Steel grade

Material No.	PREMIUM 303
AISI	303; S30300
Search for alternatives in the ABRAMS STEEL GUIDE	**www.abrams-steelguide.com/alternatives/303**

Shapes

$mart Flat Stock [$mart]
Standardized Precision Blanks
L: 12"
L: 24"

$mart Flat Stock Metric [$martM]
Standardized Precision Blanks Metric
L: 300 mm
L: 600 mm

Cold Finished Rounds [CF]
Precision Round Bars
L: 18"
L: 36"

Cold Finished Rounds Metric [CFM]
Precision Round Bars Metric
L: 914 mm (36")

Chemical composition AISI 303 (reference value %)

C	Si	Mn	P	S	Cr	Ni	Cu	N
0 - 0.1	0 - 1.0	0 - 2.0	0 - 0.045	0.15 - 0.35	17.0 - 19.0	8.0 - 10.0	0 - 1.0	0 - 0.11

Physical properties

Hardness (delivery condition)	max. 250 HB, annealed				
Tensile strength R_m (as received condition)	approx. 116.0 KSI				
Working hardness	max. 20 HRC				
Thermal expansion coefficient 10^{-6}m/(m • K)	68 - 212°F	68 - 392°F	68 - 572°F	68 - 752°F	68 - 932°F
	16.0	16.5	17.0	17.5	18.0
Thermal conductivity W/(m • K)	68°F				
	15.0				

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-magnetisable and conditionally acid resistant.

Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, fittings construction, kitchen equipment, decoration.

Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	1832 – 1976°C	Air	max. 250 HB

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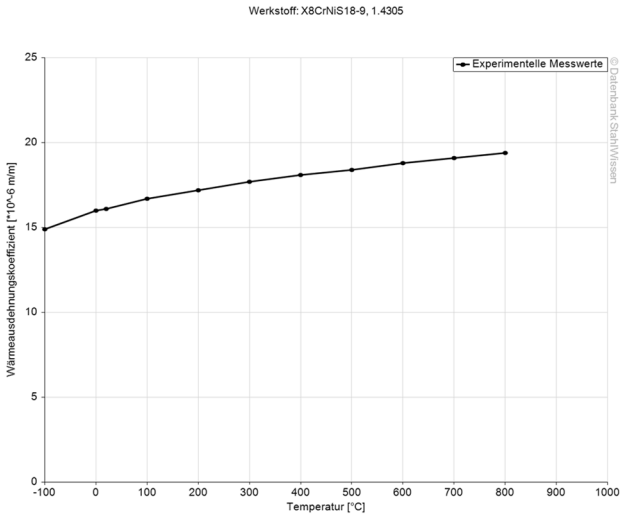
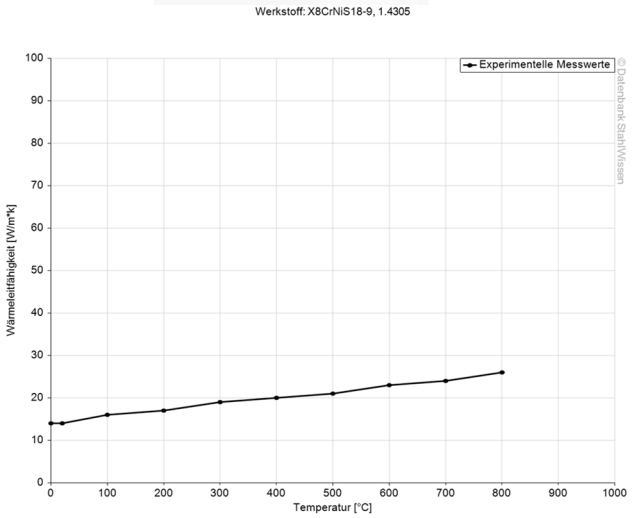
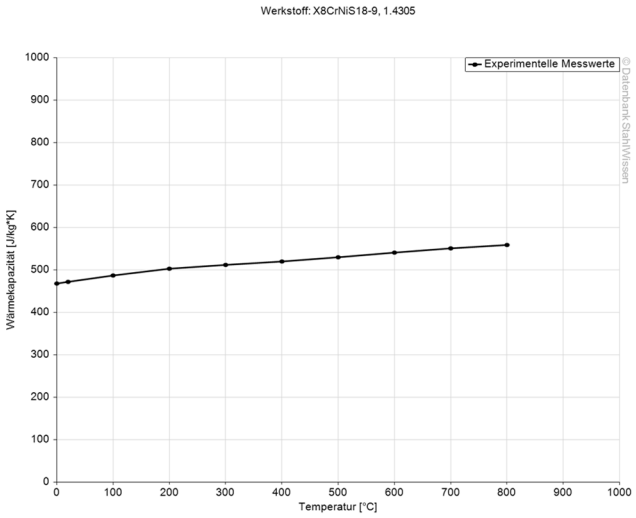
Thermal expansion coefficient diagram



Thermal conductivity diagram



Thermal capacity diagram



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.
Diagramsaretakenfrom Datenbank StahlWissen Dr. Sommer Werkstofftechnik
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