

POROUS MEDIA<sup>®</sup>  
**AIR BEARING**  
SOLUTIONS



**FLAT RECTANGULAR**

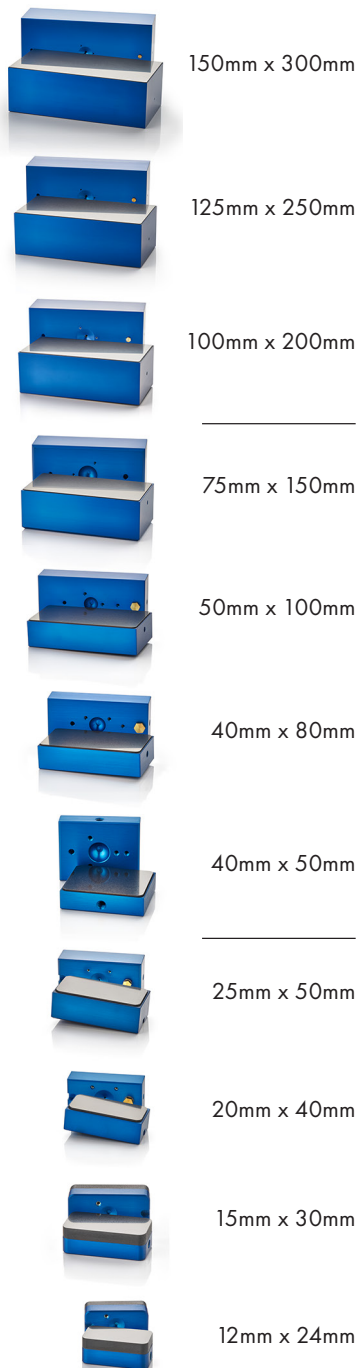
**NEWWAY<sup>®</sup>**  
a i r   b e a r i n g s



### A COMPLETE LINE OF FLAT RECTANGULAR POROUS MEDIA<sup>®</sup> AIR BEARINGS

New Way<sup>®</sup> flat rectangular air bearings can be readily used to create custom air stages.

These bearings are appropriate for highly-loaded applications and are the easiest type of air bearings to integrate into prototype designs as they can be readily replaced or changed. The standard product line shown is available off-the-shelf. New Way can also work with you to engineer a custom flat, rectangular air bearing to your specification.

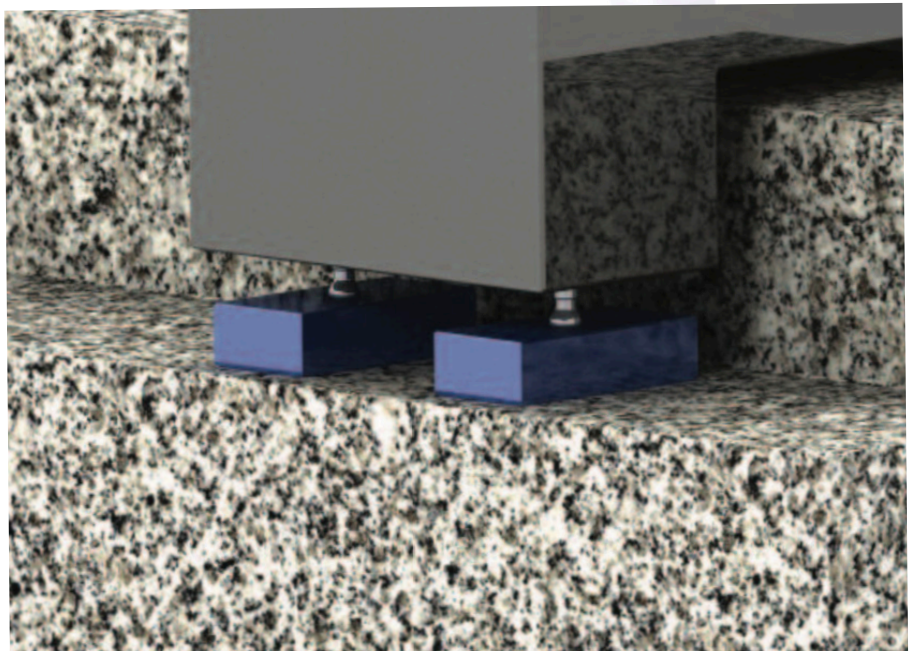


### EASY APPLICATION

New Way makes air bearing components easy for anyone to apply. A gimbaled mount allows for great flexibility in tolerance and the threaded ball studs make alignment simple.



