

BC2 BAND CYLINDER

BC2 BAND CYLINDER



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SIZING & SELECTION
SOFTWARE FOR
BAND CYLINDERS
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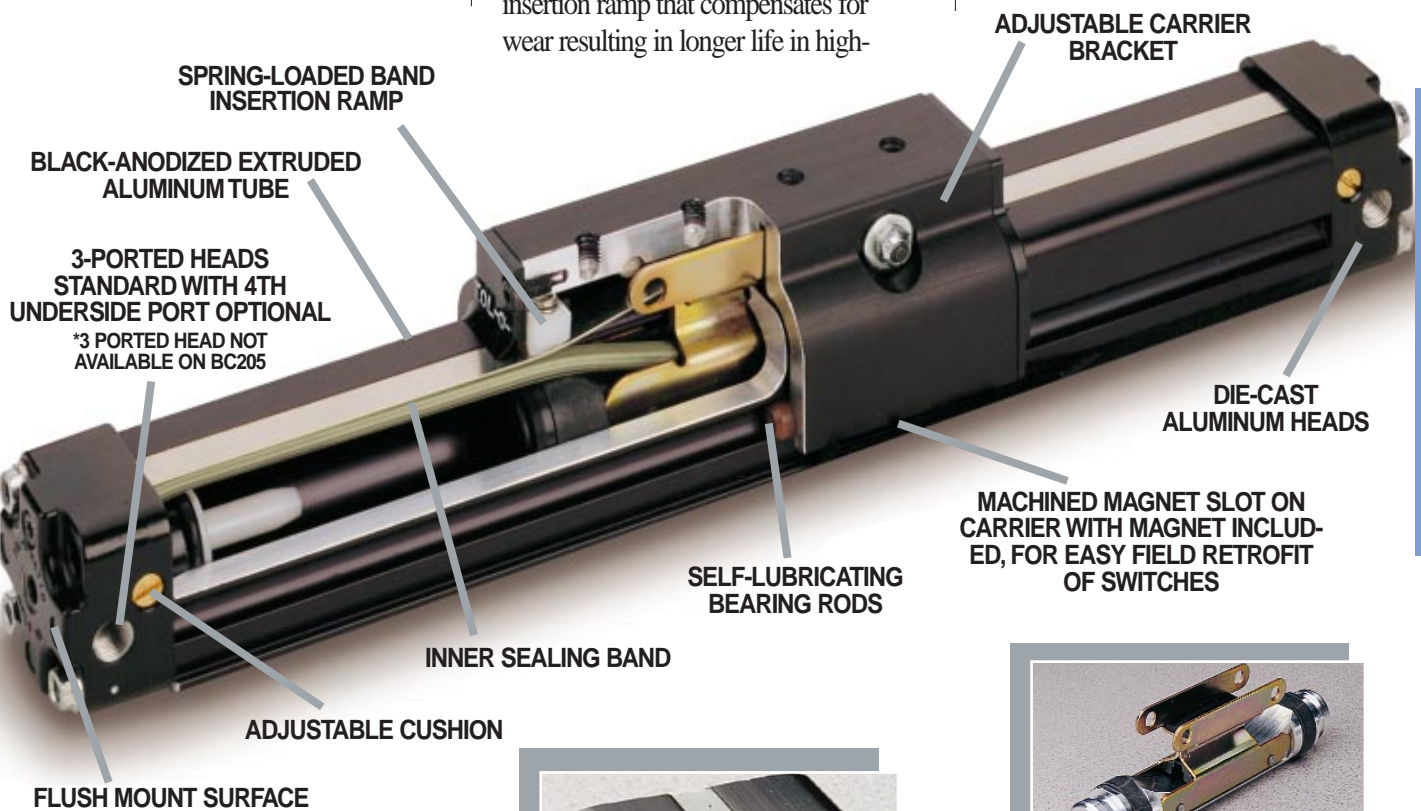
Tol-O-Matic, inventor of the world's first rodless cylinder, presents the BC2 series of Band Cylinders®. A step ahead of other rodless band-type cylinders available in the marketplace today, the BC2 series patented design and customer-driven features will fill countless application requirements with reliable, long-term performance.

It is designed for maximum flexibility and versatile mounting in both horizontal and many vertical applications, see page 22 for vertical application guidelines. BC2 Series Band Cylinders are available in six bore sizes: 1/2" (12mm), 1" (25mm), 1 1/4" (32mm), 1 1/2" (40mm), 2" (50mm) and 2 1/2" (63mm).

