



# Rod End Bearings

## -Standard Type-



CAD Data



Type	Standard Type				L Dimension Short Type				Holder	Spherical Inner Ring	Bushing (Liner)
	Female Thread	Male Thread	Female Thread	Male Thread	Female Thread	Male Thread	Female Thread	Male Thread			
(1) Steel	PHSC	PHSCL	PHSO	PHSOL	PHSCN	PHSCLN	PHSON	PHSOLN	1.1181/C35E (Trivalent Chromate)	1.3505/100D6 (SBR)	Special Copper Alloy Self-Lubricating Synthetic Resin
(2) Oil Free	PHSCM	PHSCLM	PHSOM	PHSOLM	PHSCMN	PHSCLMN	PHSOMN	PHSOLMN	d3 - 4 1.1181/C35E (Trivalent Chromate) Other than above 1.1181/C35E (Trivalent Chromate)	1.3505/100D6 (SBR)	Polytetrafluoroethylene
(3) Stainless Steel Oil Free	PHSS	PHSSL	PHSOS	PHSOSL	PHSSN	PHSSLN	PHSOSN	PHSOSLN	1.4305/X10C/NIS18-9	1.4125/M10C/M17 (SBR)	Polytetrafluoroethylene
(4) Aluminum Oil Free	PHSA	PHSAL	-	-	-	-	-	-	Aluminum Alloy	1.3505/100D6 (SBR) - Corrosion Resistance Coating	Special Fluororesin

**Female Thread Type**

**Male Thread Type**

⚠ Mechanical Properties  
 • Tensile Strength 275~314N/mm<sup>2</sup>  
 • Tensile Proof Strength (0.2%) 216~245N/mm<sup>2</sup>  
 ⚠ The thread end of L Dimension Short Type has no surface treatment. ⚠ The above drawing is for standard type. L Dimension Short Type has no T Dimension, W Dimension parts. ⚠ Hard Chrome Plating

Part Number	Type	d	D	D1	D2	L		MxP	e		B	B1	T	W	d1	r	Static Load Capacity Radial Cs (N)		Mass	
						Standard	Short		Standard	Short							(1)	(2)(3)	(1)	(2)(3)
Female Thread Type																				
Standard Type L Short Type																				
Right-Hand Thread																				
Left-Hand Thread																				

Part Number	Type	d	D	Standard	Short	Standard	Short	MxP	e		B	B1	d1	r	Static Load Capacity Radial Cs (N)		Mass	
									Standard	Short					(1)	(2)(3)	(1)	(2)(3)
Male Thread Type																		
L Dimension Short Type																		
Right-Hand Thread																		
Left-Hand Thread																		

⚠ (1) Steel, (2) Oil Free, (3) Stainless Steel Oil Free, (4) Aluminum Oil Free

**Order Example**  
**PHSC5**  
**8 Days**  
 • Oil Free, Stainless Steel Oil Free, Aluminum Oil Free Type  
**8 Days**  
**L Dimension Short Type**  
**10 Days**

**1. Shaft Fitting**

Condition of Use	Tolerance of Shaft Dimension		
	Steel Oil Free	Stainless Steel Oil Free	Aluminum Oil Free
Normal Load	h7	p6	h7
Indeterminate Direction Load	p6	p6	n6, p6

**2. Clearance**  
 Unit: mm

	Steel			Oil Free - Stainless Steel Oil Free			Aluminum Oil Free		
	Radial Direction Clearance	0.035 or Less	0.045 or Less	0.03 or Less	0.03 or Less	0.1 or Less	0.03 or Less	0.03 or Less	0.1 or Less
Axial Direction Clearance	0.1 or Less	0.1 or Less	0.1 or Less	0.1 or Less	0.1 or Less	0.1 or Less	0.1 or Less	0.1 or Less	0.1 or Less

**3. Allowable Slant Face**

⚠ The unit price of L Dimension Short Type is Standard Type shown below + 6.00 EUR. ⚠ L Dimension Short Type is available for the types whose prices are shown in the below Standard Type price table. (d3 and d4 are not available)

