ECONOMY BALL SLIDES

For Linear Motion Applications

B
(CENTRAL)

Material: Aluminum Base and Carriage

Finish: Black Anodize

Specifications

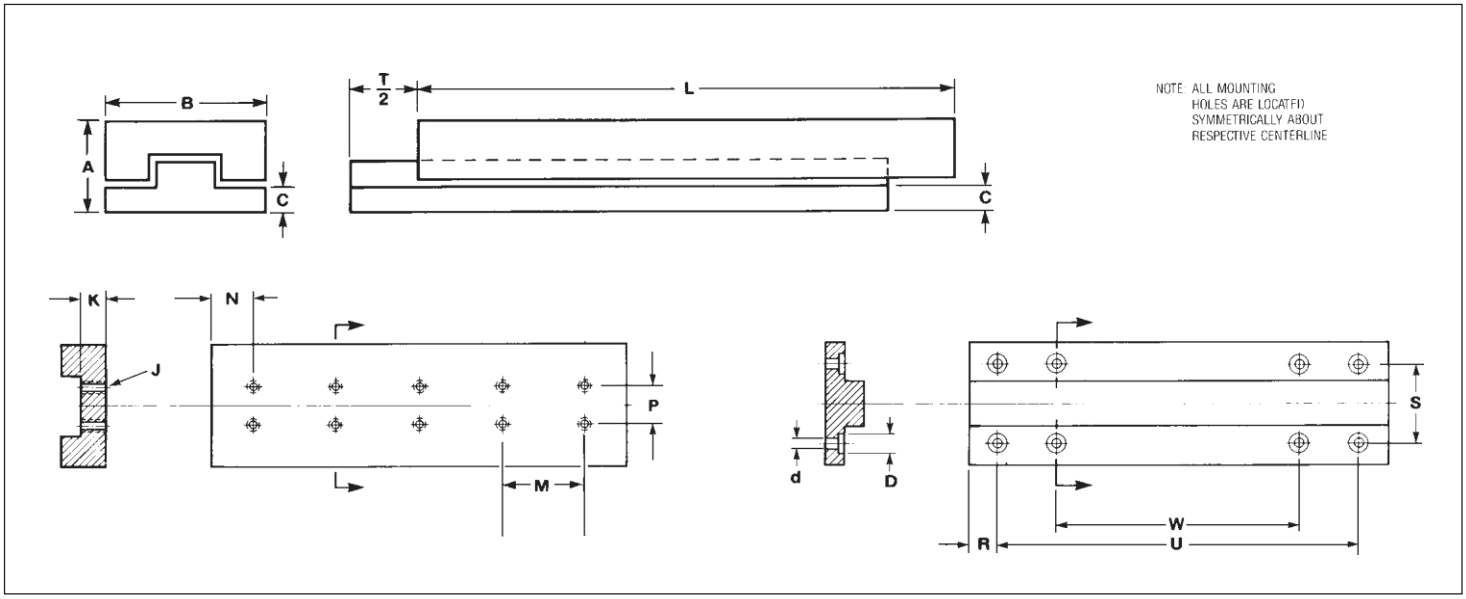
Straight line accuracy: .001' / inch of travel
Repeatability: .001

PIC's economy Ball Slides, with their unique conforming pre-loaded mechanism, provide economic solutions to linear motion applications where extreme accuracy is not required. These cost-effective slides provide the repeatability needed for most automation and robotic applications, without the need for expensive four-digij accuracy of conventional slides.

This unique PIG slide utilizes conventional, hardened rod raceways and balls, combined with a proprietary elastomer gib for even and continuous linear bearing preload. The conforming elastomeric bearing preload tends to negate the limited shock load separation of conventional linear ball slides with no degradation in reliability and at an economical cost.

