

Miniature precision balls

Watch Industry, linear bearings, ball screw

Tolerances	Grade 3 (ISO 3290/DIN 5401)	
	Stainless steel	myrox®
Spherical variation	0.08 µm	0.08 µm
Diameter variation of one batch	0.13 µm	0.13 µm
Density	7.7 g/cm ³	6.0 g/cm ³
Hardness	min. 720 HV	1150-1200 HV
E-module	214'000 MPa	220 000 MPa
Linear coefficient of thermal expansion	10.4 x 10 ⁻⁶ K ⁻¹	11 x K ⁻¹
Fracture toughness	-	10 MPa·m ^½
Bending strength	1930 MPa	>1800 MPa

Stainless steel [mm]	myrox® [mm]
0.200X	
0.250X	
0.300X	
0.397X	
0.500X	
0.600X	
	0.700ZRY
0.794X (1/32 inch)	
1.000X	1.000ZRY
1.150X	
1.250X	
1.450X	
1.500X	
1.588X (1/16 inch)	

Example of part number definition

- 0.250X/G3 Nominal ball diameter in mm
- 0.250X/G3 "X" for stainless steel
- "ZRY" for myrox®
- 0.250X/G3 Precision quality ISO grade 3

Material

myrox®: Zirconium oxide (ZrO₂)
 stainless steel: AISI 440C

