



Combining Today's Best Technologies

For Tomorrow's Break Through Discoveries

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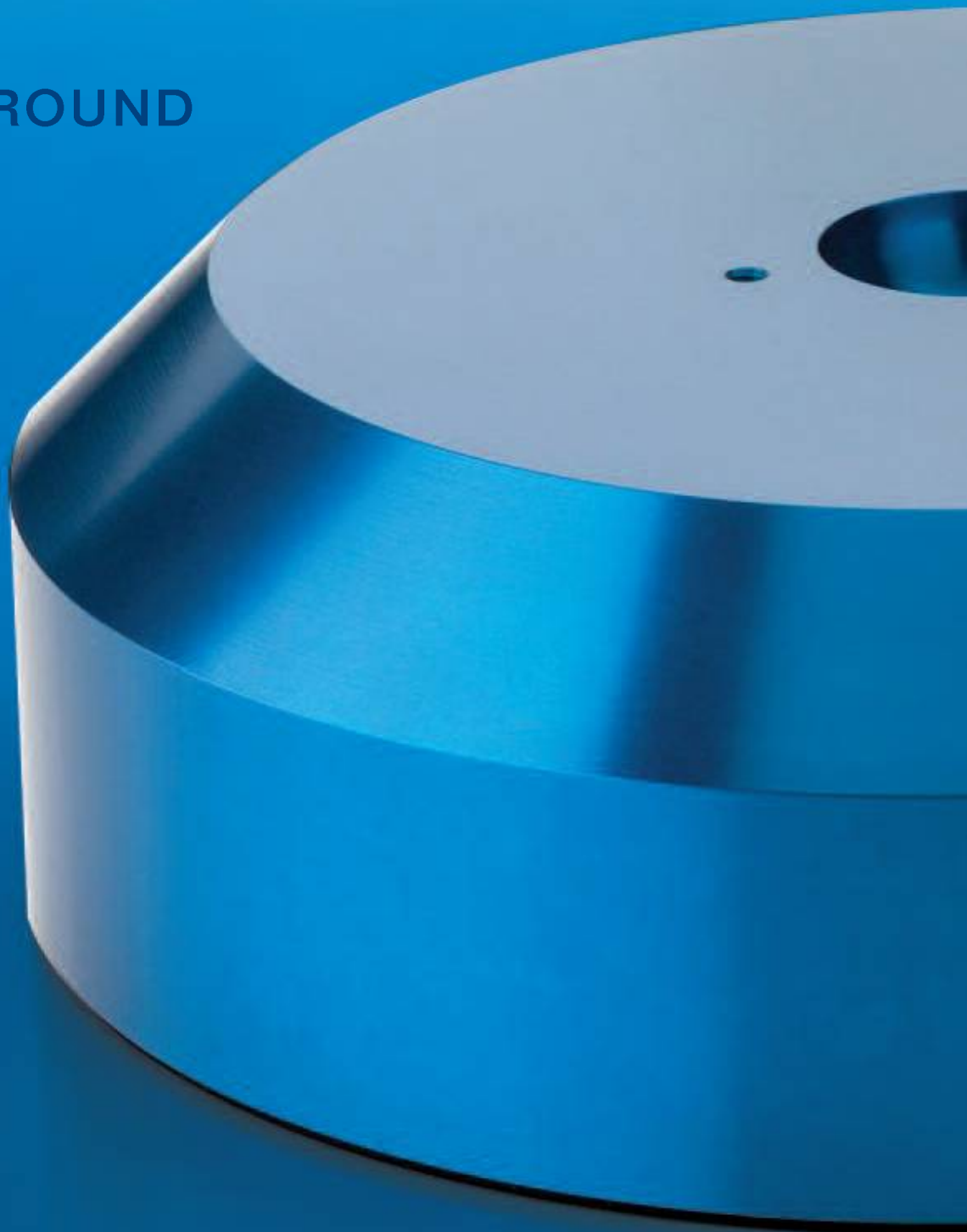
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POROUS MEDIA[®] AIR BEARING SOLUTIONS

