Stainless steel 301 | 1.4310 | X10CrNi18-8

Stainless Steel 301 offers high strength and good ductility for spring and structural parts.

Mechanical properties

Ultimate tensile strength	510 - 590 MPa
Yield strength	200 - 230 MPa
Young's modulus (modulus of elasticity)	200 - 212 GPa
Elongation at break	35 - 46 %

Physical properties

Corrosion resistance	Excellent
Magnetism	Non-magnetic in annealed condition
Weldability	Good

Thermal properties

Thermal expansion coefficent	16.6 - 19.5 10^-6/ºC
Thermal conductivity	16 - 16.3 W/(m·°C)

Electrical properties

Electrical resistivity	72 µΩ*cm

Post treatments

Post-Processing	Cold working, Annealing
Anodizing compatibility	Not suitable

Common applications

Rail car structural components	
Air frame sections	

Automotive wheel covers	
Wiper blade clips and holders	

Stainless Steel 301 CNC Machining Applications & Parts

Stainless Steel 301 is known for its high strength and good corrosion resistance, which can be enhanced through cold working. We precision machine this austenitic grade into parts that require a combination of durability and formability.

Typical Parts We Machine from Stainless Steel 301:

- **Automotive & Transportation:** Springs, clips, fasteners, structural chassis components
- **Electronics & Consumer Goods:** EMI/RFI shielding, connector components, watch cases
- **Industrial Applications:** Conveyor parts, storage tanks, railway carriages

Our Machining Advantage:

We carefully manage cutting speeds and feeds to control work hardening during the machining of 301, ensuring consistent results and preventing premature tool wear.

Get an Instant Quote for your custom Stainless Steel 301 parts today.