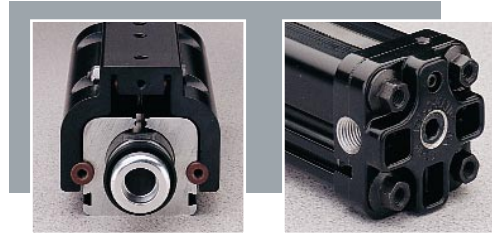
The extended carrier design of the BC2 Series features a spring-loaded band insertion ramp that compensates for wear resulting in longer life in high-

velocity applications. The magnet slot for field retrofitting of switch sensors is standard.

Adjustable cushions for smooth deceleration are standard on all models except the BC205, which features external bumpers instead.

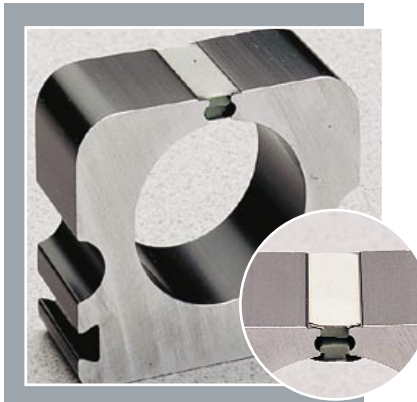


BC2 BAND CYLINDER



Patented load-bearing carrier system* features self-lubricated bearing rods that transmit the load directly from the bracket to the cylinder tube isolating the piston for longer seal life. Bearing rods guide and support moderate loads eliminating the need for external guides in many applications, saving additional costs.

Flush end mounts and 3-ported heads are standard, with 4th underside port as optional.



Stamped-steel piston bracket out performs aluminum for maximum strength at major stress points.

Patented band retention system** is the heart of the Band Cylinder. An inner Sealing Band creates a tight metal-to-metal seal with the internal diameter of the cylinder bore. An outer Dust Band keeps dust and grit away from the Sealing Band. Elastomer strips provide a positive, non-magnetic lock.



Patented adjustable carrier bracket*** has just two-bolt adjustments for true tracking and superior load support.

NOTE: Some features shown may not apply to the BC205 model.

* U.S. Patent No. 4,852,465
 ** U.S. Patent No. 4,545,290
 *** U.S. Patent No. 4,724,744



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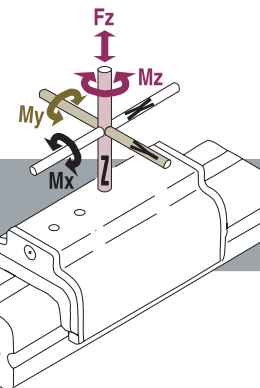
The graphs on this page are intended for a quick reference to help in determining the BC2 Band Cylinder that will work for your project.

Refer to page 84 in the Rodless

Cylinders section to find step by step directions to size and select the best rodless cylinder for the job.

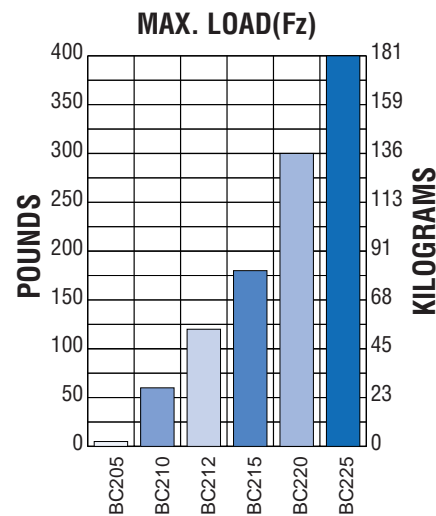
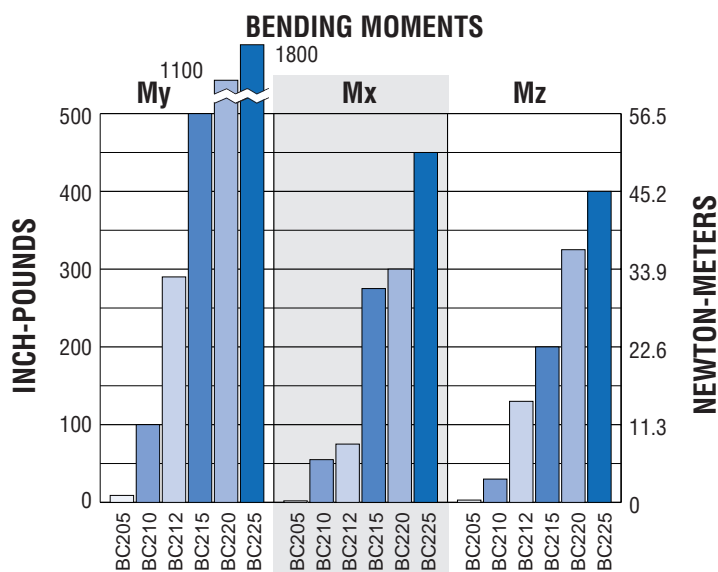
The following pages detail each of the six sizes of the BC2, giving bore size,