Travel (In.)	W	L	A	8	D	E	Load Capacity (lbs)	Part No.
1.0		2.00	1.000				20	PBE-122
2.0	2.00	3.00	2.000	1.000	1.10	1.00	30	PBE-223
3.0		4.00	3.000				40	PBE-324
2.0		4.00	3.000				30	**PBE-234**
3.0		5.00	4.000				40	PBE-335
4	3.00	6.00	5.000	2.000	2.10	2.00	50	**PBE-436**
5.0		7.00	6.000				60	PBE-537
6.0		8.00	7.000				70	PBE-638

ALUMINUM CROSSED ROLLER SLIDES



Specifications
Straight line accuracy: .0001/inch of travel
Material: Aluminum Base and Carriage
Hardened Steel Rails and Rollers
Finish: Carriage — Gold Anodize Base — Black Anodize

Travel Length and Load Selection

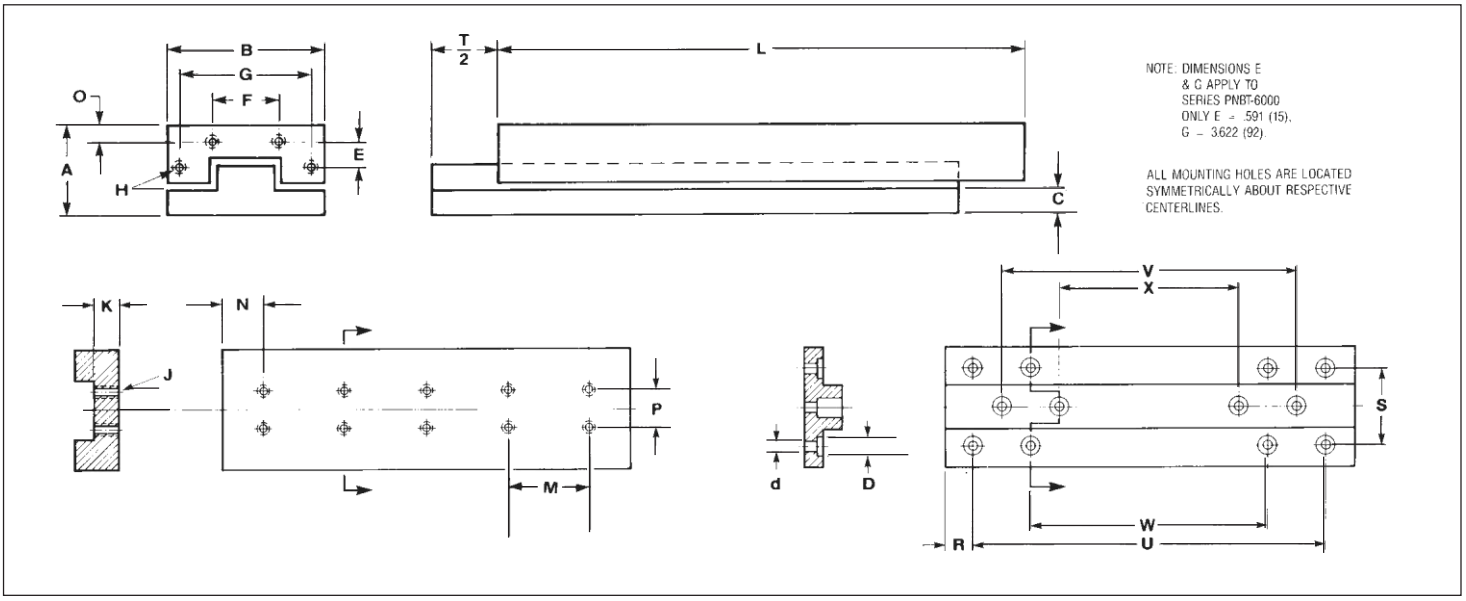
Dimension in Inches (mm)		Carriage Mounting Holes (Threaded)			Base Mounting Holes (Counterbored)			Load Capacity		Part No.
Travel T	Length L	No. Holes	No. Spaces	Spacing M	No. Holes	Spacing U	Spacing W	LBF	Kgf	
1.00	1.969 (50)	4	1	.591 (15)	4	1.575 (40)	—	96	(44)	**PNBT-1050A**
1.50	2.559 (65)	6	2	.591 (15)	4	2.165 (55)	—	114	(52)	**PNBT-1065A**
2.00	3.150 (80)	8	3	.591 (15)	8	2.756 (70)	1.575 (40)	145	(66)	**PNBT-1080A**
2.50	3.740 (95)	10	4	.591 (15)	8	3.346 (85)	2.165 (55)	162	(74)	**PNBT-1095A**
3.00	4.921 (125)	14	6	.591 (15)	8	4.528 (115)	3.346 (85)	198	(90)	**PNBT-1125A**
1.00	1.969 (50)	4	1	.591 (15)	4	1.575 (40)	—	96	(44)	**PNBT-2050A**
1.50	2.559 (65)	6	2	.591 (15)	4	2.165 (55)	—	114	(52)	**PNBT-2065A**
2.00	3.150 (80)	8	3	.591 (15)	8	2.756 (70)	1.575 (40)	145	(66)	**PNBT-2080A**
2.50	3.740 (95)	10	4	.591 (15)	8	3.346 (85)	2.165 (55)	162	(74)	**PNBT-2095A**
3.00	4.921 (125)	14	6	.591 (15)	8	4.528 (115)	3.346 (85)	198	(90)	**PNBT-2125A**
1.00	2.165 (55)	2	—	—	4	1.378 (35)	—	193	(88)	**PNBT-3055A**
2.00	4.134 (105)	6	2	.984 (25)	4	3.346 (85)	—	338	(154)	**PNBT-3105A**
3.00	6.102 (155)	10	4	.984 (25)	6	5.315 (135)	—	477	(217)	**PNBT-3155A**
2.00	3.346 (85)	2	—	—	4	2.559 (65)	—	430	(196)	**PNBT-4085A**
3.00	4.921 (125)	4	2	1.575 (40)	4	4.134 (105)	—	600	(273)	**PNBT-4125A**
4.00	6.496 (165)	6	4	1.575 (40)	6	5.709 (145)	—	723	(329)	**PNBT-4165A**