FLAT ROUND



NEWWAY[®]
air bearings

FLAT AIR BEARINGS

NEW WAY POROUS MEDIA[®] TECHNOLOGY OFFERS YOU SIGNIFICANT ADVANTAGES

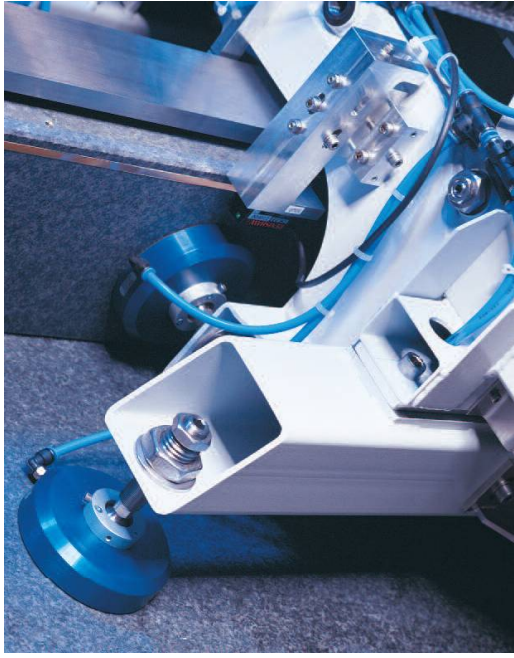
FEATURES	BENEFITS
Standard component	Anyone can use
Porous carbon media	Eliminates damage to the guide surface
Non-contact	Zero friction and no stiction for infinite resolution and repeatability
Non-contact	Zero wear, for consistent machine characteristics
Non-contact	Smooth, silent motion without vibration
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
Gimballed mount	Easy to apply, adjust, achieve parallelism

APPLICATIONS

- Coordinate Measuring Machines
- Photomask Repair
- Wafer Thickness Inspection
- Wafer Inspection
- High Speed Applications
- Memory Repair
- Scanning Machines
- Fast Tool Servos
- Grinding/Dry Machining of Metals
- Diamond Turning Machines
- Material Testing Machines
- Tensile Strength Testing
- Stages

MARKETS

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



Photograph courtesy of BES Precision Engineering B.V., Eindhoven, the Netherlands

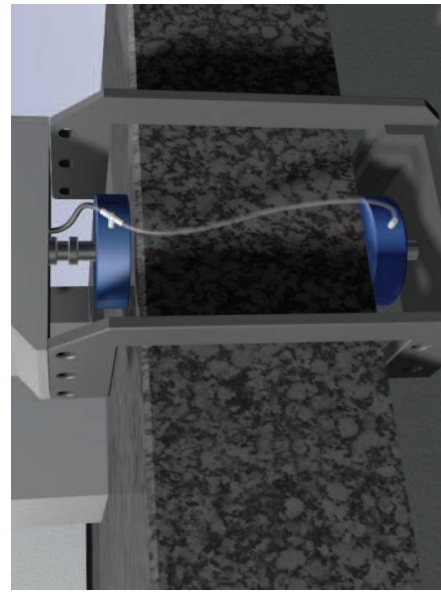
New Way flat round air bearings can be readily used to create custom air stages. These bearings are appropriate for highly loaded applications and are the easiest type of air bearings to integrate into prototype designs as they can be readily replaced or changed. The standard product line shown is available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

