  
 Working hardness: approx. 215 BHN (delivery condition).



### Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.



### AISI 316L / 316 – all at a glance!

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via smartphone/tablet:



## PREMIUM 316L / 316 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Stainless, austenitic chromium-nickel-molybdenum steel.  
Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetizable. Working hardness: approx. 215 BHN (delivery condition).



## Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.



## [\$martM]: Surface Condition

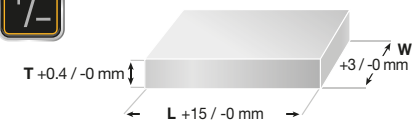
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 215 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni   | N   |
|------|-----|-----|------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0    | 0.015 | 16.5 | 2.0 | 10.0 | 0   |
| 0.03 | 1.0 | 2.0 | 0.04 | 0.03  | 18.5 | 2.5 | 13.0 | 0.1 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
Custom orders on request  
- according to your requirements!



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## Direct access to our online shop

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## AISI 316L / 316 – all at a glance!

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abrams-steel.com/316L-316

via smartphone/tablet:



303

304

314

316L / 316

## PREMIUM 316L / 316 - COLD FINISHED ROUNDS

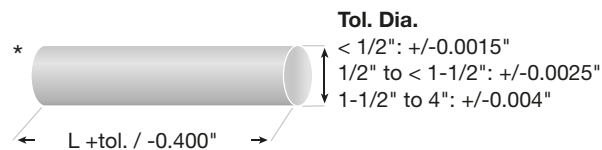
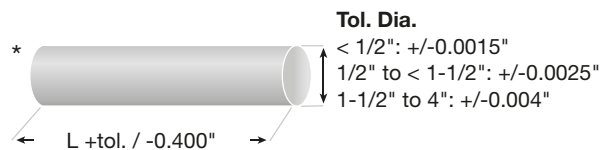
## STAINLESS STEEL

Length: **18"**

Length: **36"** **IMPERIAL DIAMETERS in inch**

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

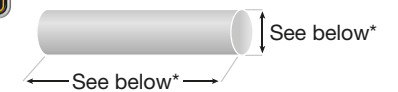


### [CF]: Surface Condition

Drawn, smooth turned, ground, or ground and polished



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni   | N   |
|------|-----|-----|------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0    | 0.015 | 16.5 | 2.0 | 10.0 | 0   |
| 0.03 | 1.0 | 2.0 | 0.04 | 0.03  | 18.5 | 2.5 | 13.0 | 0.1 |



### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.



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### Direct access to our online shop

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 [36"] - [abrams-steel.com/316L-316-20](http://abrams-steel.com/316L-316-20)



### Technical Properties

Stainless, austenitic chromium-nickel-molybdenum steel.  
 Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetizable.  
 Working hardness: approx. 215 BHN (delivery condition).



### Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.



### AISI 316L / 316 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:





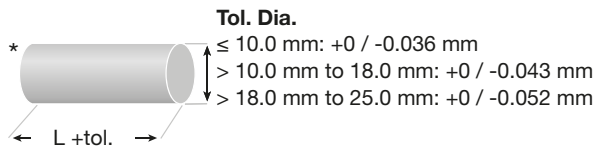
## PREMIUM 316L / 316 - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

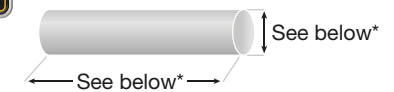
Length: 914 mm (36")

## METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[CFM]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

**Tolerances****Standard values**

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | Ni   | N   |
|------|-----|-----|------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0    | 0.015 | 16.5 | 2.0 | 10.0 | 0   |
| 0.03 | 1.0 | 2.0 | 0.04 | 0.03  | 18.5 | 2.5 | 13.0 | 0.1 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
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 - according to your requirements.

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**Direct access to our online shop**

[abrams-steel.com/316L-316-21](http://abrams-steel.com/316L-316-21)

**Technical Properties**

Stainless, austenitic chromium-nickel-molybdenum steel.  
 Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetizable. Working hardness: approx. 215 BHN (delivery condition).

**Applications**

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.

**AISI 316L / 316 – all at a glance!**

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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303

304

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**ABRAMS PREMIUM CORROSION RESISTANT STEEL!**

**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 316Ti - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

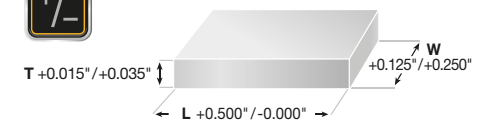
| WIDTH                     | THICKNESS |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------------------------|-----------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                           | 3/8"      | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [mm] |           |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                        | ■         | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                    | ■         | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                        | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                    | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                   | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                       | ■         | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Mo  | Ni   | Ti  |
|------|-----|-----|-------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0     | 0     | 16.5 | 2.0 | 10.5 | 0   |
| 0.08 | 1.0 | 2.0 | 0.045 | 0.015 | 18.5 | 2.5 | 13.5 | 0.7 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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 - according to your requirements!



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### Technical Properties

Stainless steel, austenitic chromium-nickel-molybdenum steel, stabilized with titanium. Resistant to seawater, diluted sulphuric and hydrochloric acids, and to intergranular corrosion following welding processes. Has excellent cold working properties, very good weldability and temperature resistance up to 1112°F, non-magnetizable.  
 Working hardness: approx. 215 BHN (delivery condition).



### Applications

Chemical industry, textile industry, oil industry, building industry, food industry, soap industry, paper industry, photographic industry, paint industry, rubber industry, mechanical engineering, apparatus engineering, pump construction, compressor construction, pipeline construction, shipbuilding, medical technology, pharmaceutical industry, nuclear engineering.



### AISI 316Ti – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/316Ti](http://abrams-steel.com/316Ti)

via smartphone/tablet:



## PREMIUM 316Ti - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 3/8"                     | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Stainless steel, austenitic chromium-nickel-molybdenum steel, stabilized with titanium. Resistant to seawater, diluted sulphuric and hydrochloric acids, and to intergranular corrosion following welding processes. Has excellent cold working properties, very good weldability and temperature resistance up to 1112°F, non-magnetizable.  
Working hardness: approx. 215 BHN (delivery condition).



## Applications

Chemical industry, textile industry, oil industry, building industry, food industry, soap industry, paper industry, photographic industry, paint industry, rubber industry, mechanical engineering, apparatus engineering, pump construction, compressor construction, pipeline construction, shipbuilding, medical technology, pharmaceutical industry, nuclear engineering.



## [\$mart]: Surface Condition

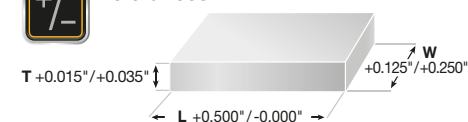
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 215 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Mo  | Ni   | Ti  |
|------|-----|-----|-------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0     | 0     | 16.5 | 2.0 | 10.5 | 0   |
| 0.08 | 1.0 | 2.0 | 0.045 | 0.015 | 18.5 | 2.5 | 13.5 | 0.7 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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via smartphone/tablet:



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314

316L /  
316

316Ti

# PREMIUM 316Ti - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

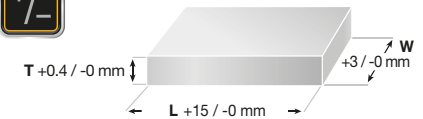
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Mo  | Ni   | Ti  |
|------|-----|-----|-------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0     | 0     | 16.5 | 2.0 | 10.5 | 0   |
| 0.08 | 1.0 | 2.0 | 0.045 | 0.015 | 18.5 | 2.5 | 13.5 | 0.7 |



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### Technical Properties

Stainless steel, austenitic chromium-nickel-molybdenum steel, stabilized with titanium. Resistant to seawater, diluted sulphuric and hydrochloric acids, and to intergranular corrosion following welding processes. Has excellent cold working properties, very good weldability and temperature resistance up to 1112°F, non-magnetizable.  
 Working hardness: approx. 215 BHN (delivery condition).



### Applications

Chemical industry, textile industry, oil industry, building industry, food industry, soap industry, paper industry, photographic industry, paint industry, rubber industry, mechanical engineering, apparatus engineering, pump construction, compressor construction, pipeline construction, shipbuilding, medical technology, pharmaceutical industry, nuclear engineering.



### AISI 316Ti – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/316Ti](http://abrams-steel.com/316Ti)

via smartphone/tablet:





## PREMIUM 316Ti - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

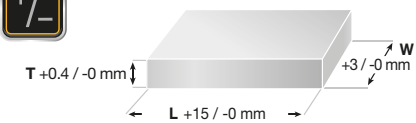
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 215 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Mo  | Ni   | Ti  |
|------|-----|-----|-------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0     | 0     | 16.5 | 2.0 | 10.5 | 0   |
| 0.08 | 1.0 | 2.0 | 0.045 | 0.015 | 18.5 | 2.5 | 13.5 | 0.7 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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## Technical Properties

Stainless steel, austenitic chromium-nickel-molybdenum steel, stabilized with titanium. Resistant to seawater, diluted sulphuric and hydrochloric acids, and to intergranular corrosion following welding processes. Has excellent cold working properties, very good weldability and temperature resistance up to 1112°F, non-magnetizable.

Working hardness: approx. 215 BHN (delivery condition).



## Applications

Chemical industry, textile industry, oil industry, building industry, food industry, soap industry, paper industry, photographic industry, paint industry, rubber industry, mechanical engineering, apparatus engineering, pump construction, compressor construction, pipeline construction, shipbuilding, medical technology, pharmaceutical industry, nuclear engineering.



## AISI 316Ti – all at a glance!

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ABRAMS PREMIUM CORROSION RESISTANT STEEL!

**ABRAMS!**  
PREMIUM STEEL

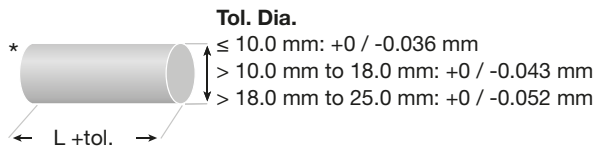
## PREMIUM 316Ti - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

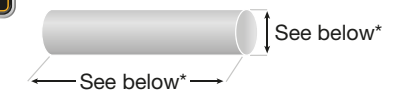
Length: 914 mm (36")

## METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 5.0                     | ● |
| 6.0                     | ● |
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[CFM]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

**Tolerances****Standard values**

Delivery condition: maximum 215 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr   | Mo  | Ni   | Ti  |
|------|-----|-----|-------|-------|------|-----|------|-----|
| 0    | 0   | 0   | 0     | 0     | 16.5 | 2.0 | 10.5 | 0   |
| 0.08 | 1.0 | 2.0 | 0.045 | 0.015 | 18.5 | 2.5 | 13.5 | 0.7 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
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**Technical Properties**

Stainless steel, austenitic chromium-nickel-molybdenum steel, stabilized with titanium. Resistant to seawater, diluted sulphuric and hydrochloric acids, and to intergranular corrosion following welding processes. Has excellent cold working properties, very good weldability and temperature resistance up to 1112°F, non-magnetizable.  
 Working hardness: approx. 215 BHN (delivery condition).

**Applications**

Chemical industry, textile industry, oil industry, building industry, food industry, soap industry, paper industry, photographic industry, paint industry, rubber industry, mechanical engineering, apparatus engineering, pump construction, compressor construction, pipeline construction, shipbuilding, medical technology, pharmaceutical industry, nuclear engineering.

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via smartphone / tablet:



303

304

314

316L /  
316

316Ti

# PREMIUM 410 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

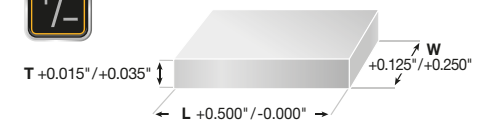
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 252 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|------|
| 0.08 | 0   | 0   | 0    | 0    | 11.5 | 0    |
| 0.15 | 1.0 | 1.5 | 0.04 | 0.03 | 13.5 | 0.75 |



### Don't see your exact dimension(s)?

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### Technical Properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.

Working hardness: approx. 25 HRC (delivery condition)  
 up to 31 HRC.



### Applications

Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).



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via smartphone/tablet:



## PREMIUM 410 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.

Working hardness: approx. 25 HRC (delivery condition) up to 31 HRC.



## Applications

Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).



## [\$mart]: Surface Condition

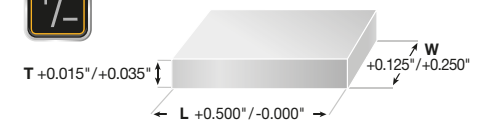
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 252 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|------|
| 0.08 | 0   | 0   | 0    | 0    | 11.5 | 0    |
| 0.15 | 1.0 | 1.5 | 0.04 | 0.03 | 13.5 | 0.75 |



## Don't see your exact dimension(s)?

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via smartphone/tablet:



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304

314

316L /  
316

316Ti

410

# PREMIUM 410 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

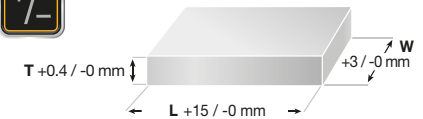
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 252 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|------|
| 0.08 | 0   | 0   | 0    | 0    | 11.5 | 0    |
| 0.15 | 1.0 | 1.5 | 0.04 | 0.03 | 13.5 | 0.75 |



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 - according to your requirements!



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### Technical Properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.

Working hardness: approx. 25 HRC (delivery condition)  
 up to 31 HRC.



### Applications

Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).



### AISI 410 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/410](http://abrams-steel.com/410)

via smartphone/tablet:





## PREMIUM 410 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |      |      |      |      |      |      |      |      |      |      |      |       |
|-------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
|       | 8.3                       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH | Available Dimensions [mm] |      |      |      |      |      |      |      |      |      |      |      |       |
| 33    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93    | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## Technical Properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.

Working hardness: approx. 25 HRC (delivery condition) up to 31 HRC.



## Applications

Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).