Profile and Mounting Dimensions

			Carriage				Base Spacing				Series
			Spacing		Thread Depth				Counterbore		
A ± .005 (0.13)	B ± .010 (25)	C	N	P	J	K	R	S	D	d	
.590 (15)	1.181 (30)	.160 (4.1)	.689 (17.5)	.394 (10)	4-40	.177 (4.5)	.197 (5)	.866 (22)	.198 (5)	.125 (3.1)	**PNBT-1000A**
.827 (21)	1.575 (40)	.256 (6.5)	.689 (17.5)	.591 (15)	6-32	.315 (8)	.197 (5)	1.181 (30)	.241 (6.1)	.144 (3.7)	**PNBT-2000A**
1.102 (28)	2.362 (60)	.354 (9)	1.083 (27.5)	.984 (25)	10-32	.413 (10.5)	.394 (10)	1.575 (40)	.328 (8.3)	.197 (5)	**PNBT-3000A**
1.378 (35)	3.150 (80)	.413 (10.5)	1.673 (42.5)	1.575 (40)	10-32	.512 (13)	.394 (10)	2.165 (55)	.328 (8.3)	.197 (5)	**PNBT-4000A**

Measurement in inches

STEEL CROSSED ROLLER SLIDES



Specifications

Straight line accuracy: .00008" for 1.0" — 4.0" of length .00012" for 4.1" — 12.5" of length