weights, force, cushion data, tube support requirement and available options.

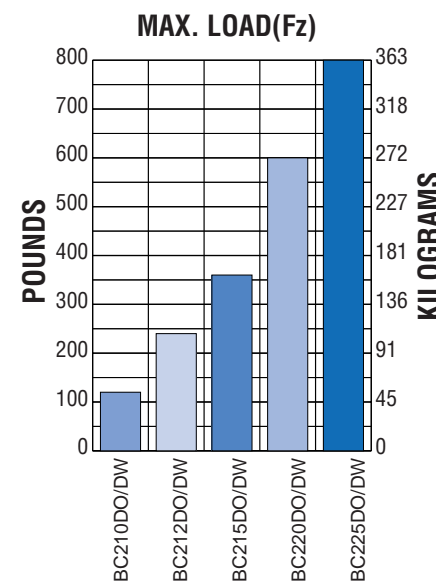
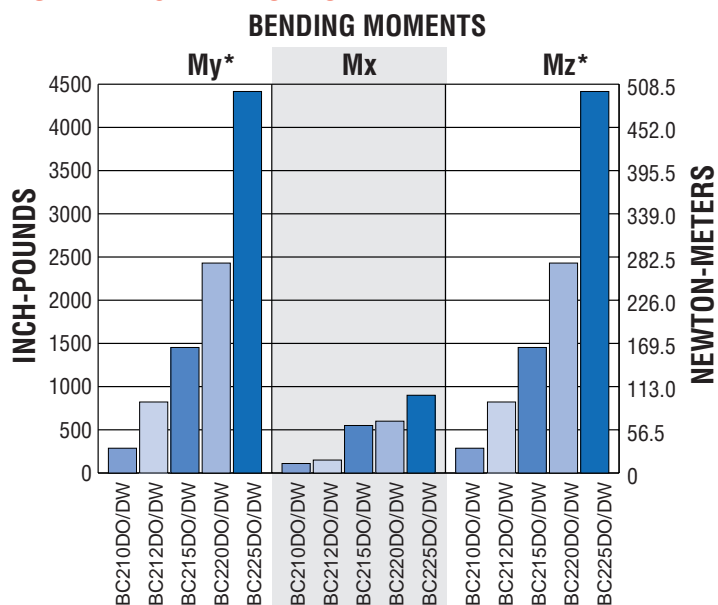