## [\$martM]: Surface Condition

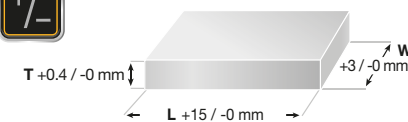
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 252 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|------|
| 0.08 | 0   | 0   | 0    | 0    | 11.5 | 0    |
| 0.15 | 1.0 | 1.5 | 0.04 | 0.03 | 13.5 | 0.75 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



## Contact us

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## AISI 410 – all at a glance!

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via smartphone/tablet:



303

304

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316L /  
316

316Ti

410

## PREMIUM 410 - COLD FINISHED ROUNDS

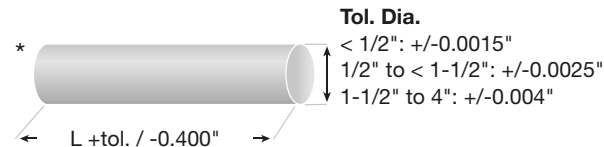
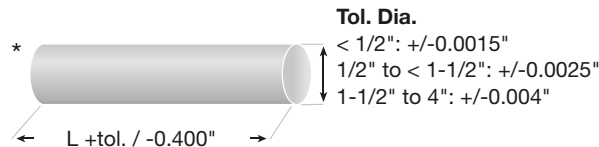
## STAINLESS STEEL

Length: **18"**

Length: **36"** **IMPERIAL DIAMETERS in inch**

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |

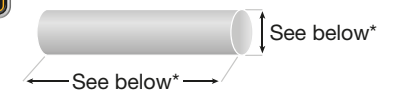


### [CF]: Surface Condition

Drawn, smooth turned, ground, or ground and polished



### Tolerances



### Standard values

Delivery condition: maximum 252 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|------|
| 0.08 | 0   | 0   | 0    | 0    | 11.5 | 0    |
| 0.15 | 1.0 | 1.5 | 0.04 | 0.03 | 13.5 | 0.75 |



### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.



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[18"] - [abrams-steel.com/410-19](http://abrams-steel.com/410-19)  
 [36"] - [abrams-steel.com/410-20](http://abrams-steel.com/410-20)



### Technical Properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.  
 Working hardness: approx. 25 HRC (delivery condition) up to 31 HRC.



### Applications

Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).



### AISI 410 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/410](http://abrams-steel.com/410)

via smartphone/tablet:





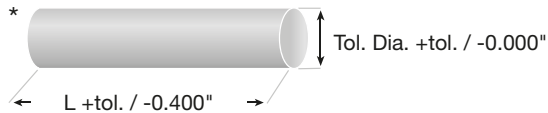
## PREMIUM 410 - DECARB FREE ROUNDS

## STAINLESS STEEL

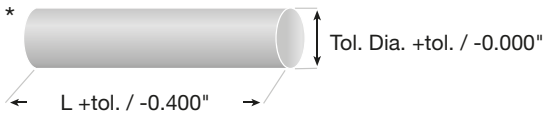
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

| Available Diameters [●] |   |
|-------------------------|---|
| 2-1/2"                  | ● |
| 3"                      | ● |
| 3-1/2"                  | ● |
| 4"                      | ● |



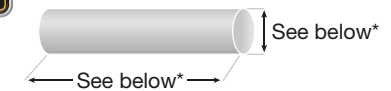
| Available Diameters [●] |   |
|-------------------------|---|
| 2-1/2"                  | ● |
| 3"                      | ● |
| 3-1/2"                  | ● |
| 4"                      | ● |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 252 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni   |
|------|-----|-----|------|------|------|------|
| 0.08 | 0   | 0   | 0    | 0    | 11.5 | 0    |
| 0.15 | 1.0 | 1.5 | 0.04 | 0.03 | 13.5 | 0.75 |



**Don't see your exact dimension(s)?**

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- according to your requirements.



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**[18"]** - abrams-steel.com/410-22  
**[36"]** - abrams-steel.com/410-23



### Technical Properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.

Working hardness: approx. 25 HRC (delivery condition)  
up to 31 HRC.



### Applications

Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).



### AISI 410 – all at a glance!

Datasheets, online shop,  
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via smartphone / tablet:



303

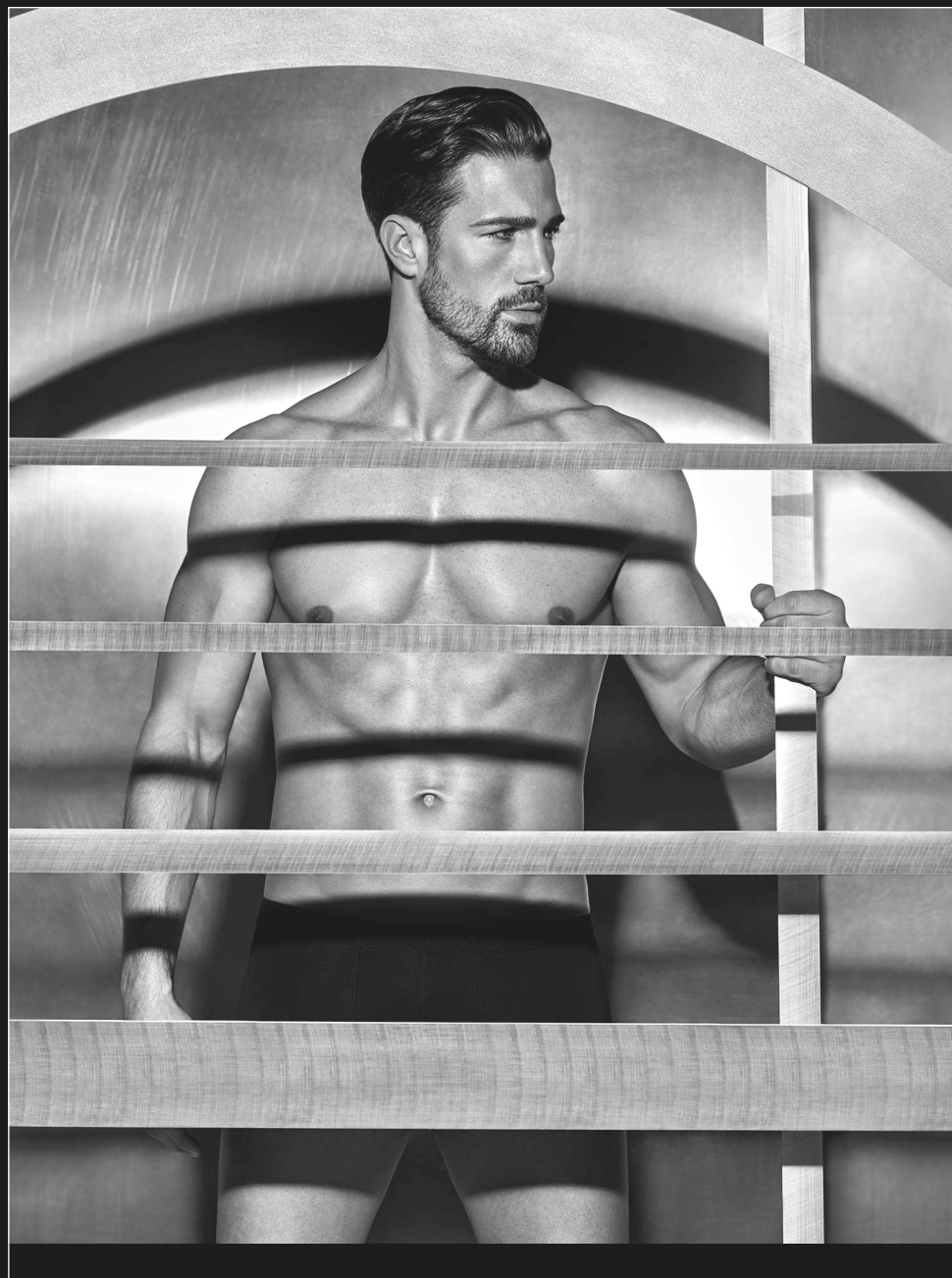
304

314

316L /  
316

316Ti

410



ABRAMS - PIONEERING!

**ABRAMS!**  
PREMIUM STEEL

## PREMIUM 420 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## STAINLESS STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

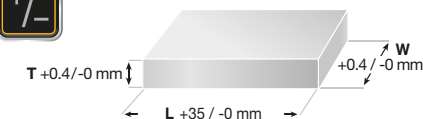
|       | THICKNESS                |      |      |      |      |      |
|-------|--------------------------|------|------|------|------|------|
|       | 8.2                      | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 |
| WIDTH | Available Dimensions [■] |      |      |      |      |      |
| 15.3  |                          |      |      | ■    |      |      |
| 20.3  | ■                        | ■    | ■    | ■    | ■    | ■    |
| 25.3  | ■                        | ■    | ■    | ■    | ■    | ■    |
| 30.3  | ■                        | ■    | ■    | ■    | ■    |      |
| 32.3  |                          | ■    |      | ■    | ■    |      |
| 40.3  | ■                        | ■    | ■    |      |      |      |
| 50.3  | ■                        | ■    |      |      |      |      |
| 60.3  | ■                        |      |      |      |      |      |
| 70.3  | ■                        |      |      |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |

**Don't see your exact dimension(s)?**

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**Technical Properties**

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant.  
Working hardness: 50-55 HRC.

**Applications**

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.

303

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316L /  
316

316Ti

410

420

**AISI 420 – all at a glance!**

Datasheets, online shop,  
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via smartphone/tablet:




# PREMIUM 420 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

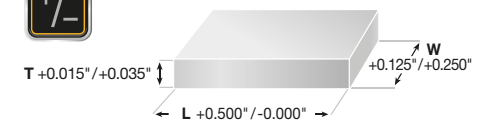
|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Direct access to our online shop

[abrams-steel.com/420-10](http://abrams-steel.com/420-10)



### Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant.  
 Working hardness: 50-55 HRC.



### Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



### AISI 420 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420](http://abrams-steel.com/420)

via smartphone/tablet:



## PREMIUM 420 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

### IMPERIAL DIMENSIONS in inch

|         |  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         |  | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   |  | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     |  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 13"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 14"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 15"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 16"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 17"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 18"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 19"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 20"     |  | ■                        | ■    | ■     | ■     | ■    |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |



#### Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant.  
Working hardness: 50-55 HRC.



#### Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



#### [\$mart]: Surface Condition

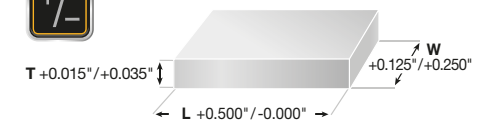
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



#### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
Custom orders on request  
- according to your requirements!



#### Contact us

+1 (331) 234-9900

sales@abrams-industries.com



#### Direct access to our online shop

abrams-steel.com/420-11



#### ! AISI 420 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/420

via smartphone / tablet:























































































































































































































































































































































# PREMIUM 420 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

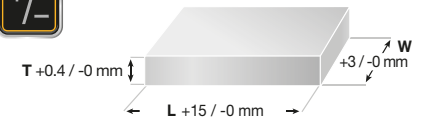
|  | THICKNESS  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 2.3  | 3.3   | 4.3   | 5.3   | 6.3   | 8.3   | 10.3  | 12.3  | 15.3  | 20.3  | 25.3  | 30.3  | 40.3  | 50.3  | 60.3  | 70.3  | 80.3  | 100.3   |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 33  |                         |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |
| 43  |                         |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |
| 53  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |
| 63  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |
| 73  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| 83  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 93  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 103   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 123   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 143   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 153   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 163   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 183   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 203   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 223   |                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 243   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 253   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 263   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 283   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 303   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant.  
 Working hardness: 50-55 HRC.



### Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



### AISI 420 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420](http://abrams-steel.com/420)

via smartphone/tablet:





## PREMIUM 420 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|  | THICKNESS   |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3   | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions  |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 323   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 343   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 353   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 363   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 383   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 403   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 423   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 443   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 453   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 463   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 483   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 503   | ■   | ■   | ■   | ■   | ■   |     |      |      |      |      |      |      |      |      |      |      |      |       |



## [\$martM]: Surface Condition

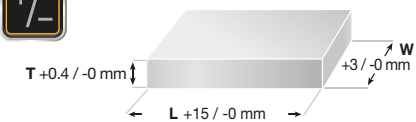
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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- according to your requirements!



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## Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant. Working hardness: 50-55 HRC.



## Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



## AISI 420 – all at a glance!

Datasheets, online shop,  
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## PREMIUM 420 - HARD FLAT METRIC

## STAINLESS STEEL

Length: 250 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |     |     |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 | 4.7 | 5.2 | 6.2 | 7.2 | 8.2 | 9.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |     |     |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   |

Hard Flat

ALREADY HARDENED DIMENSIONS IN LENGTH OF 250 mm AND 500 mm !

Length: 500 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   |

Hardened dimensions are delivered with approx. 50 HRC, at least double tempered.



## Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant. Working hardness: 50-55 HRC.



## Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



## [HardM]: Surface Condition

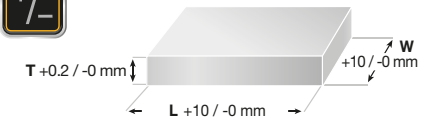
Thickness: ground or fine milled

Width: saw cut or sheared

Length: saw cut or sheared



## Tolerances



## Standard values

Delivery condition: maximum 241 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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[250 mm] - abrams-steel.com/420-14

[500 mm] - abrams-steel.com/420-15



## AISI 420 – all at a glance!

Datasheets, online shop,

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via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

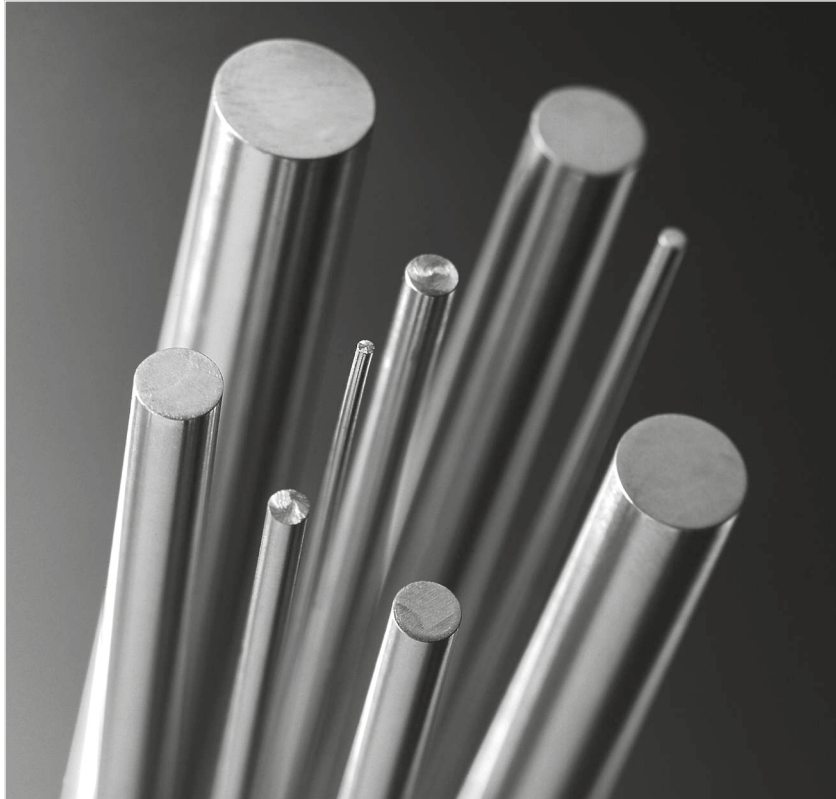
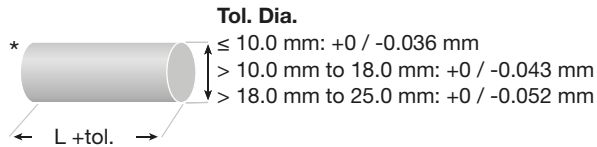
## PREMIUM 420 - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

Length: 914 mm (36")

### METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 15.0                    | ● |
| 16.0                    | ● |
| 18.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

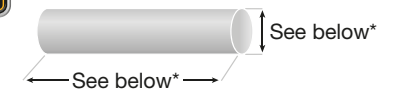


#### [CFM]: Surface Condition

Drawn, smooth turned, ground, or ground and polished (ISO h9)



#### Tolerances



#### Standard values

Delivery condition: maximum 241 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



#### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
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- according to your requirements.



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#### Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant.  
Working hardness: 50-55 HRC.



#### Applications

Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



#### AISI 420 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/420

via smartphone/tablet:



## PREMIUM 420 - DECARB FREE ROUNDS

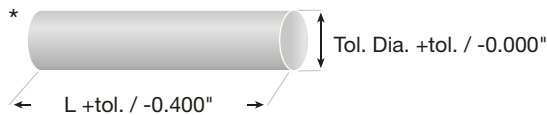
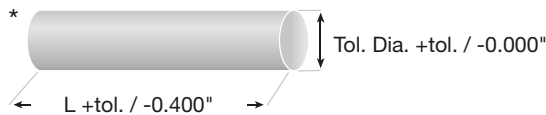
## STAINLESS STEEL

Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



### Technical Properties

Corrosion resistant cold work and plastic mold steel with good machining properties, hardenable and polishable. Low distortion through-hardening steel with full hardenability and high wear resistance, conditionally acid resistant. Working hardness: 50-55 HRC.



### Applications

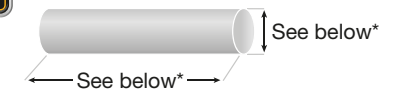
Mechanical engineering, medical technology, plastic molds, synthetic resin mold tools, die casting tools, light metal die casting, cutting tools, machine knives, kitchen knives, razors, shears, scraper blades, surgical instruments, measuring tools, roller bearings, ball bearings, ice-skates, pump parts, valves.



**[DCF]: Surface Condition**  
Peeled or rough-turned



### Tolerances



### Standard values

Delivery condition: maximum 241 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.43 | 0   | 0   | 0    | 0     | 12.5 |
| 0.5  | 1.0 | 1.0 | 0.04 | 0.015 | 14.5 |



### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
Custom orders on request  
- according to your requirements.



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sales@abrams-industries.com



### Direct access to our online shop

[18"] - abrams-steel.com/420-22  
[36"] - abrams-steel.com/420-23



### AISI 420 - all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/420

via smartphone / tablet:



303

304

314

316L /  
316

316Ti

410

420

# PREMIUM 420 mod. - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

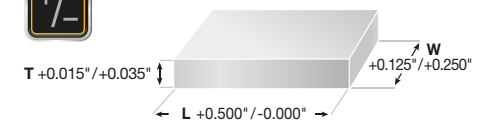
| WIDTH                    | THICKNESS |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|--------------------------|-----------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|                          | 5/16"     | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| Available Dimensions [■] |           |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"                       | ■         | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"                       | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"                   | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"                      | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"                  | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"                      | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"                  | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"                      | ■         | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 252 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.16 | 0   | 0   | 0    | 0     | 12.0 |
| 0.25 | 1.0 | 1.5 | 0.04 | 0.015 | 14.0 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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### Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). With the ability to polish this material to a high gloss finish it is ideally suited as knife steel. Good forgeability, medium weldability and is conditionally acid resistant. Working hardness: approx. 25 HRC (delivery condition) up to 47 HRC.



### Applications

Automotive industry, power engineering, turbine and power plant construction, medical technology, mechanical engineering, petrochemical industry, cutting tool industry, knives, fasteners, architecture and decoration.



### AISI 420 mod. – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420mod](http://abrams-steel.com/420mod)

via smartphone/tablet:



## PREMIUM 420 mod. - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). With the ability to polish this material to a high gloss finish it is ideally suited as knife steel. Good forgeability, medium weldability and is conditionally acid resistant. Working hardness: approx. 25 HRC (delivery condition) up to 47 HRC.



## Applications

Automotive industry, power engineering, turbine and power plant construction, medical technology, mechanical engineering, petrochemical industry, cutting tool industry, knives, fasteners, architecture and decoration.



## [\$mart]: Surface Condition

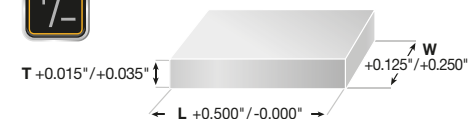
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 252 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.16 | 0   | 0   | 0    | 0     | 12.0 |
| 0.25 | 1.0 | 1.5 | 0.04 | 0.015 | 14.0 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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## AISI 420 mod. – all at a glance!

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via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

# PREMIUM 420 mod. - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

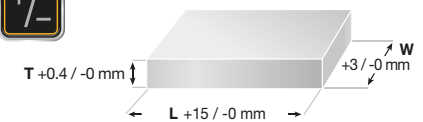
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 252 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.16 | 0   | 0   | 0    | 0     | 12.0 |
| 0.25 | 1.0 | 1.5 | 0.04 | 0.015 | 14.0 |



### Don't see your exact dimension(s)?

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### Direct access to our online shop

[abrams-steel.com/420mod-12](http://abrams-steel.com/420mod-12)



### Technical Properties

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### Applications

Automotive industry, power engineering, turbine and power plant construction, medical technology, mechanical engineering, petrochemical industry, cutting tool industry, knives, fasteners, architecture and decoration.



### AISI 420 mod. – all at a glance!

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[abrams-steel.com/420mod](http://abrams-steel.com/420mod)

via smartphone/tablet:





## PREMIUM 420 mod. - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

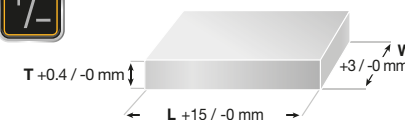
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 252 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.16 | 0   | 0   | 0    | 0     | 12.0 |
| 0.25 | 1.0 | 1.5 | 0.04 | 0.015 | 14.0 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



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abrams-steel.com/420mod-13



## Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). With the ability to polish this material to a high gloss finish it is ideally suited as knife steel. Good forgeability, medium weldability and is conditionally acid resistant. Working hardness: approx. 25 HRC (delivery condition) up to 47 HRC.



## Applications

Automotive industry, power engineering, turbine and power plant construction, medical technology, mechanical engineering, petrochemical industry, cutting tool industry, knives, fasteners, architecture and decoration.



## AISI 420 mod. – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/420mod

via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.



COLD FINISHED ROUNDS IN METRIC - DRAWN, SMOOTH TURNED, GROUND OR GROUND AND POLISHED!

**ABRAMS!**  
PREMIUM STEEL

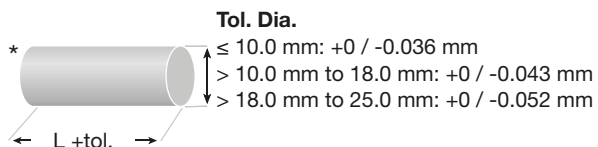
## PREMIUM 420 mod. - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

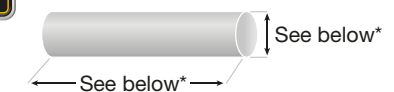
Length: 914 mm (36")

## METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 8.0                     | ● |
| 10.0                    | ● |
| 12.0                    | ● |
| 15.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[CFM]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

**Tolerances****Standard values**

Delivery condition: maximum 252 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   |
|------|-----|-----|------|-------|------|
| 0.16 | 0   | 0   | 0    | 0     | 12.0 |
| 0.25 | 1.0 | 1.5 | 0.04 | 0.015 | 14.0 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.

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**Direct access to our online shop**

[abrams-steel.com/420mod-21](http://abrams-steel.com/420mod-21)

**Technical Properties**

Martensitic chromium steel with good mechanical properties (tempered condition). With the ability to polish this material to a high gloss finish it is ideally suited as knife steel. Good forgeability, medium weldability and is conditionally acid resistant. Working hardness: approx. 25 HRC (delivery condition) up to 47 HRC.

**Applications**

Automotive industry, power engineering, turbine and power plant construction, medical technology, mechanical engineering, petrochemical industry, cutting tool industry, knives, fasteners, architecture and decoration.

**AISI 420 mod. – all at a glance!**

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
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via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

# PREMIUM 420RM - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

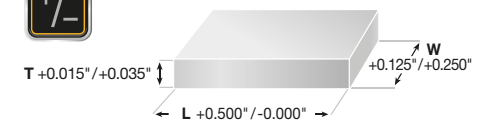
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 325 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S    | Cr   | Mo  | Ni  |
|------|-----|-----|-------|------|------|-----|-----|
| 0.33 | 0   | 0   | 0     | 0    | 15.5 | 0.8 | 0   |
| 0.45 | 1.0 | 1.5 | 0.045 | 0.03 | 17.5 | 1.3 | 1.0 |



### Don't see your exact dimension(s)?

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### Technical Properties

Pre-hardened corrosion resistant chrome-steel with good polishing properties, heat resistance and wear resistance. Often used for processing chemically aggressive plastic materials (e.g. PVC). The material is conditionally acid resistant.  
 Working hardness: approx. 30 HRC (delivery condition) up to 48 HRC.



### Applications

Mechanical engineering, marine engineering, apparatus engineering, plastic processing, plastic molds, extrusion tools, press molds, fitting tools, shafts, spindles, bolts, pistons, valves, steam valves, water valves, beater bars, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical Instruments.



### AISI 420RM – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420RM](http://abrams-steel.com/420RM)

via smartphone/tablet:



## PREMIUM 420RM - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Pre-hardened corrosion resistant chrome-steel with good polishing properties, heat resistance and wear resistance. Often used for processing chemically aggressive plastic materials (e.g. PVC). The material is conditionally acid resistant.

Working hardness: approx. 30 HRC (delivery condition) up to 48 HRC.



## Applications

Mechanical engineering, marine engineering, apparatus engineering, plastic processing, plastic molds, extrusion tools, press molds, fitting tools, shafts, spindles, bolts, pistons, valves, steam valves, water valves, beater bars, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical Instruments.



## [\$mart]: Surface Condition

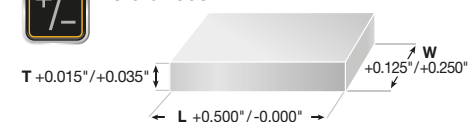
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S    | Cr   | Mo  | Ni  |
|------|-----|-----|-------|------|------|-----|-----|
| 0.33 | 0   | 0   | 0     | 0    | 15.5 | 0.8 | 0   |
| 0.45 | 1.0 | 1.5 | 0.045 | 0.03 | 17.5 | 1.3 | 1.0 |



## Don't see your exact dimension(s)?

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- according to your requirements!



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via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM



# PREMIUM 420RM - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

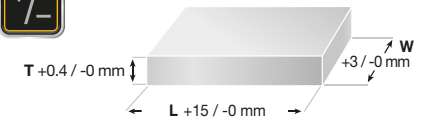
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 325 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S    | Cr   | Mo  | Ni  |
|------|-----|-----|-------|------|------|-----|-----|
| 0.33 | 0   | 0   | 0     | 0    | 15.5 | 0.8 | 0   |
| 0.45 | 1.0 | 1.5 | 0.045 | 0.03 | 17.5 | 1.3 | 1.0 |



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### Technical Properties

Pre-hardened corrosion resistant chrome-steel with good polishing properties, heat resistance and wear resistance. Often used for processing chemically aggressive plastic materials (e.g. PVC). The material is conditionally acid resistant.  
 Working hardness: approx. 30 HRC (delivery condition) up to 48 HRC.



### Applications

Mechanical engineering, marine engineering, apparatus engineering, plastic processing, plastic molds, extrusion tools, press molds, fitting tools, shafts, spindles, bolts, pistons, valves, steam valves, water valves, beater bars, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical Instruments.