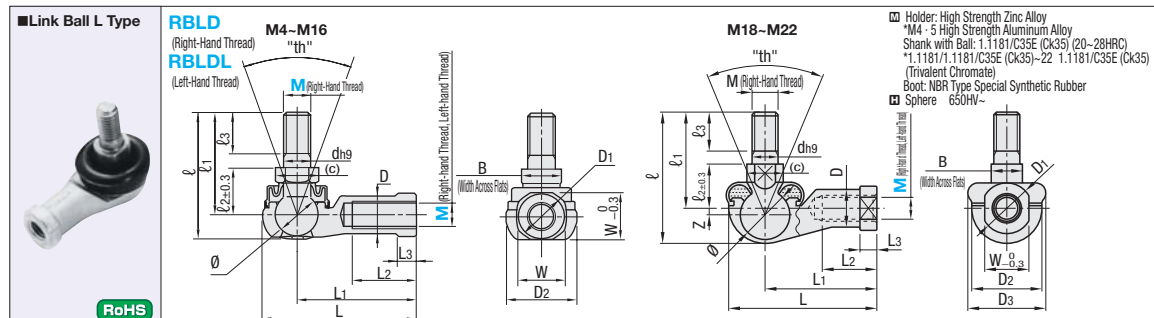
d	PHSC · PHSCL		PHSO · PHSOL		PHSCM · PHSCLM		PHSOM · PHSOLM		PHSS · PHSSL		PHSOS · PHSOSL		PHSA · PHSAL	
	Qty. 1-9	10-	Qty. 1-9	10-	Qty. 1-9	Qty. 10-49	Qty. 1-9	Qty. 10-49	Qty. 1-9	Qty. 10-49	Qty. 1-9	Qty. 10-49	Qty. 1-9	Qty. 10-19
3	-	-	-	-	9.30	9.50	9.20	8.70	-	-	-	-	-	-
4	-	-	-	-	9.30	8.80	8.70	8.30	-	-	-	-	-	-
5	7.50	7.30	6.90	6.70	10.90	10.50	10.40	10.10	24.70	23.90	24.70	23.90	10.80	10.20
6	7.50	7.30	6.90	6.70	11.70	11.30	10.70	10.40	25.50	24.70	25.50	24.70	11.20	10.60
8	8.70	8.40	8.10	7.85	13.10	12.70	12.30	11.90	29.40	28.50	29.40	28.50	12.80	12.10
10	9.40	9.10	8.50	8.20	14.90	14.50	14.10	13.70	34.40	33.30	34.40	33.30	14.50	13.70
10A	11.00	10.70	10.60	10.30	-	-	-	-	-	-	-	-	-	-
12	10.60	10.30	10.20	9.90	18.50	17.80	16.30	15.80	38.90	37.70	38.90	37.70	16.30	15.40
14	15.80	15.40	15.40	15.00	20.80	19.70	20.20	19.20	50.70	48.20	50.70	48.20	-	-
14A	17.20	16.70	16.80	16.30	-	-	-	-	-	-	-	-	-	-
16	16.40	15.90	15.40	14.90	29.00	27.50	27.30	25.90	82.70	78.60	82.70	78.60	-	-
18	23.40	23.00	22.80	22.30	-	-	-	-	-	-	-	-	-	-
18A	24.00	23.50	23.60	23.10	34.20	32.50	31.30	29.70	96.10	91.30	-	-	-	-
20	27.80	26.40	26.70	25.40	-	-	-	-	-	-	-	-	-	-
22	33.30	31.60	32.30	30.70	-	-	-	-	-	-	-	-	-	-



# Rod End Bearings

## -Link Ball Type with Thread, Compact Embedded Type-

CAD Data



Part Number	Type	M	D	D1	D2	D3	L		MxP	L3	W	d <sub>h9</sub>	e	e1	e2	e3	B	Z	Ball Dia. Omm	Allowable Slant Angle "th"	Strength of Yielding Point Pk (N)	Static Load Capacity Radial Cs (N)		Mass (g)	Unit Price	
							Standard	Short														Tensile (N)	Compression (N)		Qty. 1-9	10-
RBLD (Right-Hand Thread)																										
RBLDL (Left-Hand Thread)																										

Part Number	Type	M	D	D1	D2	L	L1	L2	MxP	L3	W	d <sub>h9</sub>	e	e1	e2	W1	D3	D4	Ball Dia. Omm	Allowable Slant Angle "th"	Strength of Yielding Point Pk (N)	Static Load Capacity Radial Cs (N)		Mass (g)	Unit Price	
																						Tensile (N)	Compression (N)		Qty. 1-9	10-49
RBID (Right-Hand Thread)																										
RBIDL (Left-Hand Thread)																										

Part Number	Type	M	D	D1	D2	L	L1	L2	MxP	L3	W	d <sub>h9</sub>	e	e1	e2	W1	D3	D4	Ball Dia. Omm	Allowable Slant Angle "th"	Strength of Yielding Point Pk (N)	Static Load Capacity Radial Cs (N)		Mass (g)	Unit Price	
																						Tensile (N)	Compression (N)		Qty. 1-9	10-49
RBID (Right-Hand Thread)																										
RBIDL (Left-Hand Thread)																										

**Compact Embedded Type**

**1. Clearance of Sphere** Unit: mm

Direction	RBLD · RBLDL	RBID · RBIDL	RBTS
Radial Direction Clearance	0.02 - 0.06	0.03 or Less	0.03 or Less
Axial Direction Clearance	0.3 or Less	0.1 or Less	0.1 or Less

**2. H10 tolerance is recommended for applicable hole to shank with ball.**  
**3. Strength of yielding point (Pk) shows the strength of the direction shown in the figure below.**

**Example**

Part Number	Type	M	L	L1	L2	L3	L4	M1xP	W	d <sub>h9</sub>	MxP	e	e1	e2	D	W1	Ball Dia. Omm	Allowable Slant Angle "th"	Strength of Yielding Point Pk (N)	Static Load Capacity			Mass (g)	Unit Price	
																				Perpendicular Direction to Axis	Axial Direction (Tension) Csa (N)	Axial Direction (Compression) Csa (N)		Qty. 1-9	10-29
RBID · RBLDL																									
RBIDL · RBIDL																									
RBTS																									

**Order Example**  
**Part Number**  
**RBLD8**  
**RBLDL2A**  
**RBTS10**  
**Days to Ship**  
**6 Days**  
 • An Express Charge of 8,10 EUR for 3 or more identical pieces.