

X8CrNiS18-9 (1.4305)

Material Designations

1.4305 DIN
~303 AISI

Standards

DIN EN 10088-3
DIN EN 10088-5

Chemical Composition Mass-% acc. to DIN EN 10088-3

	C	Si	Mn	P	S	Cr	Ni	N	Cu
min.	-	-	-	-	0,15	17,0	8,0	-	-
max.	0,1	1,0	2,0	0,045	0,35	19,0	10,0	0,10	1,00

Customer specific restrictions upon request.

Properties

1.4305 is an austenitic Cr-Ni steel with added sulfur for optimal machinability (free-cutting steel).

Due to the sulfur addition, corrosion resistance in acidic and chloride-containing media is limited; however, the steel is resistant to steam up to 400 °C.

Due to its susceptibility to hot cracking, 1.4305 should not be welded.

Delivery Condition

✂ solution annealed (+AT) max. 230 HBW

Application Area

Machined components for use in mildly to moderately corrosive environments.

Typical Applications

- ✂ Automotive industry
- ✂ Valves and fittings
- ✂ Mechanical and plant engineering
- ✂ Decorative elements

Mechanical Properties acc. to DIN EN 10088-3

Diameter [mm]	Yield strength [N/mm ²]	Tensile strength [N/mm ²]	Elongation [%]
≤ 160	≥ 190	500 - 750	≥ 35

Heat Treatment Guideline values acc. to DIN EN 10088-3

	Temperature [°C]	Cooling medium
Solution annealing (+AT)	1000 - 1100	Water, air

Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNV ...
- Customer specific approval certificates

Innovation

- Fully automated ultrasonic testing up to dia. 1000 mm
- CO₂-reduction by innovative heat treatment solutions

Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

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