

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

AIR BUSHINGS METRIC & ENGLISH



**NEWWAY**<sup>®</sup>  
air bearings

**A COMPLETE LINE OF  
POROUS MEDIA®  
METRIC AND ENGLISH  
AIR BUSHINGS**

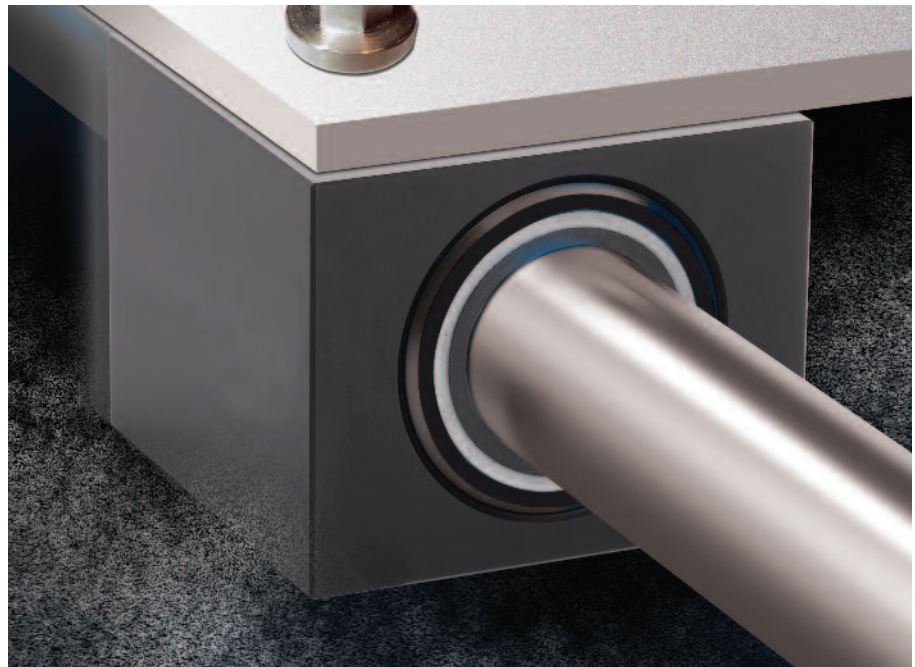
New Way air bushings run on standard precision steel shafting and are directly interchangeable with most rolling-element bushings. Once the swap-out is complete, these flexible components provide all the advantages of frictionless motion – supporting linear or rotary applications.

**EASY APPLICATION**

New Way makes air bushing components easy for anyone to apply. Mounting blocks, O-rings and precision shafts are manufactured to industry standard sizes and finishes for optimal performance.



75mm Metric Air Bushing with matching stock mounting block



0.75" English Air Bushing Application 3-D Model

## NEW WAY POROUS MEDIA® TECHNOLOGY OFFERS YOU SIGNIFICANT ADVANTAGES

FEATURES	BENEFITS
Standard component	Anyone can use
Cylindrical configuration	Allows for frictionless linear or rotary motion
Cylindrical configuration	Hoop stiffness provides for relatively small cross sections (small space)
Porous carbon media	Eliminates damage to the shaft
Non-contact	Zero friction and no stiction for infinite resolution and repeatability
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
Mounting blocks /precision shafts /end mounts	Easy to apply, cost-effective and available
O-Rings	Allow bushings some self-alignment capability (can also be potted in place)

### APPLICATIONS

- Crystal Pulling
- Dusty or Dirty Environments
- Fast Tool Servos
- Friction Testing
- Positioning Stages
- Rotary Tables
- Spindles
- Tone Arms
- Voice Coil Actuators