BC2 BENDING MOMENTS, LOAD : BC205, BC210, BC212, BC215, BC220, BC225

STANDARD ACTUATOR

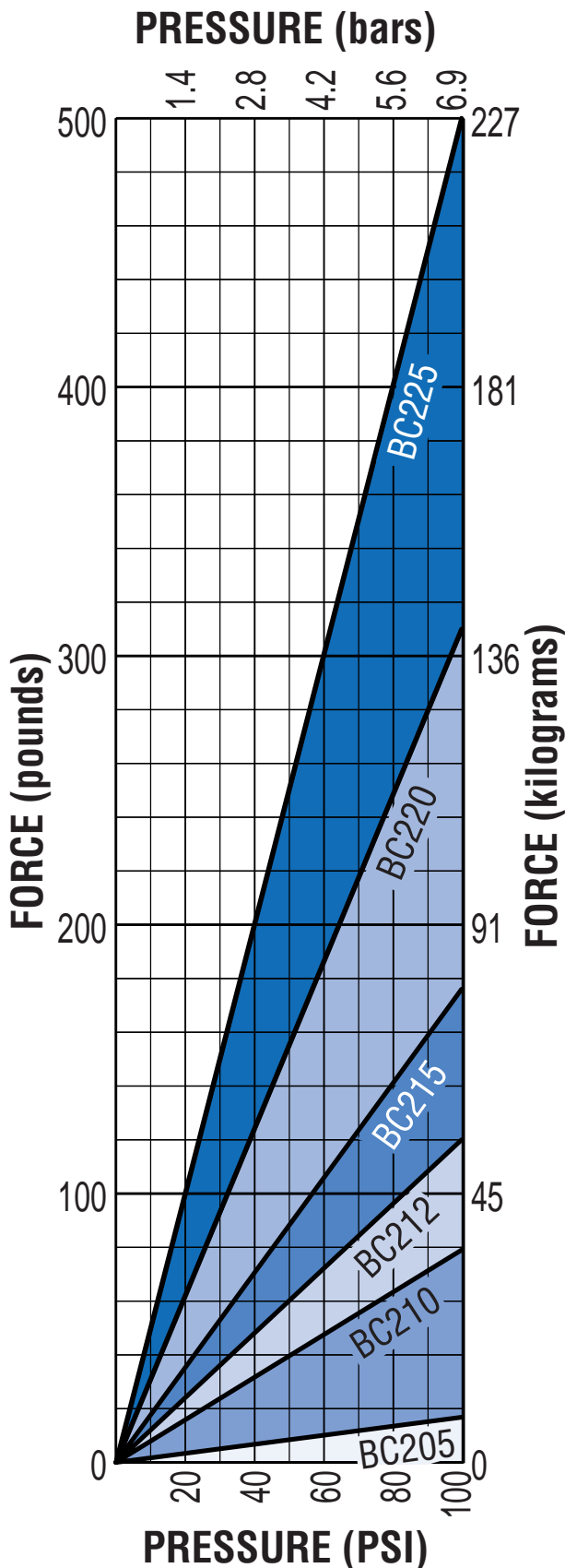


AUXILIARY CARRIER OPTION



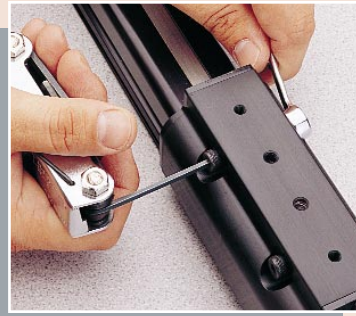
*Auxiliary carrier bending moments indicated are at minimum center to center distance. Additional My + Mz load capacity can be obtained by increasing "D" dimension. Refer to auxiliary carrier data on page 22

**BC2 THEORETICAL FORCE
VS PRESSURE:
BC205, BC210, BC212,
BC215, BC220, BC225**



APPLICATION GUIDELINES

1. BC2 CARRIER BRACKET BOLT ADJUSTMENT



BC2 carrier bracket adjustment bolts should be adjusted to suit each individual application, depending on the degree of rigidity required. A good starting point is to

tighten the nut on the bolt until there is no lateral movement of the bolt. Then, equally tighten each nut on the carrier bolt while moving the carrier by hand along the length of the stroke. When all lateral play in the carrier is eliminated and free movement along the length of the stroke is maintained, your carrier bracket is adjusted properly. Some applications may require fine tuning of this adjustment to gain more lateral play or a higher degree of rigidity. In demanding applications, carrier adjustments should be done periodically.

2. CUSHION NEEDLE ADJUSTMENT (BC2, BC3, BC4 ONLY)

Adjust the cushion needles in the cylinder heads carefully to obtain a smooth, hesitation free deceleration for your particular application. If there are questions on proper adjustment, please consult Tol-O-Matic, Inc.



3. CUSHION DATA CHARTS (BC2, BC3, BC4, CC, SA, DP, TC ONLY)

NOTE: The velocities listed on the Cushion Data charts in this catalog are final or cushion impact velocities. On applications where the internal cushions or bumpers are to be used, be sure the actual, final or impact velocity is known. If the velocity is not known, use of limit switches with valve deceleration circuits or shock absorbers should be considered.

ALSO SEE

| | |
|---|-----|
| SELECTION (BC2, BC3, BC4, LS) | 84 |
| LUBRICATION GUIDELINES | 241 |
| FINAL VELOCITY CALCULATIONS | 241 |