

# Spherical Bearing / Spherical Bearing Holder Sets

## Standard Type

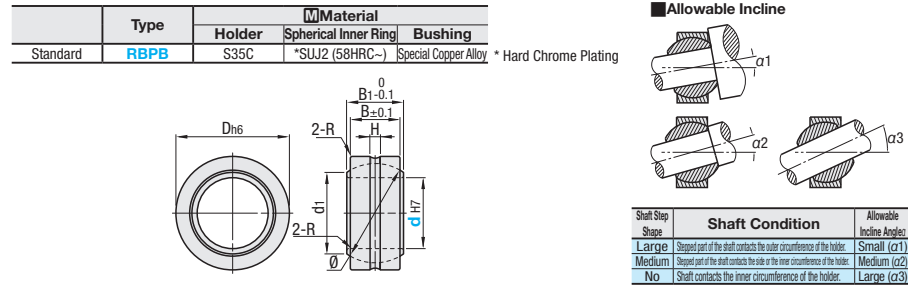
# Hinge Bolt

## Standard / R Type

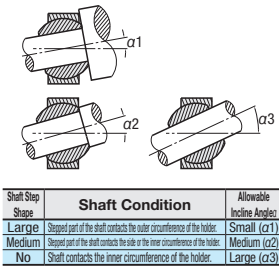
### Spherical Bearing



RoHS 10



### Allowable Incline



Shaft Step Shape	Shaft Condition	Allowable Incline Angles
Large	Stepped part of the shaft contacts the outer circumference of the holder.	Small (α1)
Medium	Stepped part of the shaft contacts the side of the inner circumference of the holder.	Medium (α2)
No	Shaft contacts the inner circumference of the holder.	Large (α3)

Part Number Type	d	D	B	B1	d1	H	R	Ball Dia. Ø (mm)	Allowable Incline Angle			Static Load Capacity Radial Cs (kN)	Mass (g)	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~30	
									α1°	α2°	α3°					
RBPB	5	16	6	8	7.7	1	0.3	11.112	8	13	30	7.84	8.5			
	6	18	6.75	9	9			12.7	15.875	16.7	24	9.8	13			
	8	22	9	12	10.4			19.05	22.225	23.5	39	16.7	24			
	10	26	10.5	14	12.9	1.5	0.5	25.4	10	16	25	31.4	58			
	12	30	12	16	15.4			28.575	31.75	34.925	40.2	84	50			111
	14	34	13.5	19	16.9			31.75	34.925	40.2	84	61.8	160			
	16	38	15	21	19.4	2.5	0.7	38.1	10	23	24	73.5	210			
	18	42	16.5	23	21.9			42.862	9		111	390	88.2			265
	20	46	18	25	24.4			50.8	10		148	610	111			390
	22	50	20	28	25.8	3	0.8	50.8	10	17	23	148	610			
	25	56	22	31	29.6											
	30	66	25	37	34.8											

Ordering Example Part Number RBPB14

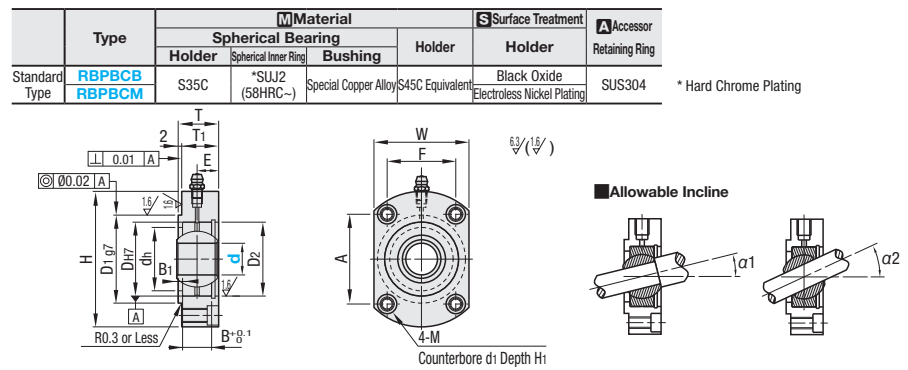
### Shaft Fits

Usage Condition	Shaft	Housing
Inner Ring Rotary Load	Normal Load m6	H7
Outer Wheel Rotary Load	Normal Load h7	M7

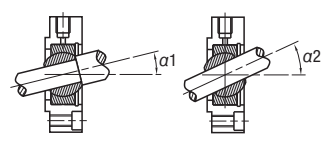
### Clearance

Standard
Radial Direction Clearance: 0.035mm or Less
Axial Clearance: 0.1mm or Less