### MARKETS

- Solar
- Semiconductor
- Machine Tools
- Food Processing

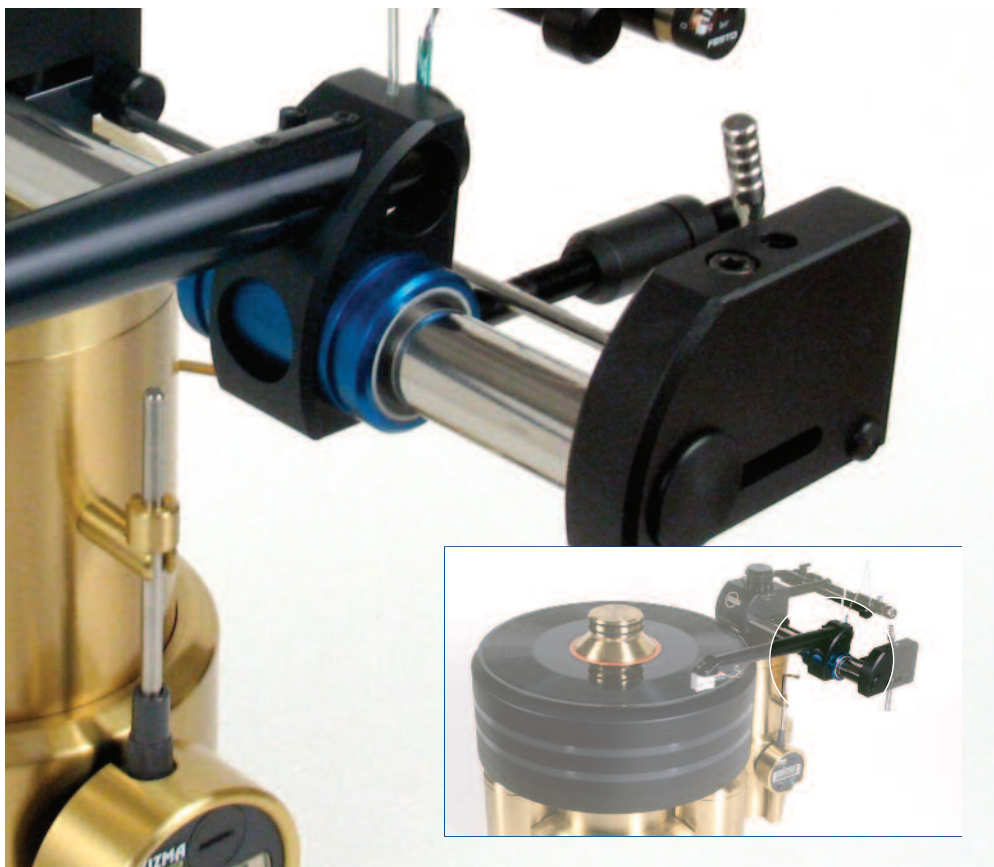


Photo courtesy of Kuzma d.o.o., Preddvor, Slovenia

# AIR BUSHING PRODUCT LINE

## PRODUCT LINE SPECIFICATIONS: AIR BUSHINGS – METRIC

Bushing I.D. (mm)	Part Number	Max. Load (N)	Normal Stiffness (N/um)	Max. Moment (N-m)	Pitch Stiffness (N-m/mil rad)	Bore Dia +.0051 -0.0000	Bushing O.D. mm	Bushing Length mm	Mounting Hole Dia. +.127 / -.000	Air Consumption Range (NLPM)	Min. Housing Length mm	Weight (grams)	Nominal Shaft Dia. mm	Shaft Tolerance (g6) μm
13	S301301	44	11	0.8	2.1	13	23.7	51	24.181	2.2-3.1	31.750	31	13	-5, -17
20	S302001	133	23	1.1	2.8	20	31.8	51	32.258	3.5-4.8	31.750	57	20	-7, -20
25	S302502	187	34	1.9	5.3	25	38.9	57	39.497	4.5-5.9	34.925	85	25	-7, -20
40	S304002	645	72	3.1	11.0	40	59.6	76	60.325	7.1-9.3	47.600	204	40	-9, -25
50	S305002	934	110	5.2	23.0	50	74.1	89	74.803	9.0-11.9	70.612	482	50	-9, -25
75	S307502	1245	159	7.1	31.0	75	99.5	89	100.000	13.2-17.5	70.612	623	75	-9, -25

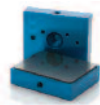
## PRODUCT LINE SPECIFICATIONS: AIR BUSHINGS – ENGLISH

Bushing I.D.	Part Number	Max. Load (lbs)	Normal Stiffness (lbs-in)	Max. Moment (lbs-in)	Pitch Stiffness (lbs-in/rad)	Bore Dia +.0002 -0.0000	Bearing O.D.	Bearing Length	Mounting Hole Dia. +.005 / -.000	Air Consumption Range (SCFH)	Min. Housing Length	Weight (oz.)	Nominal Shaft Dia. in	Shaft Tolerance (g6) in
0.25 I.D.	S300601	2.75	10,000	0.125	195	0.2502	0.623	1.250	0.635	2.25-3.30	0.812	0.3	0.2495	-0.0002 , -0.0006
0.50 I.D.	S301201	10	60,000	7.5	18,750	0.5008	0.932	2.000	0.952	4.75-6.60	1.250	1.1	0.5000	-0.0002 , -0.0007
0.75 I.D.	S301901	30	130,000	10.0	25,000	0.7508	1.250	2.000	1.270	7.00-9.60	1.250	2.0	0.7500	-0.0003 , -0.0008
1.00 I.D.	S302501	42	190,000	17.0	47,400	1.0008	1.532	2.250	1.555	9.50-12.60	1.375	3.0	1.0000	-0.0003 , -0.0008
1.50 I.D.	S303801	145	410,000	28.0	100,875	1.5008	2.346	3.000	2.375	14.00-19.20	1.874	7.2	1.5000	-0.0004 , -0.0010
2.00 I.D.	S305001	210	630,000	46.0	201,750	2.0008	2.918	3.500	2.945	19.00-25.20	2.780	17.0	2.0000	-0.0004 , -0.0011
3.00 I.D.	S307501	280	910,000	63.0	275,110	3.0008	3.917	3.500	3.937	28.00-37.80	2.780	22.0	3.0000	-0.0004 , -0.0011

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



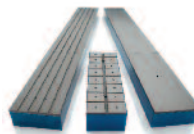
Flat Round Air Bearings



Flat Rectangular Air Bearings



Vacuum Preloaded Air Bearings



Conveyor Air Bearings



Radial Air Bearings



Air Bushings



Air Slides

**ISO**  
9001:2008  
CERTIFIED

New Way Air Bearings products are manufactured using ISO 9001:2008 certified processes

**NEWWAY**<sup>®</sup>  
air bearings

*Frictionless Motion*<sup>®</sup>

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