EASY APPLICATION

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

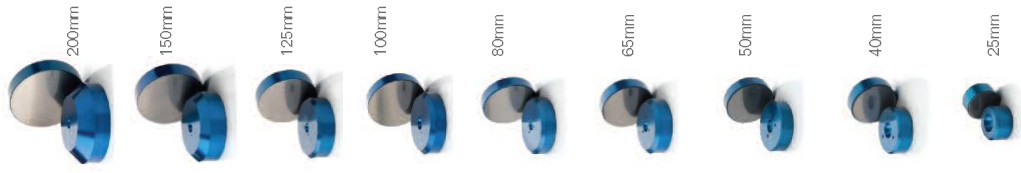


25mm Flat Round Air Bearing shown with Round-End Ball Mounting Screw



65mm Flat Round Air Bearing Application 3D Model

A COMPLETE LINE OF FLAT ROUND POROUS MEDIA[®] AIR BEARINGS



FLAT ROUND AIR BEARING PRODUCT LINE

PRODUCT LINE COMPARISON: FLAT ROUND AIR BEARINGS							
Size (diameter)	Part # (select for load/lift curve & drawing)	Ideal Load N (lbs) @ .41 MPa (60psi)	Stiffness N/micron (lbs/u in) @ 0.41 MPa (60psi)	Flow NLPM (SCFH) @ .41 MPa (60psi)	Ball Socket Size	Bearing Height mm (in)	Bearing Weight grams (oz.)
25mm	S102501	80 (18)	18 (0.10)	0.53 (1.2)	13mm	13 (0.52)	14 (0.5)
40mm	S104001	222 (50)	28 (0.16)	0.74 (1.6)	13mm	13 (0.52)	35 (1.2)
50mm	S105001	355 (80)	58 (0.33)	1.1 (2.3)	13mm	13 (0.52)	62 (2.1)
65mm	S106501	666 (150)	87 (0.50)	1.4 (2.9)	13mm	20 (0.79)	151 (5.3)
80mm	S108001	1110 (250)	114 (0.65)	2.3 (4.9)	13mm	20 (0.79)	235 (8.2)
100mm	S1010001	1776 (400)	175 (1.0)	2.6 (5.6)	20mm	25 (0.98)	440 (15.5)
125mm	S1012501	2775 (625)	254 (1.5)	2.6 (5.6)	20mm	35 (1.38)	1033 (36.4)
150mm	S1015001	4444 (1000)	350 (2.0)	2.9 (6.1)	25mm	50 (1.97)	2092 (73.7)
200mm	S1020001	7770 (1750)	700 (4.0)	3.8 (8.1)	25mm	70 (2.76)	4773 (168)

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 Slides

NEWWAY®
air bearings

Frictionless Motion®

New Way Air Bearings, Inc. • 50 McDonald Blvd., Aston, PA 19014 USA
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POROUS MEDIA[®] AIR BEARING SOLUTIONS

FLAT RECTANGULAR

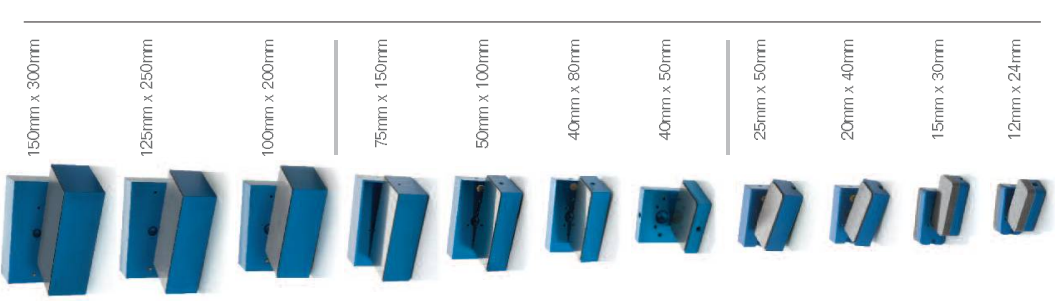


NEWWAY[®]
air bearings

FLAT AIR BEARINGS

NEW WAY POROUS MEDIA[®] TECHNOLOGY OFFERS YOU SIGNIFICANT ADVANTAGES

New Way 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 bearing to your specification.