**40mm x 80mm Flat Rectangular Air Bearing**  
shown with Flat-End Ball Mounting Screw



**50mm x 100mm Flat Rectangular Air Bearing**  
Application 3-D Model

## NEW WAY POROUS MEDIA<sup>®</sup> TECHNOLOGY OFFERS YOU SIGNIFICANT ADVANTAGES

FEATURES	BENEFITS
Standard component	Anyone can use
Rectangular configuration	Maximizes bearing surface area for guideway width
Porous carbon media	Eliminates damage to the guide surface
Non-contact	Zero friction and no stiction for infinite resolution and repeatability
Non-contact	Zero wear, for consistent machine characteristics
Non-contact	Smooth, silent motion without vibration
Non-contact	10x the speed
Non-contact without moving parts	High, consistent acceleration
No lubrication	Virtually maintenance free
High air film stiffness	Reduced probability of contact
High air film stiffness	High natural frequency
High air film stiffness	High damping for faster settling time
High air film stiffness	High precision positioning
Porous carbon media	Lower air consumption
Gimbaled mount	Easy to apply, adjust, achieve parallelism

## APPLICATIONS

- Coordinate Measuring Machines
- Diamond Turning Machines
- Dry Machining of Metals
- Fast Tool Servos
- High Speed Applications
- Material Testing Machines
- Scanning Machines
- Specialty Gauging
- Stages
- Vision Machines

## MARKETS

- Metrology
- Semiconductor
- Flat Panel Display
- Solar
- Medical
- Machine Tools



**NEW WAY FLAT RECTANGULAR AIR BEARINGS**  
provide frictionless linear motion in environments of all kinds.

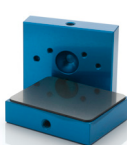
# FLAT RECTANGULAR AIR BEARING COMPARISON TABLE

Size mm (in)	Part #	Ideal Load N(lbs) @.41 MPA (60psi)	Stiffness (lbs./in @.60 N/micron @.41 MPA (60psi)	No Load Flow NlPM(SCFH)	Ball Socket Size mm (in)	Bearing Height mm (in)	Bearing Weight g (lb)
150 x 300 (5.9 x 11.8)	S1215001	11121 (2500)	1645 (9.39)	4.96 - 5.43 (10.5 - 11.5)	40 (1.6)	100 (3.94)	6693 (14.76)
125 x 250 (4.9 x 9.8)	S1212501	7784 (1750)	1009 (5.76)	4.72 - 5.19 (10.0 - 11.0)	25 (1.0)	85 (3.35)	4597 (10.13)
100 x 200 (3.9 x 7.9)	S1210001	4893 (1100)	665 (3.80)	3.54 - 4.48 (3.54 - 4.48)	25 (1.0)	70 (2.76)	3628 (8.00)
75 x 150 (3.0 x 5.9)	S127501	2580 (580)	324 (1.85)	1.98 - 3.21 (4.2 - 6.8)	25 (1.0)	50 (1.97)	1411 (3.11)
50 x 100 (2.0 x 3.9)	S125001	1112 (250)	110 (0.63)	2.27 - 3.68 (4.8 - 7.8)	13 (0.5)	25 (0.98)	295 (0.65)
40 x 80 (1.6 x 3.1)	S124002	623 (140)	58 (0.33)	1.89 - 3.21 (1.13 - 1.89)	13 (0.5 in)	20 (0.79)	145 (0.12)
40 x 50 (1.6 x 2.0)	S124001	356 (80)	35 (0.20)	1.13 - 1.89 (2.4-4.0)	13 (0.5 in)	13 (0.51)	56 (0.12)
25 x 50 (1.0 x 2.0)	S122501	187(42)	22 (0.13)	0.94 - 1.18 (0.94 - 1.18)	6 (0.2)	17 (0.67)	48 (0.11)
20 x 40 (0.8 x 1.6)	S122001	111 (25)	14 (0.08)	0.71 - 1.18 (1.5 - 2.5)	6 (0.2)	13 (0.51)	26 (0.06)
15 x 30 (0.6 x 1.2)	S121501	62 (14)	7 (0.04)	0.47 - 0.94 (1.0 - 2.0)	6 (0.2)	10 (0.39)	8 (0.02)
12 x 24 (0.5 x 0.9)	S121201	26 (8)	5 (0.03)	0.19 - 0.28 (0.4 - 0.6)	6 (0.2)	10 (0.39)	6 (0.01)

## COMPLETE NEW WAY POROUS MEDIA® AIR BEARING PRODUCT LINE



Flat Round  
Air Bearings



Flat Rectangular  
Air Bearings



Vacuum Preloaded  
Air Bearings



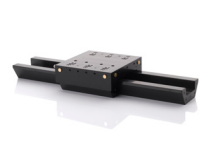
Conveyor  
Air Bearings



Radial  
Air Bearings



Air Bushings



Air Sliders



# NEWWAY

**NEWWAY®**  
air bearings

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