### AISI 420RM – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/420RM](http://abrams-steel.com/420RM)

via smartphone / tablet:



## PREMIUM 420RM - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

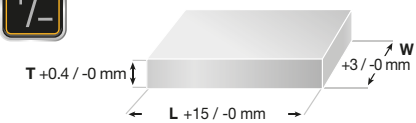
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 325 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S    | Cr   | Mo  | Ni  |
|------|-----|-----|-------|------|------|-----|-----|
| 0.33 | 0   | 0   | 0     | 0    | 15.5 | 0.8 | 0   |
| 0.45 | 1.0 | 1.5 | 0.045 | 0.03 | 17.5 | 1.3 | 1.0 |



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## Technical Properties

Pre-hardened corrosion resistant chrome-steel with good polishing properties, heat resistance and wear resistance. Often used for processing chemically aggressive plastic materials (e.g. PVC). The material is conditionally acid resistant.

Working hardness: approx. 30 HRC (delivery condition) up to 48 HRC.



## Applications

Mechanical engineering, marine engineering, apparatus engineering, plastic processing, plastic molds, extrusion tools, press molds, fitting tools, shafts, spindles, bolts, pistons, valves, steam valves, water valves, beater bars, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical Instruments.

303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM



## AISI 420RM – all at a glance!

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via smartphone/tablet:





# PREMIUM 430F - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

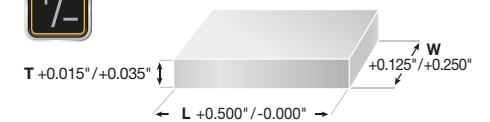
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 270 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  |
|------|-----|-----|------|------|------|-----|
| 0.1  | 0   | 0   | 0    | 0.15 | 15.5 | 0.2 |
| 0.17 | 1.0 | 1.5 | 0.04 | 0.35 | 17.5 | 0.3 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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### Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). The addition of sulphur makes it ideal for machining. It can also be polished very well and is conditionally acid resistant, but difficult to weld.

Working hardness: approx. 26 HRC (approx. on delivery).



### Applications

Automotive industry, electronic equipment, power engineering, mechanical engineering, connecting elements, architecture and decoration, construction parts for automatic machining in water and steam such as screws, spindles, axes, etc.



### AISI 430F – all at a glance!

Datasheets, online shop,  
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via smartphone/tablet:



## PREMIUM 430F - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). The addition of sulphur makes it ideal for machining. It can also be polished very well and is conditionally acid resistant, but difficult to weld.

Working hardness: approx. 26 HRC (approx. on delivery).



## Applications

Automotive industry, electronic equipment, power engineering, mechanical engineering, connecting elements, architecture and decoration, construction parts for automatic machining in water and steam such as screws, spindles, axes, bushings, etc.



## [\$mart]: Surface Condition

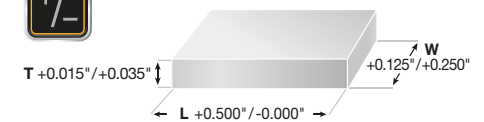
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  |
|------|-----|-----|------|------|------|-----|
| 0.1  | 0   | 0   | 0    | 0.15 | 15.5 | 0.2 |
| 0.17 | 1.0 | 1.5 | 0.04 | 0.35 | 17.5 | 0.3 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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- according to your requirements!



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# PREMIUM 430F - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

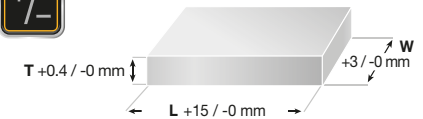
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 270 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  |
|------|-----|-----|------|------|------|-----|
| 0.1  | 0   | 0   | 0    | 0.15 | 15.5 | 0.2 |
| 0.17 | 1.0 | 1.5 | 0.04 | 0.35 | 17.5 | 0.3 |



### Don't see your exact dimension(s)?

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### Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). The addition of sulphur makes it ideal for machining. It can also be polished very well and is conditionally acid resistant, but difficult to weld.

Working hardness: approx. 26 HRC (approx. on delivery).



### Applications

Automotive industry, electronic equipment, power engineering, mechanical engineering, connecting elements, architecture and decoration, construction parts for automatic machining in water and steam such as screws, spindles, axes, bushings, etc.



### AISI 430F – all at a glance!

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via smartphone/tablet:



## PREMIUM 430F - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

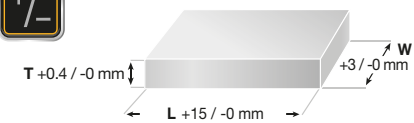
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 270 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Mo  |
|------|-----|-----|------|------|------|-----|
| 0.1  | 0   | 0   | 0    | 0.15 | 15.5 | 0.2 |
| 0.17 | 1.0 | 1.5 | 0.04 | 0.35 | 17.5 | 0.3 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

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## Direct access to our online shop

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## Technical Properties

Martensitic chromium steel with good mechanical properties (tempered condition). The addition of sulphur makes it ideal for machining. It can also be polished very well and is conditionally acid resistant, but difficult to weld.

Working hardness: approx. 26 HRC (approx. on delivery).



## Applications

Automotive industry, electronic equipment, power engineering, mechanical engineering, connecting elements, architecture and decoration, construction parts for automatic machining in water and steam such as screws, spindles, axes, bushings, etc.

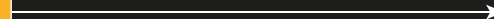
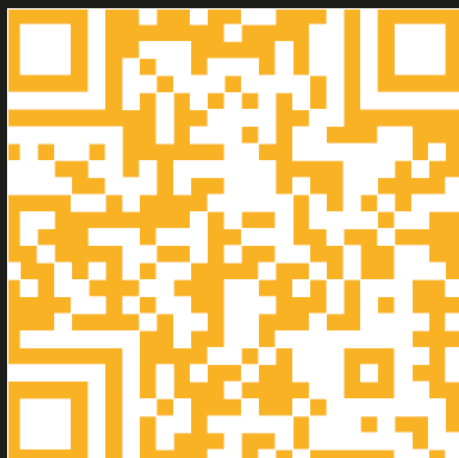


## AISI 430F – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/430F

via smartphone/tablet:





WATCH THE MAKING OF THE 9TH MOTIF FOR CALENDAR 2013 / 2016



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

ABRAMS - SAME DAY SHIPPING (SUBJECT TO AVAILABILITY)!

**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 431 - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

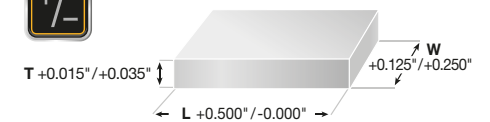
| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 331 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.12 | 0   | 0   | 0    | 0    | 15.0 | 1.5 |
| 0.22 | 1.0 | 1.5 | 0.04 | 0.03 | 17.0 | 2.5 |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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### Technical Properties

Martensitic chromium steel with high strength (tempered condition) and good corrosion resistance (added nickel). It is easy to weld and is conditionally acid resistant. The material has poor forgeability.

Working hardness: approx. 32 HRC (approx. on delivery) to 47 HRC.



### Applications

Mechanical engineering, automotive industry, oil and petrochemical industry, aviation, food industry, soap industry, acetic acid industry, shafts, pump parts, perforated plates, spindles, piston rods, valve cones, turbine blades.



### AISI 431 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/431](http://abrams-steel.com/431)

via smartphone/tablet:





## PREMIUM 431 - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---------|--------------------------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|         | 5/16"                    | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
|         | Available Dimensions [■] |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"      | ■                        | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"      | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2" | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"     | ■                        | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## [\$mart]: Surface Condition

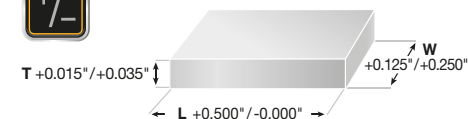
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 331 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.12 | 0   | 0   | 0    | 0    | 15.0 | 1.5 |
| 0.22 | 1.0 | 1.5 | 0.04 | 0.03 | 17.0 | 2.5 |



## Don't see your exact dimension(s)?

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## Technical Properties

Martensitic chromium steel with high strength (tempered condition) and good corrosion resistance (added nickel). It is easy to weld and is conditionally acid resistant. The material has poor forgeability.

Working hardness: approx. 32 HRC (approx. on delivery) to 47 HRC.



## Applications

Mechanical engineering, automotive industry, oil and petrochemical industry, aviation, food industry, soap industry, acetic acid industry, shafts, pump parts, perforated plates, spindles, piston rods, valve cones, turbine blades.



## AISI 431 – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/431

via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431

# PREMIUM 431 - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

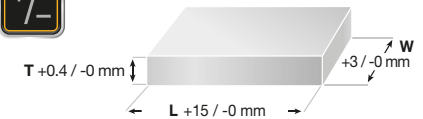
| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 331 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.12 | 0   | 0   | 0    | 0    | 15.0 | 1.5 |
| 0.22 | 1.0 | 1.5 | 0.04 | 0.03 | 17.0 | 2.5 |



### Don't see your exact dimension(s)?

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### Technical Properties

Martensitic chromium steel with high strength (tempered condition) and good corrosion resistance (added nickel). It is easy to weld and is conditionally acid resistant. The material has poor forgeability.

Working hardness: approx. 32 HRC (approx. on delivery) to 47 HRC.



### Applications

Mechanical engineering, automotive industry, oil and petrochemical industry, aviation, food industry, soap industry, acetic acid industry, shafts, pump parts, perforated plates, spindles, piston rods, valve cones, turbine blades.



### AISI 431 – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/431](http://abrams-steel.com/431)

via smartphone/tablet:



## PREMIUM 431 - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                           | 8.3       | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| Available Dimensions [mm] |           |      |      |      |      |      |      |      |      |      |      |      |       |
| 33                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93                        | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303                       | ■         | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



## [\$martM]: Surface Condition

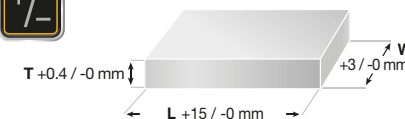
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 331 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.12 | 0   | 0   | 0    | 0    | 15.0 | 1.5 |
| 0.22 | 1.0 | 1.5 | 0.04 | 0.03 | 17.0 | 2.5 |



## Don't see your exact dimension(s)?

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- according to your requirements!



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## Direct access to our online shop

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## Technical Properties

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Working hardness: approx. 32 HRC (approx. on delivery) to 47 HRC.



## Applications

Mechanical engineering, automotive industry, oil and petrochemical industry, aviation, food industry, soap industry, acetic acid industry, shafts, pump parts, perforated plates, spindles, piston rods, valve cones, turbine blades.



## AISI 431 – all at a glance!

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abrams-steel.com/431

via smartphone/tablet:



## PREMIUM 431 - COLD FINISHED ROUNDS

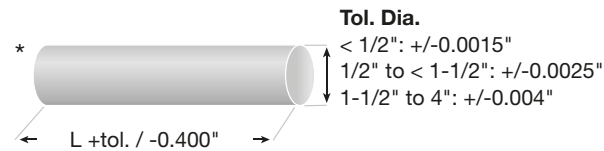
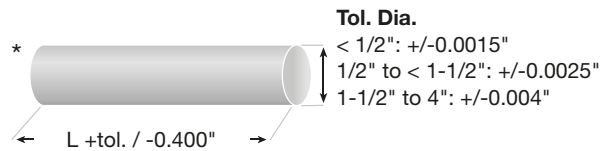
## STAINLESS STEEL

Length: **18"**

Length: **36"** **IMPERIAL DIAMETERS in inch**

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |

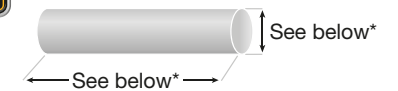


### [CF]: Surface Condition

Drawn, smooth turned, ground, or ground and polished



### Tolerances



### Standard values

Delivery condition: maximum 331 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.12 | 0   | 0   | 0    | 0    | 15.0 | 1.5 |
| 0.22 | 1.0 | 1.5 | 0.04 | 0.03 | 17.0 | 2.5 |



### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.



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### Direct access to our online shop

[18"] - [abrams-steel.com/431-19](http://abrams-steel.com/431-19)  
 [36"] - [abrams-steel.com/431-20](http://abrams-steel.com/431-20)



### Technical Properties

Martensitic chromium steel with high strength (tempered condition) and good corrosion resistance (added nickel). It is easy to weld and is conditionally acid resistant. The material has poor forgeability.

Working hardness: approx. 32 HRC (approx. on delivery) to 47 HRC.



### Applications

Mechanical engineering, automotive industry, oil and petrochemical industry, aviation, food industry, soap industry, acetic acid industry, shafts, pump parts, perforated plates, spindles, piston rods, valve cones, turbine blades.



### AISI 431 - all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/431](http://abrams-steel.com/431)

via smartphone/tablet:



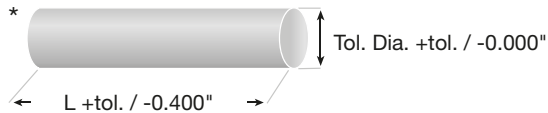
## PREMIUM 431 - DECARB FREE ROUNDS

## STAINLESS STEEL

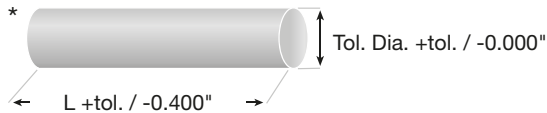
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



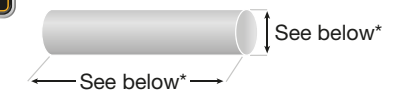
|        | Available Diameters [●] |
|--------|-------------------------|
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



**[DCF]: Surface Condition**  
Peeled or rough-turned



**Tolerances**



**Standard values**

Delivery condition: maximum 331 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S    | Cr   | Ni  |
|------|-----|-----|------|------|------|-----|
| 0.12 | 0   | 0   | 0    | 0    | 15.0 | 1.5 |
| 0.22 | 1.0 | 1.5 | 0.04 | 0.03 | 17.0 | 2.5 |



**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
Custom orders on request  
- according to your requirements.



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[36"] - abrams-steel.com/431-23



### Technical Properties

Martensitic chromium steel with high strength (tempered condition) and good corrosion resistance (added nickel). It is easy to weld and is conditionally acid resistant. The material has poor forgeability.