Material: Steel Base and Carriage

Finish: Black Oxide finish

Travel Length and Load Selection

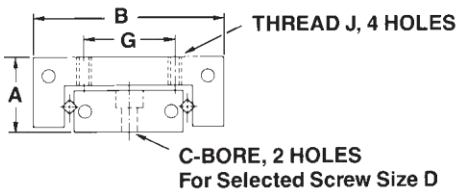
Dimension in Inches (mm)		Carriage Mounting Holes (Threaded)			Base Mounting Holes (Counterbored)				Load Capacity		Part No.
Length L	Travel T	No. Holes	No. Spaces	Spacing M	No. Holes	Spacing U	Spacing W	Spacing V	LBF	(Kgf)	
.984 (25)	.472 (12)	2	—	—	4	.709 (18)			26	(12)	PNBT-1025
1.378 (35)	.709 (18)	4	1	.394 (10)	4	1.108 (28)			35	(18)	PNBT-1035
1.772 (45)	.984 (25)	6	2	.394 (10)	4	1.496 (38)			44	(20)	PNBT-1045
2.165 (55)	1.260 (32)	8	3	.394 (10)	8	1.890 (48)	1.102 (28)		57	(26)	PNBT-1055
1.378 (35)	.709 (18)	2	—	—	4	.984 (25)			88.0	(40)	PNBT-2035
1.969 (50)	1.181 (30)	4	1	.591 (15)	4	1.575 (40)			138.0	(63)	PNBT-2050
2.559 (65)	1.575 (40)	6	2	.591 (15)	4	2.165 (55)			165.0	(75)	PNBT-2065
3.150 (80)	1.969 (50)	8	3	.591 (15)	8	2.756 (95)	1.575 (40)		209.0	(95)	PNBT-2080
2.165 (55)	1.181 (30)	2	—	—	4	1.378 (55)			277.0	(126)	PNBT-3055
3.150 (80)	1.772 (45)	4	1	.984 (25)	4	2.362 (60)			405.0	(184)	PNBT-3080
4.134 (105)	2.362 (60)	6	2	.984 (25)	4	3.345 (85)			484.0	(220)	PNBT-3105
5.118 (130)	2.953 (75)	8	3	.984 (25)	4	4.331 (110)			605.0	(275)	PNBT-3130
6.102 (155)	3.543 (90)	10	4	.984 (25)	6	5.315 (135)		3.34 (85)	682.0	(310)	PNBT-3155
3.346 (85)	1.969 (50)	2	—	—	4	2.559 (65)			616.0	(280)	PNBT-4085
4.921 (125)	2.953 (75)	4	1	1.575 (40)	4	4.134 (105)			858.0	(390)	PNBT-4125
6.496 (165)	4.134 (105)	6	2	1.575 (40)	4	5.709 (145)			1034.0	(470)	PNBT-4165
4.331 (110)	2.362 (60)	2	—	—	4	3.543 (90)			880.0	(400)	PNBT-6110
6.300 (160)	3.740 (95)	4	1	1.969 (50)	4	5.512 (140)			1518.0	(690)	PNBT-6160
8.268 (210)	5.118 (130)	6	2	1.969 (50)	6	7.480 (190)		3.543 (90)	1914.0	(870)	PNBT-6210
12.20 (310)	7.874 (200)	10	4	1.969 (50)	6	11.420 (290)		7.480 (190)	2640.0	(1200)	PNBT-6310

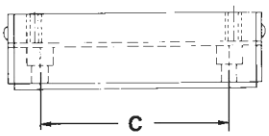
Measurement in inches

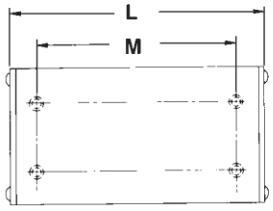
Profile and Mounting Dimensions

A ± .004	B ± .004	C	N	P	J	K	Dust Cover Attachment			R	S	D	d	Series
							O	F	Thread H					
.669 (17)	1.181 (30)	.217 (5.5)	.492 (12.5)	.394 (10)	M2	.275 (7)	.098 (2.5)	.472 (12)	M2	.138 (3.5)	.866 (22)	.185 (4.7)	.106 (2.7)	PNBT-1000
.827 (21)	1.575 (40)	.256 (6.5)	.689 (17.5)	.591 (15)	M3	.315 (8)	.134 (3.4)	.630 (16)	M2	.197 (5)	1.181 (30)	.252 (6.4)	.153 (3.9)	PNBT-2000
1.102 (28)	2.362 (60)	.354 (9)	1.083 (27.5)	.984 (25)	M4	.413 (10.5)	.217 (5.5)	1.575 (40)	M3	.394 (10)	1.575 (40)	.315 (8)	.197 (5)	PNBT-3000
1.378 (35)	3.150 (80)	.413 (10.5)	1.673 (42.5)	1.575 (40)	M5	.512 (13)	.256 (6.5)	2.165 (55)	M3	.394 (10)	2.165 (55)	.374 (9.5)	.220 (5.6)	PNBT-4000
1.772 (45)	3.937 (100)	.512 (13)	2.165 (55)	1.969 (50)	M6	.630 (16)	.315 (8)	2.362 (60)	M4	.394 (10)	2.362 (60)	.433 (11)	.283 (7.2)	PNBT-6000

ECONOMY CROSSED ROLLER SLIDES







All mounting holes are located symmetrically about respective centerlines.

