

PIglide RB Linear Air Bearing

FRictionless, ideal for positioning, scanning, metrology



A-10X Series

- Ideal for scanning or high-resolution positioning
- Clean room compatible
- Table sizes up to 300mm x 300mm
- Travel lengths up to 1m
- Load to 775kg
- Straightness/Flatness to 0.5µm / 25mm
- Pitch/Roll/Yaw to 0.25 arc-sec / 25mm

Overview

For applications that require smooth, precise, linear motion, the PIglide RB series linear air bearings are right for you. These bearings can easily replace ball bearing and crossed roller bearing slides, and are simple to integrate and use.

They offer better straightness, angular deviation, and repeatability than ball bearing slides, especially for travel lengths over 4". In addition, because air bearings are inherently frictionless, they do not exhibit breakaway or running friction, even under their maximum loading. The totally noncontact, clean nature of air bearings means that they are virtually maintenance free and their accuracy won't degrade over time due to wear.

Accessories and Options

- Air preparation kit
- Mounting feet
- Custom configurations available upon request

Model	Table Size Length x Width (mm x mm)	Travels Available (mm)	Load Capacity (N)	
			Normal	Lateral
A-101	50 x 50	50 - 200	130	75
A-102	50 x 100	50 - 300	260	260
A-103	75 x 75	50 - 300	350	195
A-104	75 x 115	50 - 300	540	540
A-105	100 x 100	50 - 300	630	370
A-106	100 x 150	50 - 600	950	950
A-107	150 x 150	50 - 750	1580	790
A-108	200 x 200	50 - 1000	2950	1475
A-109	300 x 300	50 - 1000	7600	2210

Note: Load capacities listed assume supply pressure of 80 psi.

		Travels to 300 mm	Travels to 600 mm	Travels to 1000 mm
Straightness & Flatness (TIR)	Short-term	0.5µm / 25mm		
	Overall	2.5 µm	5.0 µm	10.0 µm
Stability	+/- 0.05 µm			
Pitch & Yaw (TIR)	Short-term	0.25 arc-sec / 25 mm		
	Overall	2.0 arc-sec	4.0 arc-sec	6.0 arc-sec
Operating Pressure	80 psi (550 kPa) nominal			
Air Consumption	< 1.0 SCFM (28 SLPM)			
Air Quality	Clean (filtered to 1.0 µm or better) Oil-free Dry (-15 °C dew point)			
Construction	Hardcoat Aluminum SS Fasteners			

Note: Precision specifications are dependent on load, orientation, and external forces on the bearing.
Please consult PI for application-specific parameters.

A - 10 x . x x x

Model

Size

Travel Code

Ordering Example

Part# A-102.450 is a

Model: A-10 (PIglide RB linear air bearing)

Size: 2 (50x100mm table)