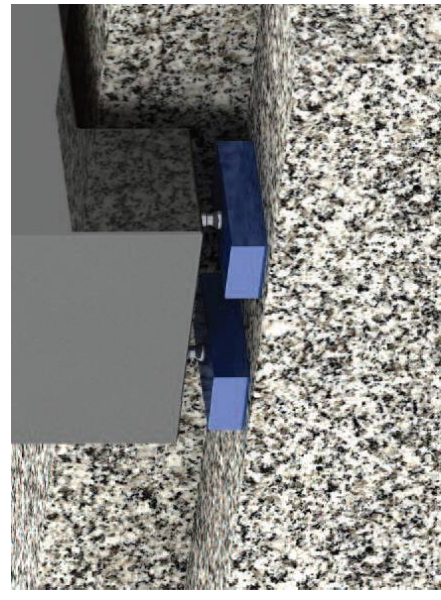


- 150mm x 300mm
- 125mm x 250mm
- 100mm x 200mm
- 75mm x 150mm
- 50mm x 100mm
- 40mm x 80mm
- 40mm x 50mm
- 25mm x 50mm
- 20mm x 40mm
- 15mm x 30mm
- 12mm x 24mm

FEATURES	BENEFITS
Standard component	Anyone can use
Rectangular configuration	Maximizes bearing surface area for given 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
Gimballed mount	Easy to apply, adjust, achieve parallelism



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



Flat Rectangular Air Bearing Application in...

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
- Medical
- Machine Tools

FLAT RECTANGULAR AIR BEARING PRODUCT LINE

PRODUCT LINE COMPARISON: FLAT RECTANGULAR AIR BEARINGS							
Size (diameter)	Part # (select for load/lift curve & drawing)	Ideal Load N (lbs) @ .41 MPa (60psi)	Stiffness N/micron (lbs/u in) @ 0.41 MPa (60psi)	Flow NLPM (SCFH) @ .41 MPa (60psi)	Ball Socket Size	Bearing Height mm (in)	Bearing Weight grams (oz.)
12mm x 24mm	S121201	36 (8)	5 (0.03)	0.1 (0.4)	6mm	10 (0.39)	6 (0.2)
15mm x 30mm	S121501	62 (14)	7 (0.04)	0.4 (1.0)	6mm	10 (0.39)	8 (0.3)
20mm x 40mm	S122001	111 (25)	14 (0.08)	.7 (1.5)	6mm	13 (0.52)	26 (0.9)
25mm x 50mm	S122501	187 (42)	22 (0.13)	.9 (2.0)	6mm	17 (0.67)	48 (1.7)
40mm x 50mm	S124001	356 (80)	35 (0.20)	1.3 (2.7)	13mm	13 (0.52)	56 (2.0)
40mm x 80mm	S124002	623 (140)	58 (0.33)	1.8 (4.0)	13mm	20 (0.79)	145 (5.1)
50mm x 100mm	S125001	1112 (250)	110 (0.63)	2.1 (4.5)	13mm	25 (0.98)	295 (10.4)
75mm x 150mm	S127501	2580 (580)	150 (0.85)	1.6 (3.5)	25mm	50 (1.97)	1411 (49.8)
100mm x 200mm	S1210001	4893 (1100)	665 (3.77)	1.8 (4.0)	25mm	70 (2.76)	3628 (128.0)
125mm x 250mm	S1212501	7784 (1750)	1009 (5.72)	3.0 (6.5)	25mm	85 (3.35)	4597 (162.2)
150mm x 300mm	S1215001	11121 (2500)	1645 (9.33)	4.2 (9.0)	25mm	100 (3.94)	6693 (236.1)

COMPLETE NEW WAY POROUS MEDIA® AIR BEARING PRODUCT LINE



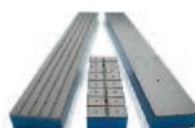
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