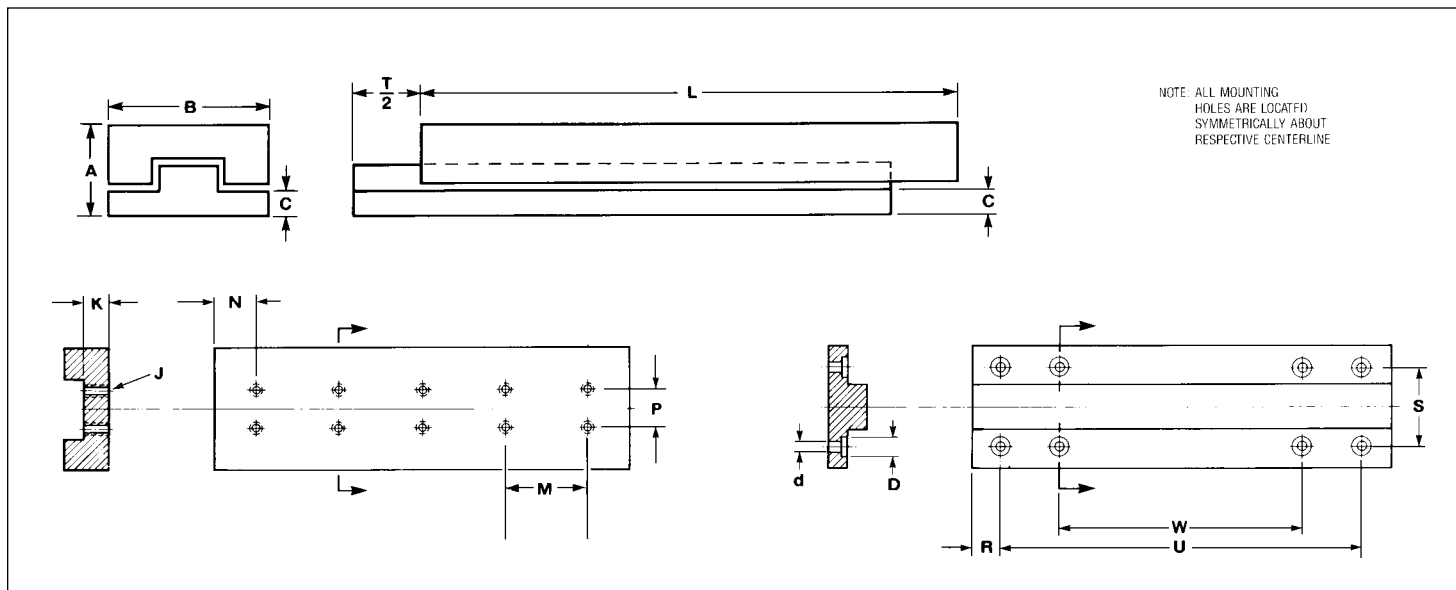


ALUMINUM CROSSED ROLLER SLIDES



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

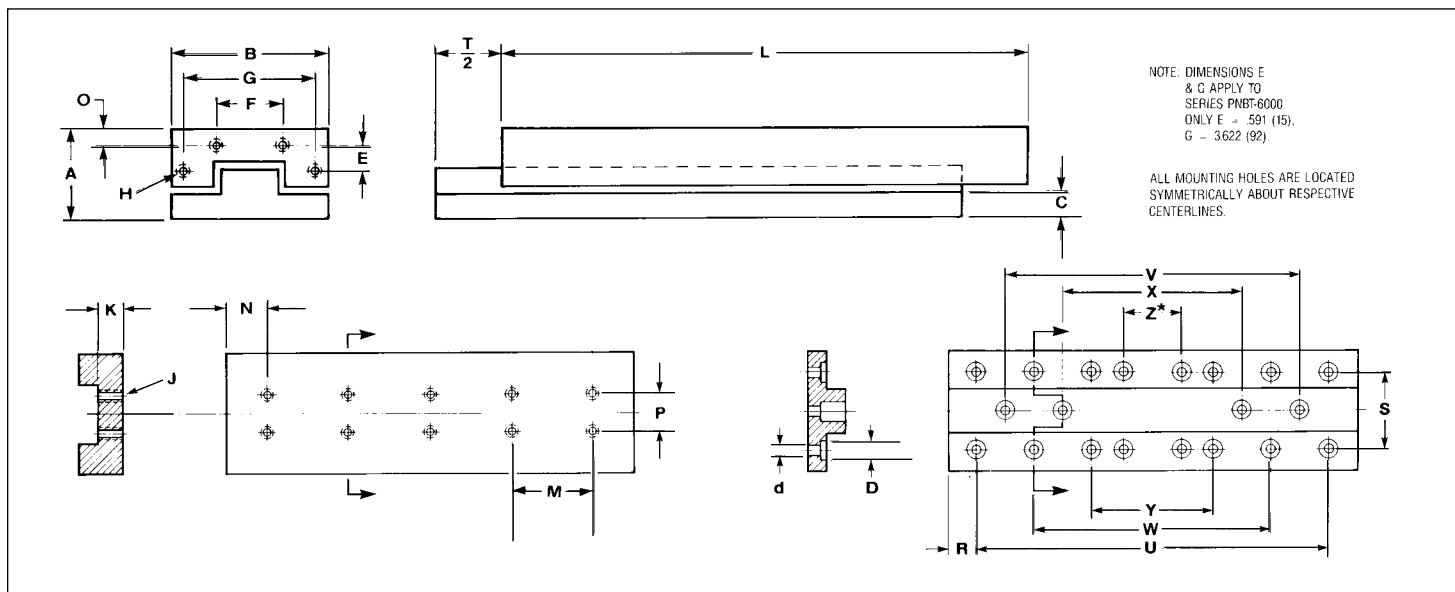
Travel Length and Load Selection

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

A ± .005 (0.13)	B ± .010 (25)	C	Carriage				Base Spacing				Series
			Spacing		Thread Depth		R	S	Counterbore		
			N	P	J	K			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

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

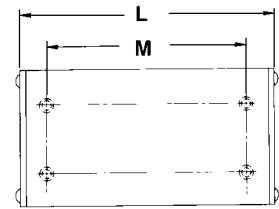
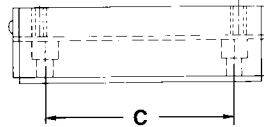
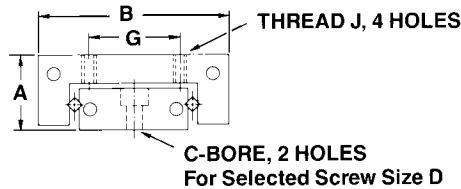
Travel Length and Load Selection

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)	1.102 (28)		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)			57	(26)	PNBT-1055
1.318 (35)	.709 (18)	2	—	—	4	.984 (25)	1.575 (40)		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)			209.0	(95)	PNBT-2080
2.165 (55)	1.181 (30)	2	—	—	4	1.378 (55)	3.34 (85)		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)	7.480 (192)	3.543 (90)	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)	7.480 (192)	7.480 (190)	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)			1914.0	(870)	PNBT-6210
12.20 (310)	7.874 (200)	10	4	1.969 (50)	6	11.420 (290)			2640.0	(1200)	PNBT-6310
16.14 (410)	10.430 (265)	14	6	1.969 (50)	10	15.350 (390)		11.42 (290)	3223.0	(1465)	PNBT-6410

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

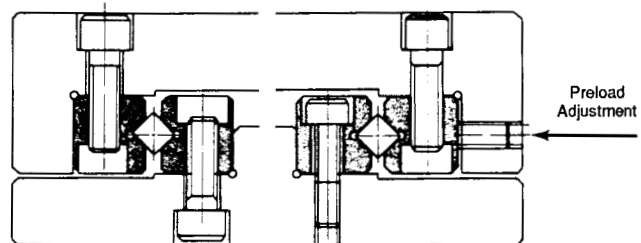
Application

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.

