

1. Bearing materials

Standard material for spherical bearing rod ends, stainless steel spherical bearing rod ends, winding shape ball joint rod ends, straight ball joint rod ends are mostly classified into balls, outer rings, races and bearing body structures. Details please refer to Table 1.1.

Table 1.1

Series	Lubricant type Series	Maintenance free Series	Maintenance free Series	Maintenance free Series	Maintenance free Series
Classification	BNM/BNF	BM/BF	BNM..K/BNF..K	DMSS/DFSS	RBL/RBI
Balls	Chromium steel, 100Cr6 (HRC 58~64), hard chrome plated	Chromium steel, 100Cr6 (HRC 58~64), hard chrome plated	Chromium steel, 100Cr6 (HRC 58~64), hard chrome plated	Stainless steel 440, hardened	Chromium steel, 100Cr6 (HRC 58~64), hard chrome plated
Outer rings	—	—	Brass(H62)	Brass(H62)	—
Races	Brass(H62)	PTFE	PTFE	PTFE	Brass(H62)
Body	Low carbon steel, Nickel plated	Low carbon steel, Nickel plated	Low carbon steel, Nickel plated	Stainless steel 440, hardened	Low carbon steel, Nickel plated

2. Tolerances for spherical bearing rod ends

2.1 Thread of stretching rod
Metric thread: Female 6H and Male 6g.

2.2 Tolerances in details

Table 2.1 Inner ring for BNM, BNF, DM, DF, RBL, RBI, DMSS and DFSS series

(Unit: μm)

d mm		Δdmp		ΔBs	
over	incl.	max.	min.	max.	min.
-	6	+12	0	0	-100
6	10	+15	0	0	-100
10	18	+18	0	0	-100
18	30	+21	0	0	-100

Table 2.2 Inner ring for BNM..K and BNF..K series

(Unit : μm)

d mm		Δdmp		ΔBs	
over	incl.	max.	min.	max.	min.
-	6	+12	0	0	-150
6	10	+15	0	0	-150
10	12	+18	0	0	-150
12	18	+18	0	0	-200
18	30	+21	0	0	-200

Table 2.3 Outer ring for BNM, BNF, DM, DF, RBL, RBI, DMSS, DFSS, BNM..K and BNF..K series

(Unit : μm)

d mm		Δdmp		ΔCs	
over	incl.	max.	min.	max.	min.
10	18	0	-11	+100	-100
18	30	0	-13	+100	-100
30	50	0	-16	+100	-100
50	60	0	-19	+100	-100

Table 2.4 Center height deviation for BNM, BNF, DM, DF, RBL, RBI, DMSS, DFSS, BNM..K and BNF..K series

d mm		Δhs mm		Δhis mm	
over	incl.	max.	min.	max.	min.
-	6	+1.20	+0.80	+0.65	-1.05
6	20	+0.80	-1.20	+0.80	-1.20
20	30	+1.00	-1.70	+1.00	-1.70
30	45	+1.40	-2.10	+1.40	-2.10
45	60	+1.80	-2.70	+1.80	-2.70
60	80	+2.25	-3.40	+2.25	-3.40