Travel: 450mm

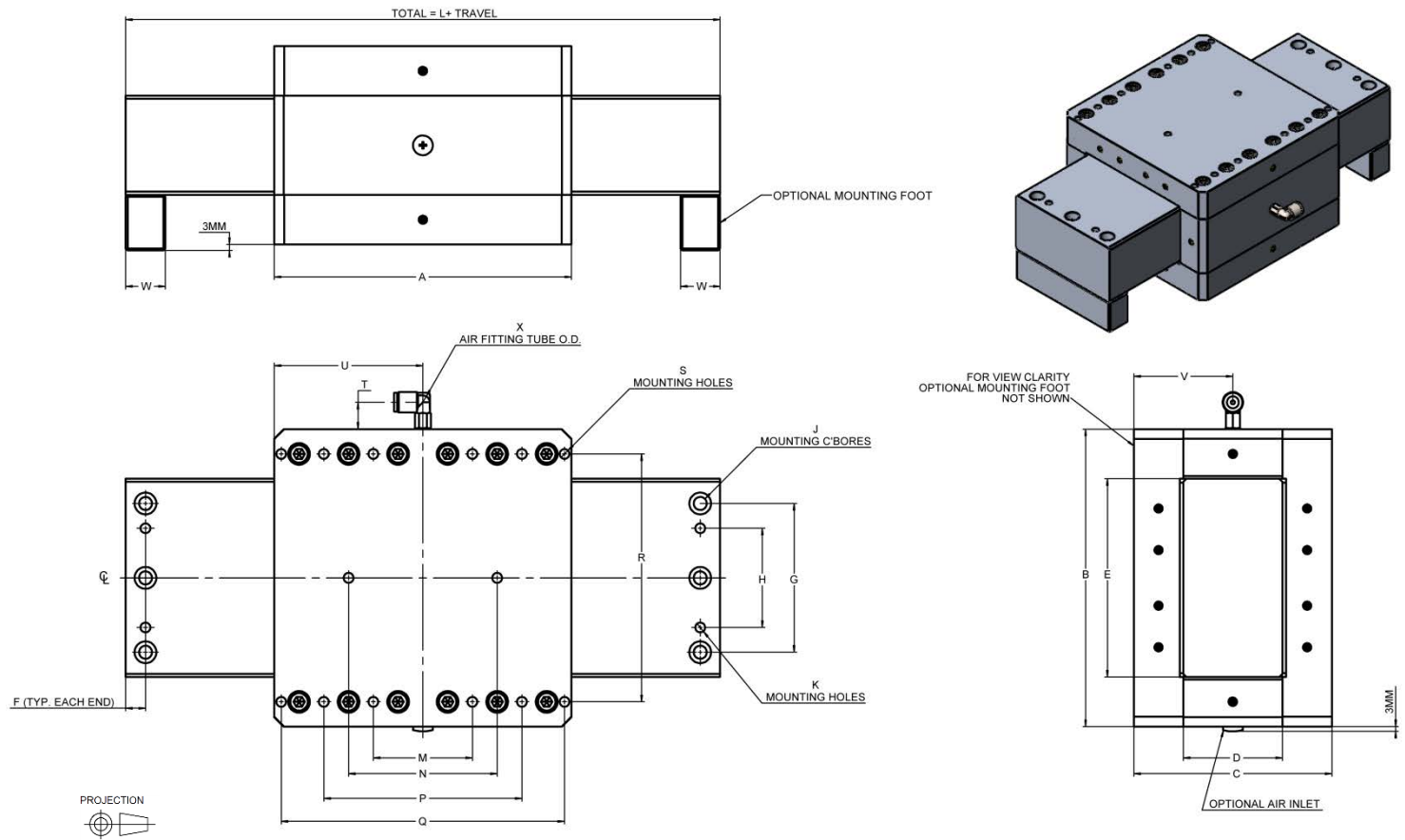
Code	Travel (mm)
50	50
100	100
150	150
200	200
300	300
450	450
600	600
750	750
A00	1000

Accessories

Order the A10x-MNT mounting feet kit separately.

Check the drawing and table on following page for dimensions.

x = size (1...9)



Model A-10x.xxx, in mm

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
A-101	50	50	35	15	25	5	15	CL	4x M3 C'BORE	2x M3	80	15	40	N/A	N/A	40	6x M3	12	21	30	10	4 (5/32")
A-102	100	50	45	25	25	5	15	CL	4x M3 C'BORE	2x M3	130	15	40	60	N/A	40	10x M3	12	46	40	10	6 (1/4")
A-103	75	75	55	25	45	7.5	30	12.5	4x M5 C'BORE	2x M5	115	35	N/A	N/A	N/A	60	4x M5	14	37.5	47.5	15	6 (1/4")
A-104	115	75	75	45	45	7.5	30	12.5	4x M5 C'BORE	2x M5	155	50	N/A	N/A	N/A	60	4x M5	14	57.5	67.5	15	6 (1/4")
A-105	100	100	75	35	60	10	40	20	4x M6 C'BORE	2x M6	150	50	N/A	N/A	N/A	80	4x M6	14	50	37.5	20	6 (1/4")
A-106	150	100	100	60	60	10	40	20	4x M6 C'BORE	2x M6	200	50	N/A	110	N/A	80	8x M6	14	75	50	20	6 (1/4")
A-107	150	150	100	50	100	10	75	50	6x M6 C'BORE	4x M6	200	50	N/A	110	N/A	125	8x M6	14	75	50	20	6 (1/4")
A-108	200	200	130	70	140	10	100	50	6x M6 C'BORE	4x M6	250	50	N/A	150	N/A	170	8x M6	14	100	65	20	6 (1/4")
A-109	300	300	140	70	240	10	200	100	6x M6 C'BORE	4x M6	350	50	N/A	150	250	270	12x M6	14	150	65	20	6 (1/4")