

SPECIFICATION FOR SPHERICAL BEARING WITH ROD ENDS

1. SCOPE

This specification covers the technical details, quality requirements and acceptance criteria of Spherical Bearings with rod ends for deployment mechanisms.

2. DOCUMENTS

The following standards form part of this specification to the extent specified herein. The latest issue of these documents in effect on the date of material purchase shall be applicable.

2.1 APPLICABLE STANDARDS

DIN ISO 8139	Dimensional standard
DIN ISO 12240-4	

3. GEOMETRIC DIMENSIONS AND MATERIAL SPECIFICATION

Table 1: General and material Specifications

S No	Description	Parameter
1	Type of rod end	Female type (Internal thread)
2	Thread type	As per table 3
3	Lubrication type	Polyamid-PTFE-fibreglass compound
5	Material for inner spherical ball	Stainless steel, hardened, ground, polished
6	Material for rod end housing	Forged stainless steel
8	Starting chamfer on both sides of inner spherical Ball	Required, Value to be specified by manufacturer
9	Temperature range	-30°C to +60°C
11	Quantity required	As per table 2

Table 2: Quantity details for each type

Type	Description	Thread type	Quantity
A	Spherical bearing with female type - M6 - Rod ends	Right hand	50
B	Spherical bearing with female type - M6 - Rod ends	Left hand	50
C	Spherical bearing with female type – M8 - Rod ends	Right hand	25
D	Spherical bearing with female type – M8 - Rod ends	Left hand	25

Table 3: Geometric Specifications (Refer Figure 1)

Sl no.	Parameter	Unit	Specification	
			Type A and B	Type C and D
1.	Inner Dia. (d)	mm	6	8
2.	Thread type (G)	mm	M6	M8
3.	Housing outer dia (d2)	mm	≤20	≤24
4.	Overall length (l4)	mm	≤45	≤50
5.	Thickness Of Sp. Ball (B)	mm	9	12
6.	Thickness Of Outer Casing (C1)	mm	6.75±1	9±1
7.	d1	mm	To be specified by manufacturer	To be specified by manufacturer

8.	Rod end OD (d3)	mm	≤10	≤12.5
9.	d4	mm	To be specified by manufacturer	To be specified by manufacturer
10.	Length of Rod end from bearing center (h1)	mm	To be specified by manufacturer	To be specified by manufacturer
11.	Thread length (l3)	mm	≥ 12	≥ 16
12.	Rod end hexagon end length (l5)	mm	≥ 5	≥ 5
13.	l7	mm	To be specified by manufacturer	To be specified by manufacturer
14.	Rod end across flat (W)	mm	≤ 12	≤ 15
15.	Bearing angle (α)	Degrees	≥ 12	≥ 12
16.	Dynamic load rating (C)	kN	≥ 4.5	≥ 7
17.	Static load rating (Co)	kN	≥ 9	≥ 14
18.	Radial clearance (CN)	Nm	≤ 12μm	≤ 12μm
19.	Weight	gm	≤ 30	≤ 50

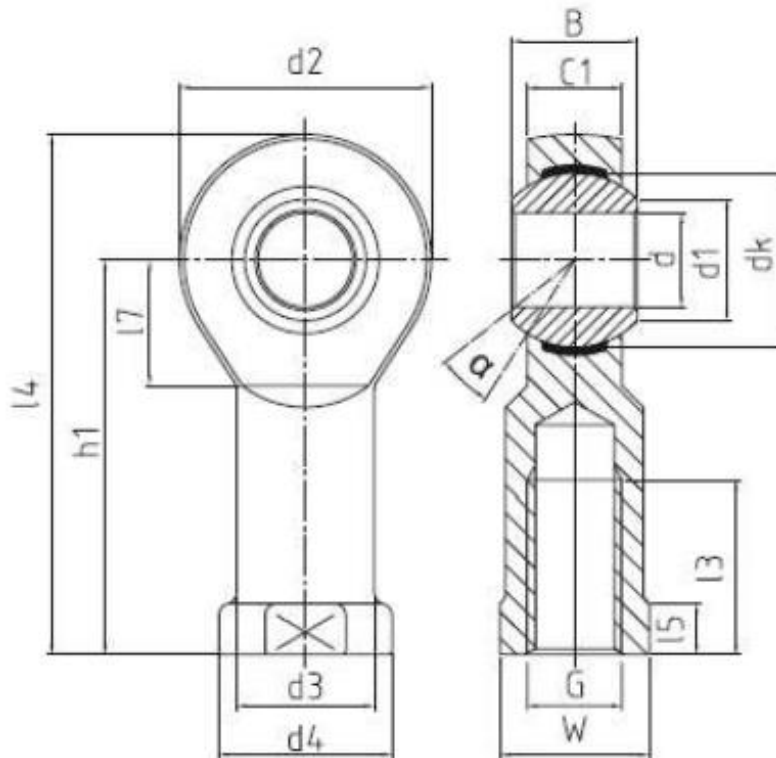


Figure 1: Schematic drawing for Table-3

4. PRESERVATION, PACKING AND DISPATCH

Material shall be preserved, packaged and dispatched such that no damage occurs to the material during storage and shipment.

5. CERTIFICATE AND REPORTS

- Manufacturer's Certificate of Conformance (CoC).
- Raw material certificate, FAI and dimensional report for one number /size

Compliance matrix

S No	Description	Parameter	Comply Yes/No
1	Type of rod end	Female type (Internal thread)	
2	Thread type	As per table 2	
	Geometric specifications	As per table 3	
3	Lubrication type	Polyamid-PTFE-fibreglass compound	
4	Material for inner spherical ball	Stainless steel, hardened, ground, polished	
5	Material for rod end housing	Forged stainless steel	
6	Starting chamfer on both sides of inner spherical Ball	Required, Value to be specified by manufacturer	
7	Temperature range	-30°C to +60°C	
8	Quantity required	As per table 2	
9	Preservation, packing and dispatch		
10	Certificate and reports		