

AISI 440C Stainless Steel Precision Balls

These AISI 440C stainless steel balls provide excellent hardness and corrosion resistance. They are ideal for use in bearings, valves, and precision instruments.



Product Overview

AISI 440C Stainless Steel Precision Balls

These martensitic stainless steel balls are engineered for high-performance applications, offering remarkable hardness, superior wear resistance, and exceptional surface finishing. Manufactured to narrow dimensional tolerances, they are supplied in a passivated state. Their durability and precision make them an ideal choice for critical components in medical instruments, precision bearings, and specialized valve systems.

Technical Specifications

Service Temperature

0 °C

Min Temp

400 °C

Max Temp

Available Sizes	0.5mm - 50.8mm
Grade Range	G5 to G1000
Hardness	61.5 HRC

Material Composition

Chemical Composition (%)

Element	Max/Range
Carbon (C)	0.95-1.20
Silicon (Si)	1.00 max
Manganese (Mn)	1.00 max
Phosphorus (P)	0.040 max
Sulfur (S)	0.030 max
Chromium (Cr)	16.00-18.00
Molybdenum (Mo)	0.75 max

Material Properties

Physical & Mechanical Properties

- Density: 7.75 g/cm³
- Young's Modulus: 210 GPa
- Specific Heat: 450 J/kg-K
- Thermal Conductivity: 19.6 W/(m·K)

Applications

Primary Applications

Precision Bearings, Anti-friction Bearings, Special Valves, Medical Instruments, Foodstuff Equipment, Ballpoint Pens, Conveyor Systems

Standards

International Standards Equivalents

Region	Designation
USA	440C
Germany	1.4125
France	Z100CD17
Russia	95X18
China	9Cr18Mo
Japan	SUS440C