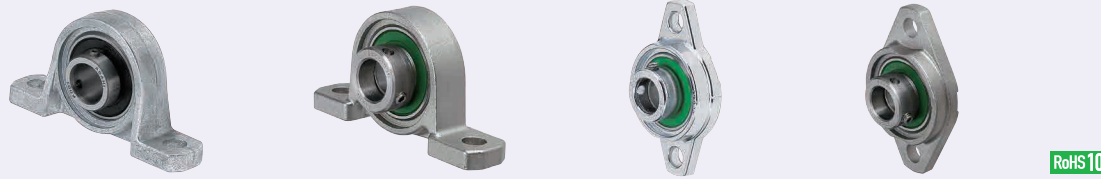


Ball Bearing Units

Pillow Blocks / Diamond Flanged

Ball Bearing Units

Cast Iron, Pillow Blocks / Bottom Mount



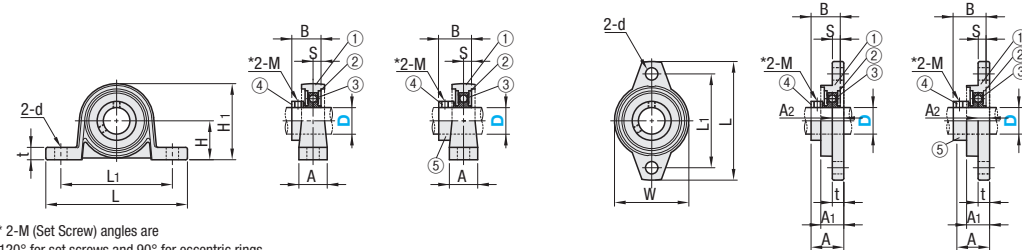
RoHS10

Pillow Blocks
Set Screw Fixed
PBT (Steel)

Eccentric Ring Fixed
PBR (Steel)
PBRs (Stainless Steel Bearing)
PBRsX (Stainless Steel)

Diamond Flanged
Set Screw Fixed
HBT (Steel)

Eccentric Ring Fixed
HBR (Steel)
HBRs (Stainless Steel Bearing)
HBRsX (Stainless Steel)



- * 2-M (Set Screw) angles are 120° for set screws and 90° for eccentric rings.
- Eccentric rings are used to secure shafts.
- Ball bearing moves slightly due to self-aligning function.
- To maintain transition fit, the fit between the main body and the bearing is designed slightly tight (Except Cast Iron Type). If the bearing is inclined when delivered, insert the shaft into the bearing to adjust the inclination.
- PBRsX and HBRsX (Cast Type) conform to JIS B 1559.

Accuracy: JIS B 1558,
Operating Temperature: -10 ~ +80°C

Type	Pillow Blocks	Diamond Flanged	Component					Material
			① Housing	② Bearing	③ Rubber Seal	④ Set Screw	⑤ Eccentric Ring	
Set Screw Fixed	PBT	HBT	Zinc Alloy Die Casting (ZDC)	SUJ2	Nitrile Rubber (NBR)	SCM435	-	
	PBR	HBR	Zinc Alloy Die Casting (ZDC)	SUJ2	Nitrile Rubber (NBR)	SCM435	S20C	
Eccentric Ring Fixed	PBRs	HBRs	Zinc Alloy Die Casting (ZDC)	SUS440C Equivalent	Nitrile Rubber (NBR)	SUS304	S20C + Nickel Chrome Plating	
	PBRsX	HBRsX	Stainless Steel Cast (SCS13)	SUS440C Equivalent	Nitrile Rubber (NBR)	SUS304	SUS304	

Part Number	Type	D	H	L	L ₁	A	d	t	Mass (g)					Unit Price					
									PBT	PBR	PBRs	PBRsX	HBT	HBR	HBRs	HBRsX	PBT	PBR	PBRs
PBT PBR PBRs PBRsX (D10~25)	10	18	67	53	16	7	6	5	35	34	14	17.5	4	70	77	79			
	12	19	71	56			6	6	38	37	14.5		4	80	91	98			
	15	22	80	63			7	7	43	42	16.5		4.5	120	125	129			
	17	24	85	67	18		7	7	47	46	17.5		5	140	156	170			
	20	28	100	80			9	9	55	53.5	21	24.5	6	210	230	258			
	25	32	112	90	20	10	10	10	62	60.5	22.5	25.5	6	270	294	333			
30	36	132	106	26	13	11	-	70	-	24.5	26.5	6.5	410	454	-				