Working hardness: approx. 32 HRC (approx. on delivery) to 47 HRC.



### Applications

Mechanical engineering, automotive industry, oil and petrochemical industry, aviation, food industry, soap industry, acetic acid industry, shafts, pump parts, perforated plates, spindles, piston rods, valve cones, turbine blades.



### AISI 431 – all at a glance!

Datasheets, online shop,  
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303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431



PRECISION ROUND STEEL WITH MACHINING ALLOWANCE – PEELED / ROUGH TURNED!


**ABRAMS!**  
PREMIUM STEEL

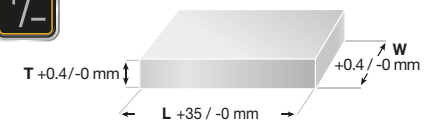
## PREMIUM 440B - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## STAINLESS STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

|  | THICKNESS                 |     |     |     |     |      |      |      |      |
|---|---------------------------|-----|-----|-----|-----|------|------|------|------|
|   | 3.2                       | 4.2 | 5.2 | 6.2 | 8.2 | 10.3 | 12.3 | 15.3 | 20.3 |
| WIDTH   | Available Dimensions [mm] |     |     |     |     |      |      |      |      |
|   | 10.3                      |     |     |     |     |      |      |      |      |
|   |                           |     |     |     |     |      | ■    |      |      |
|   |                           |     |     |     |     |      |      | ■    |      |
|   | 15.3                      |     |     |     |     |      |      |      |      |
|   |                           |     |     |     |     |      |      |      | ■    |
|   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
|   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |
|   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    | ■    |      |
|   | ■                         | ■   | ■   | ■   | ■   | ■    | ■    |      |      |
|   | ■                         | ■   | ■   | ■   | ■   | ■    |      |      |      |
|   | ■                         | ■   | ■   | ■   | ■   |      |      |      |      |
|   | ■                         | ■   | ■   | ■   | ■   |      |      |      |      |
|   | ■                         | ■   | ■   |     |     |      |      |      |      |
|   | ■                         |     |     |     |     |      |      |      |      |

**[GFSM O/S]: Surface Condition****Thickness:** ground or fine milled**Width:** ground or fine milled**Length:** milled or saw cut**Tolerances****Standard values**

Delivery condition: maximum 265 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |

**Don't see your exact dimension(s)?**

Any size is available in different thicknesses, widths and/or lengths.

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- according to your requirements!

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**Technical Properties**

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.

Working hardness: 53-58 HRC.

**Applications**

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.

**AISI 440B – all at a glance!**Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/440B

via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431

440B




# PREMIUM 440B - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

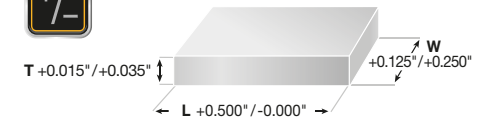
|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 265 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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 - according to your requirements!



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### Technical Properties

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.  
 Working hardness: 53-58 HRC.



### Applications

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.



### AISI 440B – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/440B](http://abrams-steel.com/440B)

via smartphone/tablet:




## PREMIUM 440B - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |  |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|--|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |  |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |  |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |  |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |  |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |  |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |  |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |  |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |  |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |  |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |  |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |  |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |  |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 13"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 14"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 15"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 16"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 17"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 18"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 19"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |
| 20"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |  |



## [\$mart]: Surface Condition

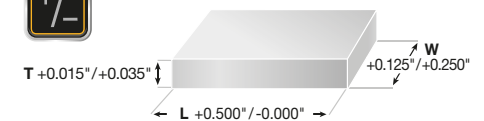
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 265 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



## Contact us

+1 (331) 234-9900

sales@abrams-industries.com



## Direct access to our online shop

abrams-steel.com/440B-11



## Technical Properties

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.

Working hardness: 53-58 HRC.



## Applications

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.



## AISI 440B – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/440B

via smartphone/tablet:























































































































































































































































































































































# PREMIUM 440B - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

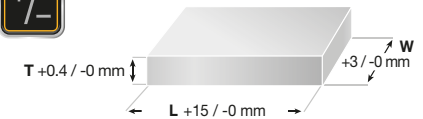
|  | THICKNESS  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 2.3  | 3.3   | 4.3   | 5.3   | 6.3   | 8.3   | 10.3  | 12.3  | 15.3  | 20.3  | 25.3  | 30.3  | 40.3  | 50.3  | 60.3  | 70.3  | 80.3  | 100.3   |
| WIDTH   | Available Dimensions  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 33  |                         |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |
| 43  |                         |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |
| 53  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |
| 63  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |
| 73  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| 83  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 93  |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 103   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 123   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 143   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 153   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 163   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 183   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 203   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 223   |                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 243   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 253   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 263   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 283   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 303   |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 265 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |



### Don't see your exact dimension(s)?

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### Technical Properties

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.  
 Working hardness: 53-58 HRC.



### Applications

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.



### AISI 440B – all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/440B](http://abrams-steel.com/440B)

via smartphone/tablet:




## PREMIUM 440B - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|  | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |      |       |



## Technical Properties

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.  
Working hardness: 53-58 HRC.



## Applications

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.



## [\$martM]: Surface Condition

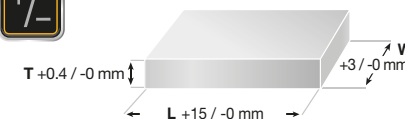
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 265 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |



## Don't see your exact dimension(s)?

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## AISI 440B – all at a glance!

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via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431

440B

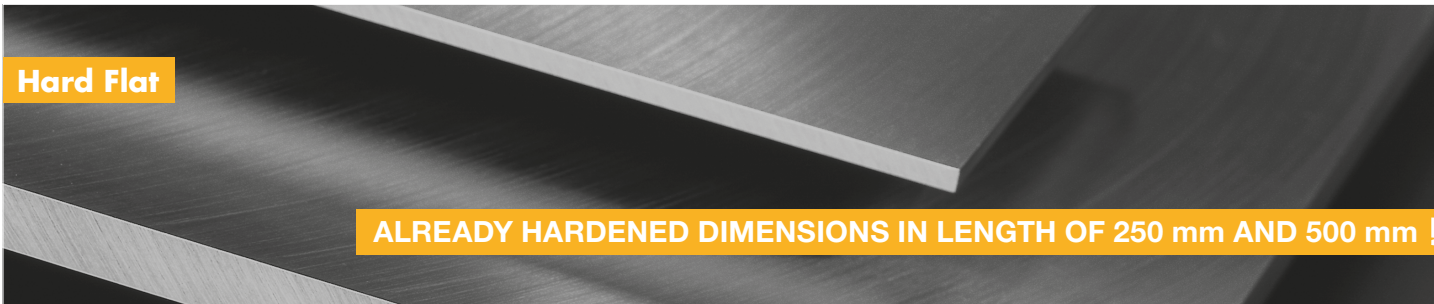
## PREMIUM 440B - HARD FLAT METRIC

## STAINLESS STEEL

Length: 250 mm

### METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |     |     |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 | 4.7 | 5.2 | 6.2 | 7.2 | 8.2 | 9.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |     |     |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   |



Length: 500 mm

### METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|
|       | 2.2                       | 2.7 | 3.2 | 3.7 | 4.2 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |
| 250   | ■                         | ■   | ■   | ■   | ■   |

Hardened dimensions are delivered with approx. 53 HRC, at least double tempered.



#### Technical Properties

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.  
Working hardness: 53-58 HRC.



#### Applications

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.

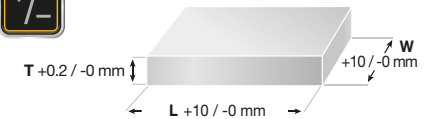


#### [HardM]: Surface Condition

**Thickness:** ground or fine milled  
**Width:** saw cut or sheared  
**Length:** saw cut or sheared



#### Tolerances



#### Standard values

Delivery condition: maximum 265 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |



#### Don't see your exact dimension(s)?

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**[250 mm]** - [abrams-steel.com/440B-14](https://abrams-steel.com/440B-14)  
**[500 mm]** - [abrams-steel.com/440B-15](https://abrams-steel.com/440B-15)



#### AISI 440B – all at a glance!

Datasheets, online shop,  
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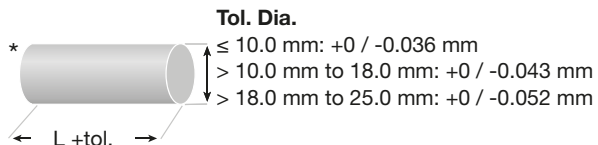
## PREMIUM 440B - COLD FINISHED ROUNDS METRIC

## STAINLESS STEEL

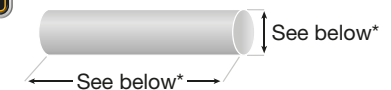
Length: 914 mm (36")

## METRIC DIAMETERS in mm

| Available Diameters [●] |   |
|-------------------------|---|
| 10.0                    | ● |
| 12.0                    | ● |
| 14.0                    | ● |
| 15.0                    | ● |
| 16.0                    | ● |
| 20.0                    | ● |
| 25.0                    | ● |

**[CFM]: Surface Condition**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

**Tolerances****Standard values**

Delivery condition: maximum 265 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  | V    |
|------|-----|-----|------|-------|------|-----|------|
| 0.85 | 0   | 0   | 0    | 0     | 17.0 | 0.9 | 0.07 |
| 0.95 | 1.0 | 1.0 | 0.04 | 0.015 | 19.0 | 1.3 | 0.12 |

**Don't see your exact dimension(s)?**

Any diameter is available in different lengths (e.g. round blanks).  
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**Technical Properties**

Corrosion resistant martensitic chrome-steel (approx. 18% Cr) for cold work. Reaches an unusually high hardness and high wear resistance after heat treatment. Polishable to high gloss and conditionally acid resistant.  
Working hardness: 53-58 HRC.

**Applications**

Cutting tools, knives, knife blades, cutlery, guide rails, wear parts, perforated discs, screw elements, pump shafts, scale pans, horizontal cutting, surgical instruments, plastic molds, injection nozzles, roller bearings, ball bearings, mechanical engineering, food industry, building industry.

**AISI 440B – all at a glance!**

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
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via smartphone / tablet:



303

304

314

316L /  
316

316Ti

410

420

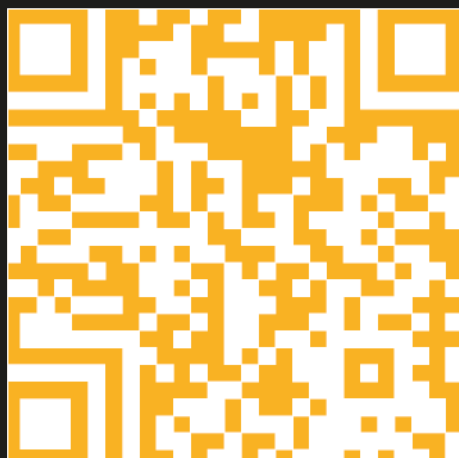
420 mod.

420RM

430F

431

440B



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ABRAMS - SIMPLY PERFECTION!

**ABRAMS**  
PREMIUM STEEL

303

304

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316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431


**440B**

# PREMIUM 440C - \$mart FLAT STOCK

# STAINLESS STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

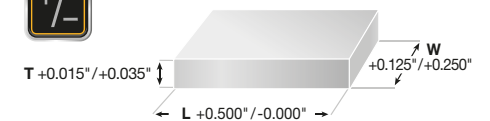
|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 285 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  |
|------|-----|-----|------|-------|------|-----|
| 0.95 | 0   | 0   | 0    | 0     | 16.0 | 0.4 |
| 1.2  | 1.0 | 1.0 | 0.04 | 0.015 | 18.0 | 0.8 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
 Custom orders on request  
 - according to your requirements!



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[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[abrams-steel.com/440C-10](http://abrams-steel.com/440C-10)



### Technical Properties

Stainless, martensitic steel with high hardness and high wear resistance and good cutting power due to the higher carbon content. Compared to the AISI 440B this steel has a slightly higher hardenability at the expense of the corrosion resistance. The material is conditionally acid resistant.  
 Working hardness: 57-60 HRC.



### Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.



### AISI 440C – all at a glance!

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via smartphone/tablet:




## PREMIUM 440C - \$mart FLAT STOCK

## STAINLESS STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|  | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
|---|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|--------|----|--------|
|   | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" | 4-1/2" | 5" | 5-1/2" |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |        |    |        |    |        |    |        |
| 1"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |        |    |        |    |        |    |        |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |        |    |        |    |        |    |        |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |        |    |        |    |        |    |        |
| 2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |        |    |        |    |        |    |        |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      |    |        |    |        |    |        |
| 3"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  |        |    |        |    |        |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      |    |        |    |        |
| 4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  |        |    |        |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      |    |        |
| 5"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  |        |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 10-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 11-1/2"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 12"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 13"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 14"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 15"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 16"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 17"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 18"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 19"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |
| 20"   | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  | ■      | ■  | ■      | ■  | ■      | ■  | ■      |



## Technical Properties

Stainless, martensitic steel with high hardness and high wear resistance and good cutting power due to the higher carbon content. Compared to the AISI 440B this steel has a slightly higher hardenability at the expense of the corrosion resistance.

The material is conditionally acid resistant.

Working hardness: 57-60 HRC.



## Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.



## [\$mart]: Surface Condition

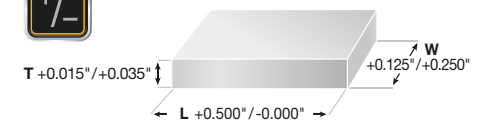
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 285 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  |
|------|-----|-----|------|-------|------|-----|
| 0.95 | 0   | 0   | 0    | 0     | 16.0 | 0.4 |
| 1.2  | 1.0 | 1.0 | 0.04 | 0.015 | 18.0 | 0.8 |



## Don't see your exact dimension(s)?

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- according to your requirements!