Specifications
Straight line accuracy: .0001"/inch of travel
Repeatability: .0001"
Material: Aluminum Base and Carriage
Finish: Black Anodize

Total Travel*	L	M	C	A	B	G	J	D	Load Capacity (lbs.)	Part No.
.50	1.06	.625	.750	.32	.56	.218	2-56	2-56	30	**PRB05-05**
1.00	2.06	1.625	1.375	.32	.56	.218	2-56	2-56	55	**PRB05-10**
2.00	3.06	2.625	2.375	.32	.56	.218	2-56	2-56	66	**PRB05-20**
.50	1.06	.625	.750	.40	.75	.375	4-40	4-40	48	**PRB08-05**
1.00	2.06	1.625	1.375	.40	.75	.375	4-40	4-40	78	**PRB08-10**
2.00	3.06	2.625	2.375	.40	.75	.375	4-40	4-40	94	**PRB08-20**
1.50	2.56	2.250	2.125	.53	1.06	.437	6-32	6-32	132	**PRB12-15**
2.00	3.56	3.250	3.125	.53	1.06	.437	6-32	6-32	220	**PRB12-20**
3.00	4.56	4.000	3.250	.53	1.06	.437	6-32	6-32	264	**PRB12-30**
1.00	2.00	1.375	1.500	.62	1.50	.625	6-32	6-32	132	**PRB15-10**
2.00	3.00	2.375	2.500	.62	1.50	.625	6-32	6-32	176	**PRB15-20**
3.00	4.00	3.375	3.500	.62	1.50	.625	6-32	6-32	176	**PRB15-30**
4.00	6.00	5.375	4.000	.62	1.50	.625	6-32	6-32	308	**PRB15-40**
1.00	2.00	1.375	1.625	.75	1.75	.875	6-32	6-32	132	**PRB2-10**
2.00	3.25	2.625	2.750	.75	1.75	.875	6-32	6-32	176	**PRB2-20**
3.00	4.00	3.375	3.500	.75	1.75	.875	6-32	6-32	176	**PRB2-30**
4.00	6.00	5.500	4.000	.75	1.75	875	6-32	6-32	308	**PRB2-40**
1.50	2.62	1.625	1.875	1.00	2.62	1.250	10-32	10-32	264	**PRB3-15**
2.00	4.00	3.000	3.375	1.00	2.62	1.250	10-32	10-32	352	**PRB3-20**
3.00	5.00	4.000	4.375	1.00	2.62	1.250	10-32	10-32	440	**PRB3-30**
4.00	6.00	5.000	5.375	1.00	2.62	1.250	10-32	10-32	440	**PRB3-40**

*Minimum centered around mean position. Typical overtravel 0.06" each direction.

RAILS

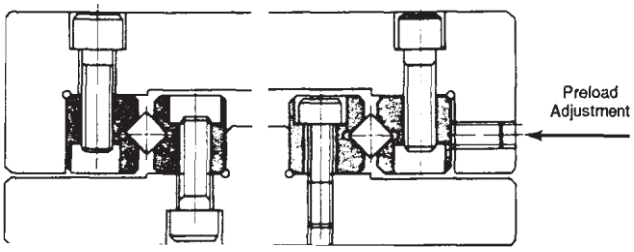
Application

Bearings are normally supplied and installed in sets of two to form an assembly that can support their rated load in any direction or orientation, and can be preloaded to eliminate side play.

Mounting and banking surfaces must be smooth and flat, and accurately parallel, coplanar, or perpendicular respectively to achieve maximum accuracy. Preload forces must be evenly distributed. Dirt and dust must be excluded. Lubrication required depends on the application, ranging from light grease or oil at the time of installation for low speeds (less than 50 inches/min.) and occasional movement to continuous oil bath or mist at 1200 inches/min.

Construction

Each bearing consists of a pair of hardened steel ways containing 90° vee grooves, and a row of alternately crossed cylindrical rollers. The hardened steel rollers are captive in a cage for easy handling and assembly and permanent alignment. The ways are installed face to face by the user, with the rollers between the vee grooves.



Mounting holes in the way bars are threaded, and also counterbored to alternatively permit using the next smaller size screw with threaded mounting holes in the user's components.