### Spherical Bearing Holder Sets



### Allowable Incline



Part Number Type	d	DH7	B	B1	H	W	T	T1	E	dh	D1	RBPBCB			RBPBCM													
												Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20													
RBPBCB RBPBCM	5	16	6	4	38	25	13	11	6	12	20	-0.007	16	24	15	M5 (4.3)	8	5										
	6	18	6.75	3.25	40	28	14	12	7.5	18	27		-0.028	18	26				17									
	8	22	9	2	45	31	14	12	7.5	18	27		22	29	19													
	10	26	10.5	2.5	50	36	16	14	8.25	22	32	-0.009	26	31	25				M6 (5.2)	9.5	6							
	12	30	12	3	54	40	18	16	9	24	36		-0.034	30	34							28						
	14	34	13.5	2.5	63	45	20	18	10.75	28	41		34	40	31													
	16	38	15	2	70	50	21	19	11.5	35	46	-0.01	38	43	37							M8 (6.8)	11	7				
	18	42	16.5	2.5	77	54	23	21	12.25	36	50		-0.04	42	51										39			
	20	46	18	2	87	57	24	22	13	40	53		47	58	39													
	22	50	20	2	92	62	27	25	15	43	58	-0.01	50	60	44										M10 (8.5)	14	9	
	25	56	22	2	97	67	29	27	16	49	63		-0.04	56	63													49
	30	66	25	2	112	80	33	31	18.5	58	76		68	70	62													

Ordering Example Part Number RBPBCB12 RBPBCM15

### Specifications for Spherical Bearing Holder Sets

d	Ball Dia. Ø (mm)	Allowable Incline Angle α1°	Static Load Capacity Radial Cs (kN)	Mass (g)
5	11.112	13°	7.84	8.5
6	12.7	13°	9.8	13
8	15.875	14°	16.7	24
10	19.05	13°	23.5	39
12	22.225	13°	31.4	58
14	25.4	16°	40.2	84
16	28.575	15°	50	111
18	31.75	15°	61.8	160
20	34.925	14°	73.5	210
22	38.1	15°	88.2	265
25	42.862	9°	111	390
30	50.8	17°	148	610

### Shaft Fits

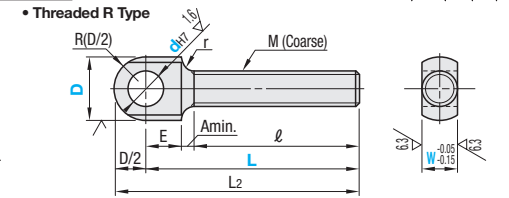
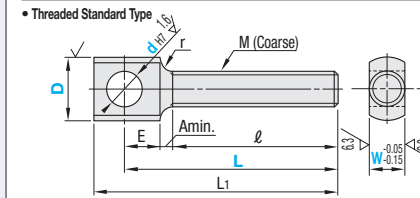
Usage Condition	Shaft	Housing
Inner Ring Rotary Load	Normal Load m6	H7
Outer Wheel Rotary Load	Normal Load h7	M7

Shaft Step Shape	Shaft Condition	Allowable Incline Angles
Medium	Stepped part of the shaft contacts the side or the inner circumference of the holder.	Medium (α1)
No	Shaft contacts the inner circumference of the holder.	Large (α2)

### Clearance

Standard
Radial Direction Clearance: 0.035mm or Less
Axial Clearance: 0.1mm or Less

Threaded		M Material	S Surface Treatment
Standard	Type R		
Right-hand Thread	Left-hand Thread	S45C Equivalent	Black Oxide
HGBB	HGBBL		Electroless Nickel Plating
HGBM	HGBMR		
HGBS	HGBSR	SUS304	



- The end face of the screw may have a cantering hole.
- Mx2-E+Amin.L
- Left-hand Thread Type has an identification groove on D circumference.

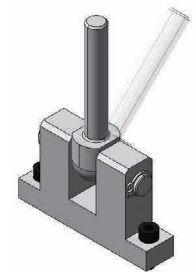
Part Number Type	dh7	D	L 1mm Increment	W 1mm Increment	M (Coarse)	ℓ max	L1	L2	E	A min	r
4	8	16~44	4~5	4	L+5	-	5	4			
5	10	17~45	4~7	5	L+6	-	6	4			
6	12	20~56	5~9	6	L+8	L+6	8	4			
8	15	24~68	6~12	8	L+10	L+7.5	10	5			
10	20	28~88	8~11	10	L+12	L+10	12	6			
12	25	30~90	10~16	12	L+14	L+12.5	14	7			
14	30	37~112	12~15	14	L+15	L+11	15	9			
16	34	37~112	12~15	16	L+17	L+12	17	9			
20	40	42~132	14~19	20	L+18	L+13	18	9			
25	50	49~154	14~19	25	L+20	L+15	20	9			
30	60	53~174	16~24	30	L+20	L+17	20	9			
34	70	53~174	16~24	34	L+20	L+17	20	9			
36	80	65~216	20~25	36	L+20	L+18	20	9			
40	100	65~216	20~25	40	L+20	L+18	20	9			
40	125	73~240	22~23	40	L+20	L+20	20	9			

Ordering Example Part Number - D - L - W  
 HGBB12 - 20 - 55 - 13  
 HGBMR12 - 25 - 80 - 15



Example

Combination of these app. examples can be selected on our website. For details of selections P87  
 \*Enter the search keyword in the search box on e-Catalog. The search result will be shown in "Modular Assembler" area.  
 e-Catalog Search Keyword #MA764 Search



dh7	D	Unit Price					
		HGBB	HGBBL	HGBM	HGBS	HGBMR	HGBSR
3	8						
4	8						
5	10						
6	12						
8	15						
10	20						
12	25						
14	30						
16	34						
20	40						
25	50						
30	60						
34	70						
36	80						
40	100						
40	125						