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## AISI 440C – all at a glance!

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via smartphone/tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431

440B


440C

# PREMIUM 440C - \$mart FLAT STOCK METRIC

# STAINLESS STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

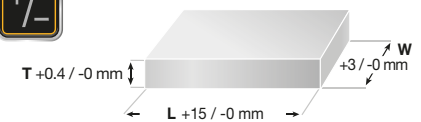
|  | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 285 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  |
|------|-----|-----|------|-------|------|-----|
| 0.95 | 0   | 0   | 0    | 0     | 16.0 | 0.4 |
| 1.2  | 1.0 | 1.0 | 0.04 | 0.015 | 18.0 | 0.8 |



### Don't see your exact dimension(s)?

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### Technical Properties

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 Working hardness: 57-60 HRC.



### Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.



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via smartphone/tablet:





## PREMIUM 440C - \$mart FLAT STOCK METRIC

## STAINLESS STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|  | THICKNESS   |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---|---|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2.3   | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 | 60.3 | 70.3 | 80.3 | 100.3 |
| WIDTH   | Available Dimensions  |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
| 33  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |      |       |
| 43  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |      |       |
| 53  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |      |       |
| 63  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |      |       |
| 73  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |       |
| 83  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 93  | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |       |
| 103   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 123   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 143   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 153   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 163   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 183   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 203   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 223   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 243   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 253   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 263   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 283   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 303   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 323   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      | ■    | ■    | ■    | ■    | ■    | ■    | ■     |
| 343   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 353   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 363   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 383   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 403   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 423   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 443   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 453   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 463   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 483   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |
| 503   | ■   | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    |      |      |      |      |      |      |      |       |



## [\$martM]: Surface Condition

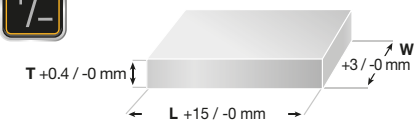
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 285 BHN

Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  |
|------|-----|-----|------|-------|------|-----|
| 0.95 | 0   | 0   | 0    | 0     | 16.0 | 0.4 |
| 1.2  | 1.0 | 1.0 | 0.04 | 0.015 | 18.0 | 0.8 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.

Custom orders on request

- according to your requirements!



## Contact us

+1 (331) 234-9900

sales@abrams-industries.com



## Direct access to our online shop

abrams-steel.com/440C-13



## Technical Properties

Stainless, martensitic steel with high hardness and high wear resistance and good cutting power due to the higher carbon content. Compared to the AISI 440B this steel has a slightly higher hardenability at the expense of the corrosion resistance.

The material is conditionally acid resistant.

Working hardness: 57-60 HRC.



## Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.



## AISI 440C – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/440C

via smartphone/tablet:



## PREMIUM 440C - COLD FINISHED ROUNDS

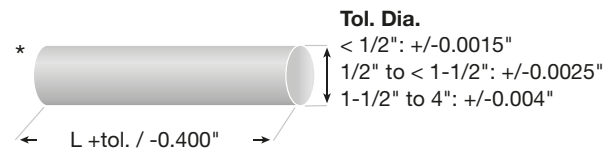
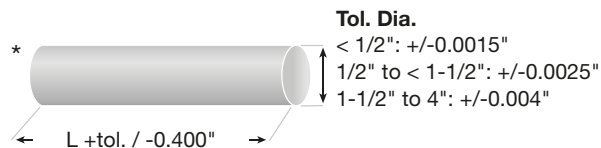
## STAINLESS STEEL

Length: **18"**

Length: **36"** **IMPERIAL DIAMETERS in inch**

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |

|        | Available Diameters [●] |
|--------|-------------------------|
| 1/4"   | ●                       |
| 3/8"   | ●                       |
| 1/2"   | ●                       |
| 5/8"   | ●                       |
| 3/4"   | ●                       |
| 1"     | ●                       |
| 1-1/8" | ●                       |
| 1-1/4" | ●                       |
| 1-3/8" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |

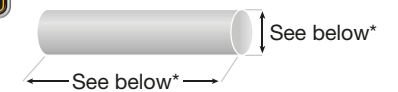


### [CF]: Surface Condition

Drawn, smooth turned, ground, or ground and polished



### Tolerances



### Standard values

Delivery condition: maximum 285 BHN  
 Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  |
|------|-----|-----|------|-------|------|-----|
| 0.95 | 0   | 0   | 0    | 0     | 16.0 | 0.4 |
| 1.2  | 1.0 | 1.0 | 0.04 | 0.015 | 18.0 | 0.8 |



### Don't see your exact dimension(s)?

Any diameter is available in different lengths (e.g. round blanks).  
 Custom orders on request  
 - according to your requirements.



### Contact us

+1 (331) 234-9900  
[sales@abrams-industries.com](mailto:sales@abrams-industries.com)



### Direct access to our online shop

[18"] - [abrams-steel.com/440C-19](http://abrams-steel.com/440C-19)  
 [36"] - [abrams-steel.com/440C-20](http://abrams-steel.com/440C-20)



### Technical Properties

Stainless, martensitic steel with high hardness and high wear resistance and good cutting power due to the higher carbon content. Compared to the AISI 440B this steel has a slightly higher hardenability at the expense of the corrosion resistance. The material is conditionally acid resistant.  
 Working hardness: 57-60 HRC.



### Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.



### AISI 440C - all at a glance!

Datasheets, online shop,  
 ABRAMS STEEL GUIDE for alternatives:  
[abrams-steel.com/440C](http://abrams-steel.com/440C)

via smartphone / tablet:



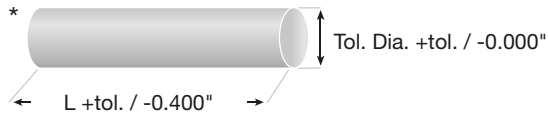
## PREMIUM 440C - DECARB FREE ROUNDS

## STAINLESS STEEL

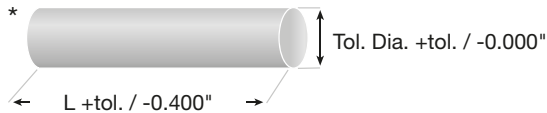
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

| Available Diameters [●] |   |
|-------------------------|---|
| 2-1/2"                  | ● |
| 3"                      | ● |
| 3-1/2"                  | ● |
| 4"                      | ● |



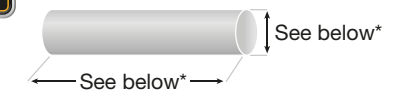
| Available Diameters [●] |   |
|-------------------------|---|
| 2-1/2"                  | ● |
| 3"                      | ● |
| 3-1/2"                  | ● |
| 4"                      | ● |



[DCF]: Surface Condition  
Peeled or rough-turned



Tolerances



Standard values

Delivery condition: maximum 285 BHN  
Chemical composition:

| C    | Si  | Mn  | P    | S     | Cr   | Mo  |
|------|-----|-----|------|-------|------|-----|
| 0.95 | 0   | 0   | 0    | 0     | 16.0 | 0.4 |
| 1.2  | 1.0 | 1.0 | 0.04 | 0.015 | 18.0 | 0.8 |



Don't see your exact dimension(s)?

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- according to your requirements.



Contact us

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sales@abrams-industries.com



Direct access to our online shop

[18"] - abrams-steel.com/440C-22  
[36"] - abrams-steel.com/440C-23



#### Technical Properties

Stainless, martensitic steel with high hardness and high wear resistance and good cutting power due to the higher carbon content. Compared to the AISI 440B this steel has a slightly higher hardenability at the expense of the corrosion resistance. The material is conditionally acid resistant. Working hardness: 57-60 HRC.



#### Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.



#### AISI 440C – all at a glance!

Datasheets, online shop,  
ABRAMS STEEL GUIDE for alternatives:  
abrams-steel.com/440C

via smartphone / tablet:



303

304

314

316L /  
316

316Ti

410

420

420 mod.

420RM

430F

431

440B

440C

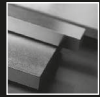


## FLATS !

Below are our flats in different categories in imperial as well as metric sizes.

Every item is available in different **thickness**, **width** and **length**. On request – specific to your needs!

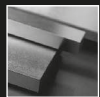
### IMPERIAL



#### Precision Ground Flat Stock, regular [GFS reg]

For example: 3/4" x 4" x 36" reg

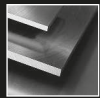
- **Thickness** ground, tol. +/-0.001"
- **Width** ground or fine milled, tol. +0.005" / -0.000"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### Precision Ground Flat Stock, oversize [GFS O/S]

For example: 3/4" x 4" x 36" O/S

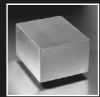
- **Thickness** ground, tol. +0.010" / +0.015"
- **Width** ground or fine milled, tol. +0.010" / +0.015"
- **Length** milled or saw cut, tol. +0.125" / +0.500"



#### \$mart Flat Stock [\$mart] Standardized Precision Blanks

For example: 3/4" x 4" x 24"

- **Thickness** ground or fine milled, tol. +0.015" / +0.035"
- **Width** saw cut, tol. +0.125" / +0.250"
- **Length** saw cut, tol. +0.500" / -0.000"

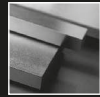


#### EDM Block hardened [EDM]

For example: 1/2" x 4" x 4"

- **Thickness** ground or fine milled, tol. +0.010" / -0.000"
- Square dimension ground or fine milled, tol. min. +0.0125"
- Grain structure is perpendicular in relation to top & bottom.

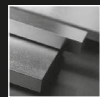
### METRIC



#### Precision Ground Flat Stock Metric, regular [GFSM reg] acc. to DIN\* 59350

For example: 20.0 x 100.0 x 1,000 mm

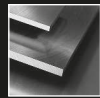
- **Thickness** ground or fine milled, tol. +0.05 / -0 mm
  - **Width** ground or fine milled, tol. +0.2 / -0 mm
  - **Length** milled or saw cut, tol. +35 / -0 mm
- Exception: AISI 1045: **T** +0.25 / -0 mm; **W** +0.4 / -0 mm



#### Precision Ground Flat Stock Metric, oversize [GFSM O/S]

For example: 20.3 x 100.3 x 1,000 mm

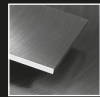
- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** ground or fine milled, tol. +0.4 / -0 mm
- **Length** milled or saw cut, tol. +35 / -0 mm



#### \$mart Flat Stock Metric [\$martM] Standardized Precision Blanks Metric

For example: 20.3 x 103 x 600 mm

- **Thickness** ground or fine milled, tol. +0.4 / -0 mm
- **Width** saw cut, tol. +3 / -0 mm
- **Length** saw cut, tol. +15 / -0 mm



#### Hard Flat Metric [HardM] Hardened Standardized Blanks Metric

For example: 10.2 x 250 x 500 mm

- **Thickness** ground or fine milled, tol. +0.2 / -0 mm
- **Width** saw cut or sheared, tol. +10 / -0 mm
- **Length** saw cut or sheared, tol. +10 / -0 mm

Flatness tolerance: +0.2 / -0 mm across the item (aimed for)

### \*DIN: DEUTSCHE INDUSTRIE NORM (GERMAN INDUSTRY STANDARD) !

Precision ground flat stock is a bar with a sharp-edged, rectangular or square cross-section made of tool steel with finely machined, decarburization-free longitudinal surfaces. In Germany, it is standardized in DIN 59350. Precision ground flat stock is used primarily as a semi-finished product in machine, tool, fixture and mold construction.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)

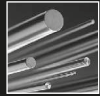


## ROUNDS !

Below are our rounds in different categories in imperial as well as metric sizes.

Any item is available in different **diameters** and / or **length**. On request – specific to your needs!

### IMPERIAL



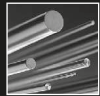
#### Drill Rod [DR]

##### Precision Round Bars

**For example: DR 3/4" x 36"**

Turned, ground & polished (TGP)

- Tol. Dia. < 1/8":  $\pm 0.0003$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/8" to < 1/2":  $\pm 0.0005$ ", L  $+0.125$ " /  $-0.000$ "
- Tol. Dia. 1/2" to 2":  $\pm 0.001$ ", L  $+0.125$ " /  $-0.000$ "



#### Cold Finished Rounds [CF]

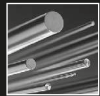
##### Precision Round Bars

**For example: CF 3/4" x 36"**

Drawn, smooth turned, ground, or ground and polished

- Tol. Dia. < 1/2":  $\pm 0.0015$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1/2" to < 1-1/2":  $\pm 0.0025$ ", L  $\pm$ tol. /  $-0.400$ "
- Tol. Dia. 1-1/2" to 4":  $\pm 0.004$ ", L  $\pm$ tol. /  $-0.400$ "

These are maximum tolerances. For more exact tolerances call our sales team.



#### Decarb Free Rounds [DCF]

##### Oversize Round Bars

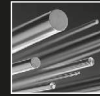
**For example: DCF 3/4" x 36"**

Peeled or rough-turned

- Tol. Dia. min.  $+0.010$ ", L  $\pm$ tol. /  $-0.400$ "
- Exception: 4XX Series stainless steel, tol. Dia.  $\pm$ tol. /  $-0.000$ ", L  $\pm$ tol. /  $-0.400$ "

These steel rounds are oversized to finish to nominal diameter.

### METRIC



#### Drill Rod Metric [DRM]

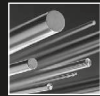
##### Precision Round Bars Metric

**For example: DRM 10.0 mm x 914 mm (36")**

Turned, ground & polished (TGP) - ISO h9

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.



#### Cold Finished Rounds Metric [CFM]

##### Precision Round Bars Metric

**For example: CFM 10.0 mm x 914 mm (36")**

Drawn, smooth turned, ground, or ground and polished (ISO h9)

- Tol. Dia.  $\leq 10.0$  mm:  $+0$  /  $-0.036$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 10.0$  mm to 18.0 mm:  $+0$  /  $-0.043$  mm, L  $\pm$ tol.
- Tol. Dia.  $> 18.0$  mm to 25.0 mm:  $+0$  /  $-0.052$  mm, L  $\pm$ tol.