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Part Number	Type	D	L	L ₁	t	A ₂	A ₁	d	W	Mass (g)					Unit Price				
										HBT	HBR	HBRs	HBRsX	HBT	HBR	HBRs	HBRsX	HBT	HBR
HBR (D=8 is for HBR only)	8	48	37	4	4.5	8.5	4.8	27	-	16	-	15	3.5	-	30	-	-	-	-
	10	60	45	5.5	5.5	11.5	7	36	15.5	19	14	17.5	4	50	60	77			
	12	63	48				7	38	16		14.5		4	70	76	87			
	15	67	53	6.5	6.5	13	7	42	18.5	20.5	16.5	18.5	4.5	90	100	115			
	17	71	56	7	7	14	7	46	19.5	22.5	17.5	20.5	5	115	129	146			
	20	90	71	8	8	16	10	55	23	26.5	21	24.5	6	190	205	253			
25	95	75	8	8	16	10	60	24.5	27.5	22.5	25.5	6	220	244	298				
30	112	85	9	9	18	13	70	27	29	24.5	26.5	6.5	340	354	-				

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Basic Load Rating

D	Basic Load Rating			
	PBT	PBRs	PBRsX	HBRsX
8	3300	-	1260	-
10	4600	3900	2000	1550
12	5100	4300	2400	1900
15	5600	4750	2800	2250
17	6000	5100	3300	2650
20	9350	7900	5100	4000
25	10100	8600	5800	4650
30	13200	11300	8300	6600

Set Screw Detailed Dimensions

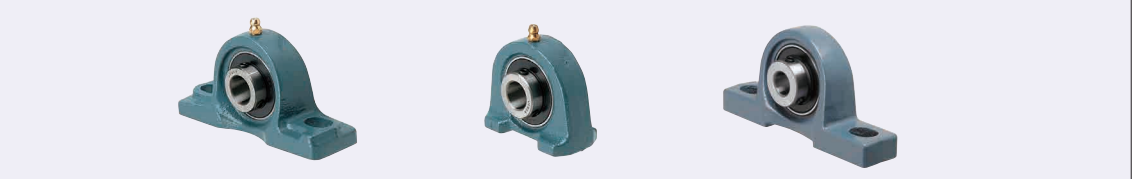
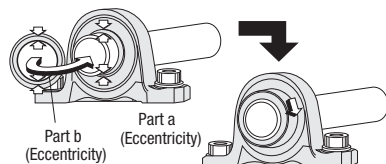
D	M		Tightening Torque (N·m)	Axial Load Capacity (kN)
	PBT	PBR, PBRs, HBR, HBRs, HBRsX		
8	-	M3x0.5	-	0.59
10	M3x0.35	M4x0.7	0.59	0.35
12	M4x0.5		1.47	0.43
15	M4x0.5		1.5	0.88
17	M5x0.5	M5x0.8	2.94	0.72
20			2.9	1.76



