


Rod End Bearings

Standard Type

Rod End Bearings – Standard Type

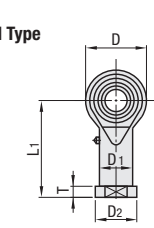


RoHS10

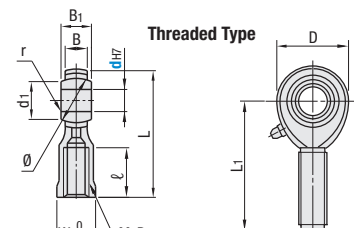
Type	Standard Type								L Short Type				Material		
	Tapped Type		Threaded Type		Tapped Type		Threaded Type		Holder	Spherical Inner Ring	Bushing (Liner)				
	Right-Hand	Left-Hand	Right-Hand	Left-Hand	Right-Hand	Left-Hand	Right-Hand	Left-Hand							
(1) Steel	PHSC	PHSCL	PHSO	PHSOL	PHSCN	PHSCLN	PHSON	PHSOLN	1035 Carbon Steel (Trivalent Chromate)	* 52100 Bearing Steel (58 HRC min.)	Special Copper Alloy				
(2) Lubrication Free	PHSCM	PHSCLM	PHSOM	PHSOLM	PHSCMN	PHSCLMN	PHSOMN	—	d3 & d4 1035 Carbon Steel (Trivalent Chromate) Other than above 1035 Carbon Steel (Trivalent Chromate)	* 52100 Bearing Steel (58 HRC min.) 52100 Bearing Steel (58 HRC min.)	Self-lubricating Synthetic Resin Polytetrafluoroethylene				
(3) Stainless Steel Oil Free	PHSS	PHSSL	PHSOS	PHSOSL	PHSSN	PHSSLN	PHSOSN	—	303 Stainless Steel	440C Stainless Steel C (58 HRC min.)	Polytetrafluoroethylene				

**Hard Chrome Plating*

Tapped Type



Threaded Type



Mechanical Properties
Tensile Strength 275–314 N/mm²
Tensile Proof Strength (0.2%) 216–245 N/mm²

Ⓢ The thread end of L Short Type has no surface treatment.
Ⓢ The above drawing is for standard type. L Short Type has no T Dimension and W Dimension parts.

Tolerance of B Dimension & B-1 Dimension

Type	B	B-1
(1)	-0.1-0	±0.1
(2)	-0.4-+0.1	-0.1-0
(3)	±0.3	-0.13-0

Part Number	Type	d	D	D ₁	D ₂	L		L ₁		M x P	ℓ			B	B ₁	T	W	d ₁	r	Static Load Capacity Radial Cs (kN)			Mass						
						Standard	Short	Standard	Short		Standard	Short	Standard							Short	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Tapped Type																													
Standard Type L Short Type																													
Right-Hand PHSC PHSCM PHSS PHSCN PHSCMN PHSSN																													
Left-Hand PHSCL PHSCLM PHSSL PHSCLN PHSCLMN PHSSLN																													

Ⓢ (1) Steel, (2) Lubrication Free, (3) Stainless Steel Oil Free kgf=N×0.101972

Part Number	Type	d	D	L		L ₁		M x P	ℓ			B	B ₁	d ₁	r	Static Load Capacity Radial Cs (kN)			Mass				
				Standard	Short	Standard	Short		Standard	Short	(1)					(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Threaded Type																							
Standard Type L Short Type																							
Right-Hand PHSO PHSON PHSOM PHSONN																							
Left-Hand PHSOL PHSOLM PHSOSL PHSOLN																							

Ⓢ (1) Steel, (2) Oil-Free, (3) Stainless Steel Oil-Free Ⓢ No Grease Nipple for PHSO (L) 5-6 and PHSO (L) N5-6. kgf=N×0.101972

Rod End Bearings

Standard Type, *continued*

Part Number Example PHSC5

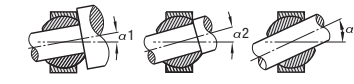
1. Shaft Fits

Usage Condition	Tolerance of Shaft Dimensions		
	Steel	Oil Free	Stainless Steel Oil Free
Normal Load	h7	p6	Recommended clearance of sleeve and shaft: ±0.013
Non-directional Load	p6	p6	

2. Clearance

Unit: mm

	Steel	Oil Free	Stainless Steel Oil-Free
Radial Direction Clearance	0.035 or Less	0.045 or Less	Not Provided
Axial Clearance	0.1 or Less	0.1 or Less	



3. Torque

Unit: N • m

Steel Oil-Free	Stainless Steel Oil-Free
Not Provided	0.02–0.34

4. Allowable Slant Face

Shaft Step Shape	Shaft Condition	Allowable Slant Angle α
Large	Stepped part of the shaft contacts the outer circumference of the holder.	Small (α1)
Medium	Stepped part of the shaft contacts the side or the inner circumference of the holder.	Middle (α2)
No	Shaft contacts the inner circumference of the holder.	Large (α3)

d	Ball Dia.φ (mm)			α1		α2		α3		
	(1)	(2)	(3)	(1)	(2)	(1)	(2)	(1)	(2)	(3)
3	—	9.525	—	—	8	—	10	—	42	—
4	—	10.319	—	—	9	—	11	—	35	—
5	11.112	11.112	11.91	8	8	13	13	30	30	12
6	12.7	12.7	14.29	8	8	13	13	30	30	10
8	15.875	15.875	17.46	8	8	14	14	25	25	12
10	19.05	19.05	20.64	8	8	14	14	25	25	12
12	22.225	22.225	23.81	8	8	13	13	25	25	12
14	25.4	25.4	26.99	10	10	16	16	24	24	14
16	28.575	28.575	28.58	9	9	15	15	24	24	15
18	31.75	31.75	31.75	9	9	15	15	24	24	15
20	34.925	—	—	9	—	15	—	24	—	—
22	38.1	—	—	10	—	15	—	23	—	—

Ⓢ (1) Steel, (2) Lubrication Free (3) Stainless Steel Oil Free

d	Available Types											
	PHSC, PHSCL		PHSO, PHSOL		PHSCM, PHSCLM		PHSOM, PHSOLM		PHSS, PHSSL		PHSOS, PHSOSL	
	1-9 pc(s)	10-30 pcs	1-9 pc(s)	10-30 pcs	1-9 pc(s)	10-30 pcs	1-9 pc(s)	10-30 pcs	1-9 pc(s)	10-30 pcs	1-9 pc(s)	10-30 pcs
3	—	—	—	—	•	•	•	•	—	—	—	—
4	—	—	—	—	•	•	•	•	—	—	—	—
5	•	•	•	•	•	•	•	•	•	•	•	•
6	•	•	•	•	•	•	•	•	•	•	•	•
8	•	•	•	•	•	•	•	•	•	•	•	•
10	•	•	•	•	•	•	•	•	•	•	•	•
10A	•	•	•	•	—	—	—	—	—	—	—	—
12	•	•	•	•	•	•	•	•	•	•	•	•
14	•	•	•	•	•	•	•	•	•	•	•	•
14A	•	•	•	•	—	—	—	—	—	—	—	—
16	•	•	•	•	•	•	•	•	•	•	•	•
18	•	•	•	•	—	—	—	—	—	—	—	—
18A	•	•	•	•	•	•	•	•	•	•	—	—
20	•	•	•	•	—	—	—	—	—	—	—	—
22	•	•	•	•	—	—	—	—	—	—	—	—