Stainless steel 440C | 1.4125 | X105CrMo17

Stainless Steel 440C is a high-carbon martensitic grade for bearings and wear parts.

Mechanical properties

Ultimate tensile strength	560 - 800 MPa
Yield strength	340 - 430 MPa
Young's modulus (modulus of elasticity)	204 - 215 GPa
Elongation at break	14 - 18 %

Physical properties

Corrosion resistance	Moderate
Magnetism	Magnetic
Weldability	Poor

Thermal properties

Thermal expansion coefficent	10 - 10.2 10^-6/ºC
Thermal conductivity	22 - 24.2 W/(m·°C)

Electrical properties

Electrical resistivity	60 µΩ*cm

Post treatments

Post-Processing	Cold and hot working, Annealing, Tempering, Hardening
Anodizing compatibility	Not suitable

Common applications

Gage blocks	
Ball bearings and races	

Molds and dies	
Valve components	
Measuring instruments	

Stainless Steel 440C CNC Machining Applications & Parts

Stainless Steel 440C is a high-carbon martensitic stainless steel renowned for its exceptional hardness, outstanding wear resistance, and good corrosion resistance. We specialize in precision machining this challenging material to produce durable, high-performance components that meet the most demanding specifications.

Typical Parts We Machine from Stainless Steel 440C:

- **Cutting Tools & Blades:** Surgical blades, industrial knife blades, food processing cutters, slitter blades
- **Aerospace & Defense:** Bearings for high-stress environments, valve components, landing gear parts, fasteners
- **Industrial Machinery:** Pump shafts, seals, mold inserts, gauges, and other high-wear tooling components
- **Medical & Dental Equipment:** Scalpel handles, surgical instrument jaws, dental drill bits, biopsy punch components

Our Machining Advantage:

Our expertise lies in machining hardened Stainless Steel 440C using state-of-the-art CNC equipment with rigid setups and specialized, wear-resistant carbide tooling, ensuring precise tolerances and eliminating geometric deformation.

Get an Instant Quote for your custom Stainless Steel 440C parts today.