Fig.1 How to Tighten Eccentric Ring Type

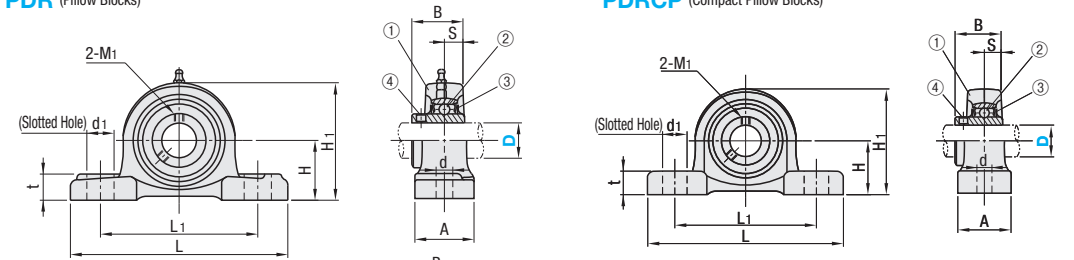
How to Secure the Shaft

- Set Screw Fixed**
 - There are two set screws at the end face of the bearing inner ring (at 120°). The shaft is connected by tightening the set screws.
- Eccentric Ring Fixed**
 - Dissociate the centers of the convex outer surface at the end of the bearing inner race (part a) and the concave inner surface of the eccentric ring (part b), connect the shaft and the inner ring by forming a wedge on the circumference (Refer to Fig. 1).
 - Also, there is a set screw and a hole each (at the angle of 90°) on the end face of eccentric ring, which helps to prevent loosening by using the set screw as well as tightening as described above.
 - The D hole is for inserting a small diameter rod when loosening the connection.

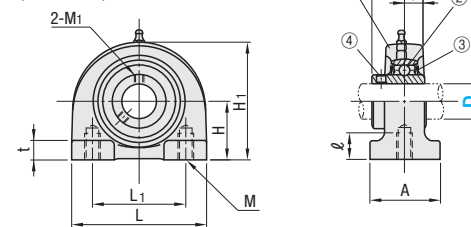


PDR (Pillow Blocks)

PDRCP (Compact Pillow Blocks)



PDB (Bottom Mount)



Accuracy: JIS B 1558
JIS B 1514
JIS B 1559

Bearing Inner Diameter Tolerance: H7 (Clearance Fit)
* Only PDRCP, J7 (Transition Fit)
Operating Temperature: -15 ~ +100°C

Component	Material
① Housing	FC200
② Bearing	SUJ2
③ Rubber Seal	Nitrile Rubber (NBR)
④ Set Screw	SCM435

Part Number	JIS Nominal	H	L	L ₁	A	d ₁	d	M	ℓ	Basic Load Rating (kN)				Set Screw		Mass (g)		Unit Price						
										Cr (Dynamic)	Cor (Static)	M ₁	Tightening Torque (N·cm)	Axial Load Capacity (N)	PDR	PDB	PDR	PDB						
PDR PDB	12	UCP201												M6x0.75	392	640	630	530						
	15	UCP202	30.2	30.2	127	76	95	52	38	19	13	M10x1.5	12	15	8	62	62	31.0	12.7	12.8	6.6			
	17	UCP203														65								
	20	UCP204	33.3																					
	25	UCP205	36.5	36.5	140	84	105	56	16				15	16	10	70	72	34.1	14.3	14.0	7.9			
	30	UCP206	42.9	42.9	165	94	121	66	48	21	17	M14x2.0	20	19	12	83	84	38.1	15.9	19.6	11.3			
PDRCP	35	UCP207	47.6	47.6	167	110	127	80	54	25						94	95	42.9	17.5	25.9	15.4			
	40	UCP208	49.2	49.2	184	116	137	84	54	25						100	100			29.3	17.9			
	45	UCP209	54.0	54.2	190	120	146	90	60	25	20					108	108	49.2	19	33.0	20.5			
	50	UCP210	57.2	57.2	206	130	159	94	60	25	20	M16x2.0	22	14	114	116	51.6		35.5	23.2	M10x1.25	2350	3550	2590

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Part Number	Type	D	H	L	L ₁	A	d ₁	d	t	H ₁	B	S	Basic Load Rating (kN)			Set Screw		Mass (g)	Unit Price
													Cr (Dynamic)	Cor (Static)	M ₁	Tightening Torque (N·cm)	Axial Load Capacity (N)		
PDRCP	12																		
	15	30.2	114	87	25											M5x0.8	240	476	390
	17																		380
	20	33.3	125	97	27														360
	25	36.5	130	100	29														480
	30	42.9	156	120	33	21	14	15	83	30.3	8	19.6	11.3			M6x0.75	490		1400
																		1960	700

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