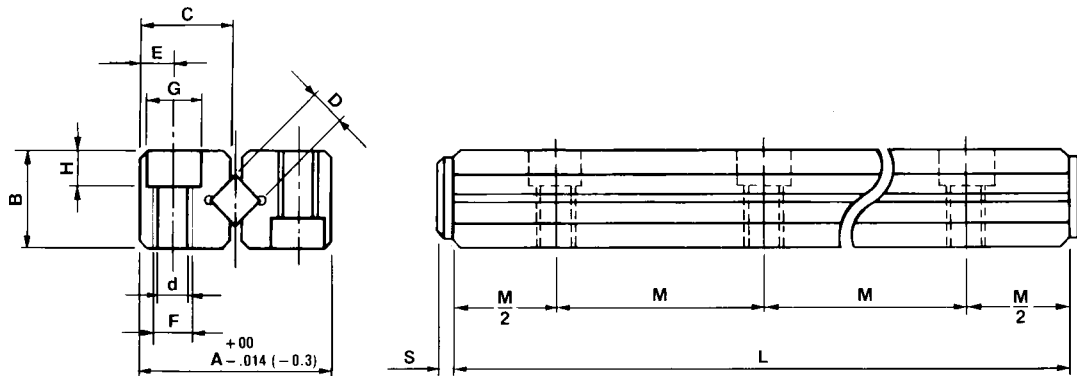
Mounting and banking surfaces must be smooth and flat, and accurately parallel, coplanar, or perpendicular respectively to achieve maximum accuracy. Preload forces must be evenly distributed. Dirt and dust must be excluded. Lubrication required depends on the application, ranging from light grease or 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 brass 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 counter-bored to alternatively permit using the next smaller size screw with threaded mounting holes in the user's components.



Specifications

Maximum deviation from parallelism between vee groove face and datum face for each way bar is 200 micro inches.

Rails: Hardened Steel

Rollers: Hardened Steel

NOTE: Each set contains 4-V grooved rails with end screws and 2-roller cages with captive rollers.

Length, Travel, and Load Selection

Travel T	Length L	No. Rollers in Each Retainer	No. Holes	Rail Set Load Cap. (lbs.)	Part No.
.473 (12)	.788 (20)	5	2	44	PNB1-020
.788 (20)	1.181 (30)	7	3	61	PNB1-030
1.063 (27)	1.575 (40)	10	4	88	PNB1-040
1.260 (32)	1.969 (50)	13	5	114	PNB1-050
.709 (18)	1.181 (30)	5	2	66	PNB2-030
.945 (24)	1.772 (45)	8	3	105	PNB2-045
1.181 (30)	2.362 (60)	11	4	145	PNB2-060
1.732 (44)	2.953 (75)	13	5	171	PNB2-075
1.102 (28)	1.969 (50)	7	2	154	PNB3-050
1.890 (48)	2.953 (75)	10	3	220	PNB3-075
2.283 (58)	3.937 (100)	14	4	308	PNB3-100
3.071 (78)	4.921 (125)	17	5	374	PNB3-125
3.464 (88)	5.906 (150)	21	6	462	PNB3-150
2.283 (58)	3.150 (80)	7	2	308	PNB4-080
3.228 (82)	4.725 (120)	11	3	484	PNB4-120
4.134 (105)	6.299 (160)	15	4	660	PNB4-160
2.165 (55)	3.937 (100)	8	2	704	PNB6-100
3.346 (85)	5.906 (150)	12	3	1056	PNB6-150
4.724 (120)	7.874 (200)	16	4	1408	PNB6-200
7.283 (185)	11.811 (300)	24	6	2112	PNB6-300
9.646 (245)	15.748 (400)	32	8	2816	PNB6-400

Profile and Mounting Dimensions

A	B	C	D	S	M	E	F	J	d	G	H	Series
.335 (8.5)	.158 (4.0)	.154 (3.9)	.059 (1.5)	.059 (1.5)	.394 (10)	.071 (1.8)	M2	# 0	.065 (1.65)	.118 (3.0)	.055 (1.4)	PNB1-000
.473 (12)	.236 (6.0)	.217 (5.5)	.079 (2.0)	.079 (2.0)	.591 (15)	.098 (2.5)	M3	# 2	.100 (2.55)	.173 (4.4)	.079 (2.0)	PNB2-000
.708 (18)	.315 (8.0)	.327 (8.3)	.118 (3.0)	.079 (2.0)	.984 (25)	.138 (3.5)	M4	# 4	.130 (3.30)	.236 (6.0)	.122 (3.1)	PNB3-000
.866 (22)	.433 (11)	.402 (10.2)	.158 (4.0)	.079 (2.0)	1.575 (40)	.178 (4.5)	M5	# 8	.169 (4.3)	.315 (8.0)	.165 (4.2)	PNB4-000
1.221 (31)	.591 (15)	.559 (14.2)	.236 (6.0)	.118 (3.0)	1.969 (50)	.236 (6.0)	M6	#10	.205 (5.2)	.374 (9.5)	.205 (5.2)	PNB6-000