These are maximum tolerances. For more exact tolerances call our sales team.

### STEEL CATEGORIES !

Steel grades are classified by their **technical properties** and/or by their **intended use**.

For example: Cold work steel, hot work steel, plastic mold steel, high speed steel, corrosion resistant steel or case hardening steel.

Steel grades are often assigned to several classification groups.

For more details on our shapes see: [us.abrams-industries.com/product-overview](http://us.abrams-industries.com/product-overview)



WATCH THE MAKING OF  
THE COVER MOTIF FOR  
CALENDAR 2016 / 2019



ABRAMS PREMIUM HEAT-TREATABLE AND CASE HARDENING STEEL!

**ABRAMS!**  
PREMIUM STEEL

HEAT-TREATABLE STEEL,  
CASE HARDENING STEEL

## STEEL GRADE - AISI

|                           |   |  |  |   |   |   |  |  |   |  |  |  |   |     |  |       |    |   |  |   |  |  |  |   |   |
|---------------------------|---|--|--|---|---|---|--|--|---|--|--|--|---|-----|--|-------|----|---|--|---|--|--|--|---|---|
| PREMIUM 4140 / 4142       |   |  |  |   | ✓ | ✓ |  |  |   |  |  |  |   | 217 |  | 104.4 | 48 | ✓ |  |   |  |  |  | ✓ |   |
| PREMIUM 4140 PH / 4142 PH | ✓ |  |  |   | ✓ | ✓ |  |  | ✓ |  |  |  | ✓ | 380 |  | 188.5 | 48 | ✓ |  |   |  |  |  | ✓ |   |
| PREMIUM 5115              |   |  |  | ✓ | ✓ | ✓ |  |  |   |  |  |  |   | 217 |  | 104.4 | 60 | ✓ |  | ✓ |  |  |  |   | ✓ |



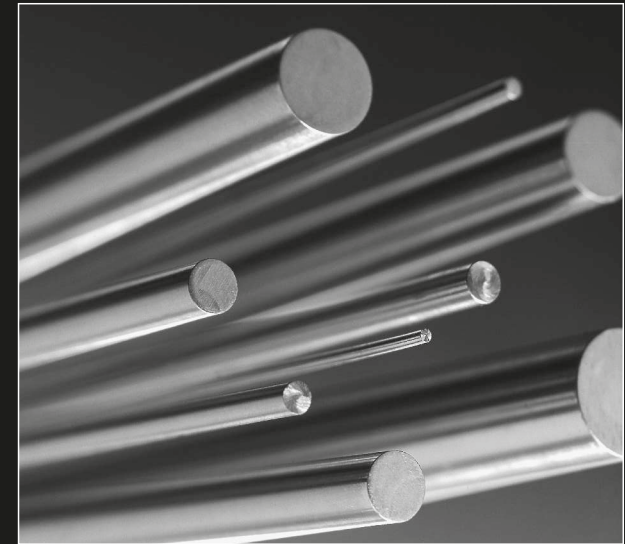
## IMPERIAL

Precision Ground Flat Stock, regular [GFS reg]  
 Precision Ground Flat Stock, oversize [GFS O/S]  
 \$mart Flat Stock [\$mart] - Standardized Precision Blanks  
 EDM Block hardened [EDM]  
 Drill Rod [DR] - Precision Round Bars  
 Cold Finished Rounds [CF] - Precision Round Bars  
 Decarb Free Rounds [DCF] - Oversize Round Bars



## METRIC

Precision Ground Flat Stock Metric, regular [GFSM reg] - acc. to DIN\* 59350  
 Precision Ground Flat Stock Metric, oversize [GFSM O/S]  
 \$mart Flat Stock Metric [\$martM] - Standardized Precision Blanks Metric  
 Hard Flat Metric [HardM] - Hardened Standardized Blanks Metric  
 Drill Rod Metric [DRM] - Precision Round Bars Metric  
 Cold Finished Rounds Metric [CFM] - Precision Round Bars Metric  
 \*DIN: Deutsche Industrie Norm (German Industry Standard)



# PREMIUM 4140 / 4142 - \$mart FLAT STOCK

# HEAT-TREATABLE STEEL

Length: 12"

## IMPERIAL DIMENSIONS in inch

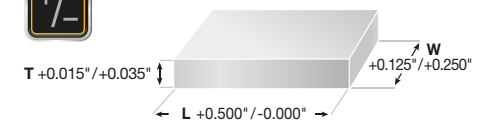
|         | THICKNESS                 |      |       |       |      |       |      |      |      |      |    |        |        |    |
|---------|---------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 3/32"                     | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
| WIDTH   | Available Dimensions [mm] |      |       |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 217 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



### Don't see your exact dimension(s)?

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 - according to your requirements!



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### Technical Properties

Heat-treatable steel (annealed condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27-48 HRC.



### Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



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via smartphone / tablet:





## PREMIUM 4140 / 4142 - \$mart FLAT STOCK

## HEAT-TREATABLE STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|         | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |  |
|---------|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--|
|         | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |  |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |  |
| 1"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |  |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      |    |  |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 2"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 3"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 4"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 5"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 6"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 7"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 8"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 9"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 10"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 10-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 11"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 11-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 12"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 13"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 14"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 15"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 16"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 17"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 18"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 19"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 20"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |



## [\$mart]: Surface Condition

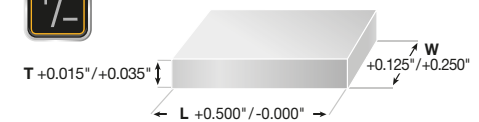
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



## Don't see your exact dimension(s)?

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- according to your requirements!



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## Technical Properties

Heat-treatable steel (annealed condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27-48 HRC.



## Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



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# PREMIUM 4140 / 4142 - \$mart FLAT STOCK METRIC

# HEAT-TREATABLE STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

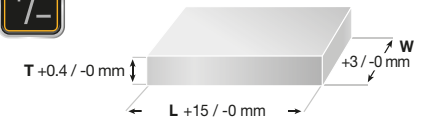
| WIDTH                     | THICKNESS |     |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 2.3       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 217 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



### Don't see your exact dimension(s)?

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## PREMIUM 4140 / 4142 - \$mart FLAT STOCK METRIC

## HEAT-TREATABLE STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

|       | THICKNESS                 |     |     |     |     |     |      |      |      |      |      |      |      |      |
|-------|---------------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|       | 2.3                       | 3.3 | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| WIDTH | Available Dimensions [mm] |     |     |     |     |     |      |      |      |      |      |      |      |      |
| 33    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93    | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503   | ■                         | ■   | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## [\$martM]: Surface Condition

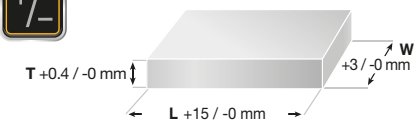
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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## Technical Properties

Heat-treatable steel (annealed condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27-48 HRC.



## Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



## AISI 4140 / 4142 – all at a glance!

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4140 /  
4142

ABRAMS - THE POWER OF STEEL GRADE VARIETY!

**ABRAMS!**  
PREMIUM STEEL

# PREMIUM 4140 PH / 4142 PH - PRECISION GROUND FLAT STOCK, REGULAR

# HEAT-TREATABLE STEEL

Length: 18"

## IMPERIAL DIMENSIONS in inch

| WIDTH  | THICKNESS                |       |      |       |      |       |      |      |      |      |    |
|--------|--------------------------|-------|------|-------|------|-------|------|------|------|------|----|
|        | 1/16"                    | 3/32" | 1/8" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" |
|        | Available Dimensions [■] |       |      |       |      |       |      |      |      |      |    |
| 3/16"  |                          |       |      | ■     |      |       |      |      |      |      |    |
| 1/4"   |                          |       |      |       | ■    |       |      |      |      |      |    |
| 5/16"  |                          |       |      |       |      | ■     |      |      |      |      |    |
| 3/8"   |                          |       | ■    | ■     | ■    | ■     | ■    |      |      |      |    |
| 1/2"   | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    |      |      |    |
| 5/8"   |                          |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    |      |    |
| 3/4"   | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    |    |
| 1"     | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/4" |                          |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/2" | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-3/4" |                          |       | ■    | ■     | ■    | ■     | ■    | ■    |      | ■    | ■  |
| 2"     | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 2-1/2" |                          |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3"     | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3-1/2" |                          |       | ■    | ■     | ■    | ■     | ■    | ■    |      | ■    | ■  |
| 4"     | ■                        | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 5"     |                          |       | ■    | ■     | ■    | ■     | ■    | ■    |      | ■    | ■  |
| 6"     |                          |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 8"     |                          |       |      |       | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 10"    |                          |       |      |       | ■    |       | ■    | ■    |      | ■    | ■  |



### [GFS reg]: Surface Condition

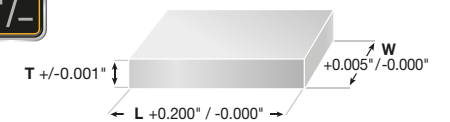
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



### Tolerances



### Standard values

Delivery condition: maximum 380 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



### Don't see your exact dimension(s)?

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### Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



### Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



### AISI 4140 PH / 4142 PH

Datasheets, online shop, ABRAMS STEEL GUIDE for alternatives: [abrams-steel.com/4140PH](https://abrams-steel.com/4140PH)

via smartphone/tablet:



## PREMIUM 4140 PH / 4142 PH - PRECISION GROUND FLAT STOCK, REGULAR

## HEAT-TREATABLE STEEL

Length: 36"

## IMPERIAL DIMENSIONS in inch

| WIDTH                    | THICKNESS |       |      |       |      |       |      |      |      |      |    |
|--------------------------|-----------|-------|------|-------|------|-------|------|------|------|------|----|
|                          | 1/16"     | 3/32" | 1/8" | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" |
| Available Dimensions [■] |           |       |      |       |      |       |      |      |      |      |    |
| 3/16"                    |           |       |      | ■     |      |       |      |      |      |      |    |
| 1/4"                     |           |       |      |       | ■    |       |      |      |      |      |    |
| 5/16"                    |           |       |      |       |      | ■     |      |      |      |      |    |
| 3/8"                     |           |       | ■    | ■     | ■    | ■     | ■    |      |      |      |    |
| 1/2"                     | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    |      |      |    |
| 5/8"                     |           |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    |      |    |
| 3/4"                     | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    |    |
| 1"                       | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/4"                   |           |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-1/2"                   | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 1-3/4"                   |           |       | ■    | ■     | ■    | ■     | ■    | ■    |      | ■    | ■  |
| 2"                       | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 2-1/2"                   |           |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3"                       | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 3-1/2"                   |           |       | ■    | ■     | ■    | ■     | ■    | ■    |      | ■    | ■  |
| 4"                       | ■         | ■     | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 5"                       |           |       | ■    | ■     | ■    | ■     | ■    | ■    |      | ■    | ■  |
| 6"                       |           |       | ■    | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 8"                       |           |       |      |       | ■    | ■     | ■    | ■    | ■    | ■    | ■  |
| 10"                      |           |       |      |       | ■    |       | ■    | ■    |      | ■    | ■  |



## Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



## Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



## [GFS reg]: Surface Condition

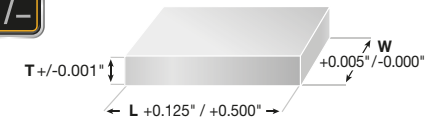
Thickness: ground

Width: ground or fine milled

Length: milled or saw cut



## Tolerances



## Standard values

Delivery condition: maximum 380 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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41424140 PH /  
4142 PH

Length: 12"

IMPERIAL DIMENSIONS in inch

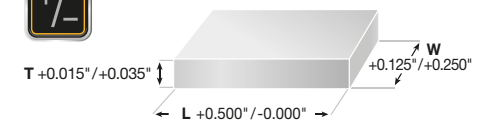
| WIDTH   | THICKNESS                |       |       |      |       |      |      |      |      |    |        |        |    |
|---------|--------------------------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 1/8"                     | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [■] |       |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



**[\$mart]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 380 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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#### Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



#### Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



#### AISI 4140 PH / 4142 PH

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via smartphone / tablet:



## PREMIUM 4140 PH / 4142 PH - \$mart FLAT STOCK

## HEAT-TREATABLE STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                |       |       |      |       |      |      |      |      |    |        |        |    |
|---------|--------------------------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 1/8"                     | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [■] |       |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 2"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 2-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 3"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 3-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 4"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 4-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 5"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 5-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 6"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 6-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 7"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 7-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 8"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 8-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 9"      | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 9-1/2"  | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 10"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 10-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 11"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 11-1/2" | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 12"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 13"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 14"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 15"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 16"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 17"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 18"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 19"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |
| 20"     | ■                        | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        | ■  |



## [\$mart]: Surface Condition

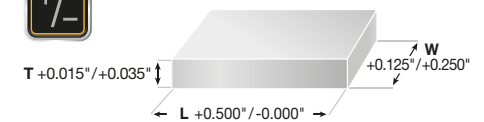
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 380 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0.    | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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## Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



## Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



## AISI 4140 PH / 4142 PH

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via smartphone/tablet:





# PREMIUM 4140 PH / 4142 PH - \$mart FLAT STOCK METRIC

# HEAT-TREATABLE STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

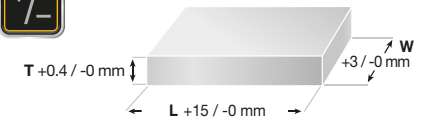
| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 380 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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### Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



### Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



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## PREMIUM 4140 PH / 4142 PH - \$mart FLAT STOCK METRIC

## HEAT-TREATABLE STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## [\$martM]: Surface Condition

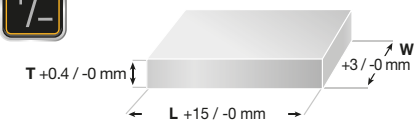
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 380 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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## Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



## Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



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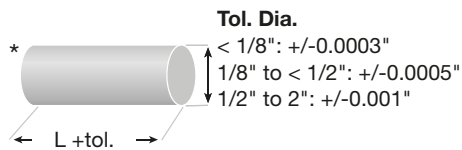
## PREMIUM 4140 PH / 4142 PH - DRILL ROD

## HEAT-TREATABLE STEEL

Length: 36"

### IMPERIAL DIAMETERS in inch

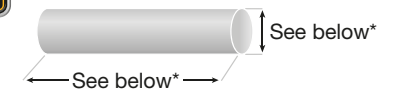
| Available Diameters [●] |   |
|-------------------------|---|
| 1/8"                    | ● |
| 3/16"                   | ● |
| 1/4"                    | ● |
| 9/32"                   | ● |
| 5/16"                   | ● |
| 3/8"                    | ● |
| 7/16"                   | ● |
| 1/2"                    | ● |
| 9/16"                   | ● |
| 5/8"                    | ● |
| 11/16"                  | ● |
| 3/4"                    | ● |
| 13/16"                  | ● |
| 7/8"                    | ● |
| 15/16"                  | ● |
| 1"                      | ● |



**[DR]: Surface Condition**  
 Turned, ground & polished (TGP)



#### Tolerances



#### Standard values

Delivery condition: maximum 380 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



#### Don't see your exact dimension(s)?

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#### Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



#### Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



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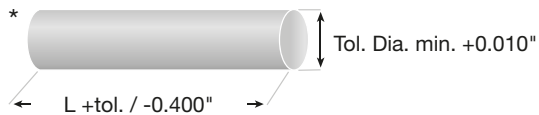
## PREMIUM 4140 PH / 4142 PH - DECARB FREE ROUNDS

## HEAT-TREATABLE STEEL

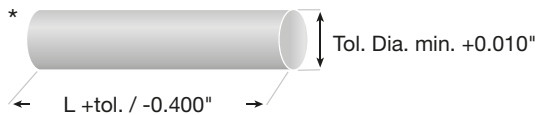
Length: 18"

Length: 36" IMPERIAL DIAMETERS in inch

|        | Available Diameters [●] |
|--------|-------------------------|
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



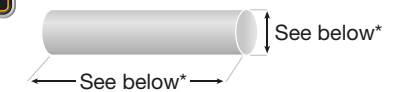
|        | Available Diameters [●] |
|--------|-------------------------|
| 1"     | ●                       |
| 1-1/4" | ●                       |
| 1-1/2" | ●                       |
| 1-3/4" | ●                       |
| 2"     | ●                       |
| 2-1/2" | ●                       |
| 3"     | ●                       |
| 3-1/2" | ●                       |
| 4"     | ●                       |



[DCF]: Surface Condition  
Peeled or rough-turned



Tolerances



Standard values

Delivery condition: maximum 380 BHN  
Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  | Mo   |
|------|-----|-----|-------|-------|-----|------|
| 0.38 | 0   | 0.6 | 0     | 0     | 0.9 | 0.15 |
| 0.45 | 0.4 | 0.9 | 0.035 | 0.035 | 1.2 | 0.3  |



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## Technical Properties

Heat-treatable steel (tempered condition) that can be used for a wide range of applications with a high degree of strength and toughness. Often used for demanding applications in automotive engineering. In quenched and tempered condition it is used in machine construction.

Working hardness: 27 (min. hardness/delivery condition) - 48 HRC.



## Applications

Mechanical engineering, machine parts, axes, knuckles, connecting rods, crankshafts, gear shafts, pinions, gears, bandages, base plates, assembly parts.



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PREMIUM STEEL

## PREMIUM 5115 - PRECISION GROUND FLAT STOCK METRIC, OVERSIZE

## CASE HARDENING STEEL

Length: 1,000 mm

## METRIC DIMENSIONS in mm

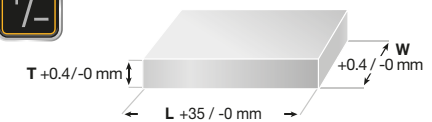
|       | THICKNESS                |      |      |      |      |      |
|-------|--------------------------|------|------|------|------|------|
|       | 8.2                      | 10.3 | 12.3 | 15.3 | 16.3 | 20.3 |
| WIDTH | Available Dimensions [■] |      |      |      |      |      |
| 15.3  |                          |      |      | ■    |      |      |
| 20.3  | ■                        | ■    | ■    | ■    | ■    | ■    |
| 25.3  | ■                        | ■    | ■    | ■    | ■    | ■    |
| 30.3  | ■                        | ■    | ■    | ■    | ■    |      |
| 32.3  | ■                        | ■    | ■    | ■    | ■    |      |
| 40.3  | ■                        | ■    | ■    |      |      |      |
| 50.3  | ■                        | ■    |      |      |      |      |
| 60.3  | ■                        |      |      |      |      |      |
| 70.3  | ■                        |      |      |      |      |      |

**[GFSM O/S]: Surface Condition**

Thickness: ground or fine milled

Width: ground or fine milled

Length: milled or saw cut

**Tolerances****Standard values**

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  |
|------|-----|-----|-------|-------|-----|
| 0.14 | 0   | 1.0 | 0     | 0     | 0.8 |
| 0.19 | 0.4 | 1.3 | 0.025 | 0.035 | 1.1 |

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**Technical Properties**

Cold work and plastic mold steel (group of case hardening steel) with the objective of high surface hardness with core toughness. Excellent machinability, good cold hobbing and polishing properties. The tensile strength is a result of the combination of hardened surface and tough core. Working hardness (surface): 58-60 HRC.

**Applications**

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin molds, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.

**AISI 5115 – all at a glance!**

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4140 /  
41424140 PH /  
4142 PH

5115

## PREMIUM 5115 - \$mart FLAT STOCK

## CASE HARDENING STEEL

Length: 12"

### IMPERIAL DIMENSIONS in inch

| WIDTH   | THICKNESS                 |      |       |       |      |       |      |      |      |      |    |        |        |    |
|---------|---------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|
|         | 3/32"                     | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |
|         | Available Dimensions [mm] |      |       |       |      |       |      |      |      |      |    |        |        |    |
| 1"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |
| 1-1/4"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      |        |    |
| 1-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      |    |
| 2"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 2-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 3-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 4-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 5-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 6-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 7-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 8-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9"      | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 9-1/2"  | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 10-1/2" | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 11-1/2" | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |
| 12"     | ■                         | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  | ■      | ■      | ■  |



#### Technical Properties

Cold work and plastic mold steel (group of case hardening steel) with the objective of high surface hardness with core toughness. Excellent machinability, good cold hobbing and polishing properties. The tensile strength is a result of the combination of hardened surface and tough core. Working hardness (surface): 58-60 HRC.



#### Applications

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin molds, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.



#### [\$mart]: Surface Condition

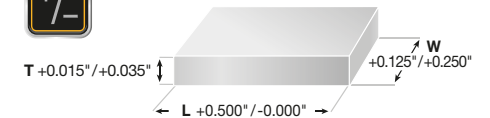
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



#### Tolerances



#### Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  |
|------|-----|-----|-------|-------|-----|
| 0.14 | 0   | 1.0 | 0     | 0     | 0.8 |
| 0.19 | 0.4 | 1.3 | 0.025 | 0.035 | 1.1 |



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## PREMIUM 5115 - \$mart FLAT STOCK

## CASE HARDENING STEEL

Length: 24"

## IMPERIAL DIMENSIONS in inch

|         | THICKNESS                |      |       |       |      |       |      |      |      |      |    |        |        |    |  |
|---------|--------------------------|------|-------|-------|------|-------|------|------|------|------|----|--------|--------|----|--|
|         | 3/32"                    | 1/8" | 3/16" | 7/32" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" |  |
| WIDTH   | Available Dimensions [■] |      |       |       |      |       |      |      |      |      |    |        |        |    |  |
| 1"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        |        |    |  |
| 1-1/4"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      |    |  |
| 1-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 2"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 2-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 3"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 3-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 4"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 4-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 5"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 5-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 6"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 6-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 7"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 7-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 8"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 8-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 9"      | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 9-1/2"  | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 10"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 10-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 11"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 11-1/2" | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 12"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 13"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 14"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 15"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 16"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 17"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 18"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 19"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |
| 20"     | ■                        | ■    | ■     | ■     | ■    | ■     | ■    | ■    | ■    | ■    | ■  |        | ■      | ■  |  |



## Technical Properties

Cold work and plastic mold steel (group of case hardening steel) with the objective of high surface hardness with core toughness. Excellent machinability, good cold hobbing and polishing properties. The tensile strength is a result of the combination of hardened surface and tough core. Working hardness (surface): 58-60 HRC.



## Applications

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin molds, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.



## [\$mart]: Surface Condition

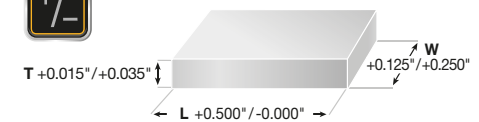
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  |
|------|-----|-----|-------|-------|-----|
| 0.14 | 0   | 1.0 | 0     | 0     | 0.8 |
| 0.19 | 0.4 | 1.3 | 0.025 | 0.035 | 1.1 |



## Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths. Custom orders on request - according to your requirements!



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4140 /  
41424140 PH /  
4142 PH

5115

# PREMIUM 5115 - \$mart FLAT STOCK METRIC

# CASE HARDENING STEEL

Length: 300 mm

## METRIC DIMENSIONS in mm

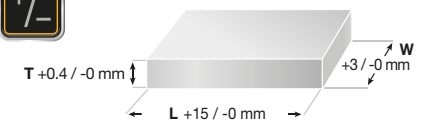
| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    |      |      |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    |      |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



**[\$martM]: Surface Condition**  
**Thickness:** ground or fine milled  
**Width:** saw cut  
**Length:** saw cut



### Tolerances



### Standard values

Delivery condition: maximum 217 BHN  
 Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  |
|------|-----|-----|-------|-------|-----|
| 0.14 | 0   | 1.0 | 0     | 0     | 0.8 |
| 0.19 | 0.4 | 1.3 | 0.025 | 0.035 | 1.1 |



### Don't see your exact dimension(s)?

Any size is available in different thicknesses, widths and/or lengths.  
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### Technical Properties

Cold work and plastic mold steel (group of case hardening steel) with the objective of high surface hardness with core toughness. Excellent machinability, good cold hobbing and polishing properties. The tensile strength is a result of the combination of hardened surface and tough core.  
 Working hardness (surface): 58-60 HRC.



### Applications

Mechanical engineering, jig construction, plant engineering, apparatus engineering, plastic processing, plastic molds, synthetic resin molds, base plates, bending bars, guide columns, gear parts, joint parts, shafts, gears, rods, bevel gears, crown wheels, piston pins, camshafts, bolts, pins, universal joints.



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Datasheets, online shop,  
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via smartphone / tablet:



## PREMIUM 5115 - \$mart FLAT STOCK METRIC

## CASE HARDENING STEEL

Length: 600 mm

## METRIC DIMENSIONS in mm

| WIDTH                     | THICKNESS |     |     |     |     |      |      |      |      |      |      |      |      |
|---------------------------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
|                           | 3.3       | 4.3 | 5.3 | 6.3 | 8.3 | 10.3 | 12.3 | 15.3 | 20.3 | 25.3 | 30.3 | 40.3 | 50.3 |
| Available Dimensions [mm] |           |     |     |     |     |      |      |      |      |      |      |      |      |
| 33                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 43                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 53                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 63                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 73                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 83                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 93                        | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 103                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 123                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 143                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 153                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 163                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 183                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 203                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 223                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 243                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 253                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 263                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 283                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 303                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 323                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 343                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 353                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 363                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 383                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 403                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 423                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 443                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 453                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 463                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 483                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |
| 503                       | ■         | ■   | ■   | ■   | ■   | ■    | ■    | ■    | ■    | ■    | ■    | ■    | ■    |



## [\$martM]: Surface Condition

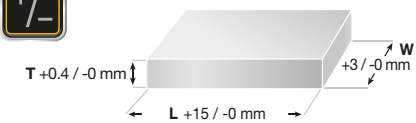
Thickness: ground or fine milled

Width: saw cut

Length: saw cut



## Tolerances



## Standard values

Delivery condition: maximum 217 BHN

Chemical composition:

| C    | Si  | Mn  | P     | S     | Cr  |
|------|-----|-----|-------|-------|-----|
| 0.14 | 0   | 1.0 | 0     | 0     | 0.8 |
| 0.19 | 0.4 | 1.3 | 0.025 | 0.035 | 1.1 |



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### Information Regarding Our Product Catalog

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This product catalog provides all the available size grade combinations of our 44 different PREMIUM steel grades, as well as an overview of their technical properties and possible applications to guide you to the most appropriate grade for your usage.

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|------------------|--------|-----------|-----------|--------------|-----------|----------|------------------|--|
| A2               | L6     |           |           |              |           | 410      |                  |  |
| A8 mod./ Chipper | O1     | Toolox 33 | 420 ESR   |              |           | 420      |                  |  |
| D2               | P20    | Toolox 44 | 420 LC    |              | 303       | 420 mod. |                  |  |
| H10              | P20 PH | W1        | 420FM     |              | 304       | 420RM    |                  |  |
| H13              | P20+Ni | 1018/A36  | 5120      |              | 314       | 431      | 4140/ 4142       |  |
| H13 ESR          | S1     | 1045      | 52100/ L1 | HSS M2       | 316L/ 316 | 440B     | 4140 PH/ 4142 PH |  |
| L3               | S7     | 2990mod.  | 6F7 ESR   | HSS PM M4 HC | 316Ti     | 440C     | 5115             |  |

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  - + Hard Flat Metric - Hardened Standardized Blanks
  - + EDM Block hardened
  - + Drill Rod - Precision Round Bars
  - + Cold Finished Rounds - Precision Round Bars
  - + Decarb Free Rounds - Oversize Round Bars
  - + NO MINIMUM ORDER VALUE
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  - + SPECIALS ON REQUEST
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