Posistop® X CL A S S™

OIL SHEAR BRAKES

VALUE ENGINEERED FOR HIGHEST PERFORMANCE AT LOWEST COST PER CYCLE

WHERE INNOVATION NEVER RUNS DRY™
Foot Mounting Kit
For the Coupler brake a foot mounting kit is available that will bolt onto the brake for those applications where the brake may not be mounted on a C-Face motor or reducer. They are made from heavy gauge steel (XB1 & XB2), or cast iron (XB3 & XB4), and hard coat epoxy coated.

Male Input Shaft Assembly
For applications where a belt drive may be required on the input, a male input shaft assembly is available to convert the quill input to an extended shaft. It consists of a mounting plate with a bearing and stainless steel shaft that bolts to the C-Face mounting flange. The shaft is then locked into the Split Clamped Quill.

Wash Down
For wash down applications in food processing facilities, the optional wash down modification is available for both the Coupler Brake and the Motor Brake. This modification consists of nickel-plated or stainless steel shafts, stainless steel locking collar on the Clamped Split Quill, Steel It epoxy coating, stainless steel fasteners, synthetic fluid (USDA H-2) and non-corrosive breather and sight gauge.

Foot Mounting Kit
- X1 & X2 Foot Kit (Pair of feet) 02-X1-FT-KIT
- X1 & X2 Foot Kit Washdown (Steel It Epoxy) 02-X1-FT-KITW
- X3 & X4 Foot Kit (Pair of feet) 02-X4-FT-KIT
- X3 & X4 Foot Kit Washdown (Steel It Epoxy) 02-X4-FT-KITW

Extended Input Shaft Assembly
- Input Shaft Assy: X1 5/8" shaft, Washdown 02-X1-IA-KITW
- Input Shaft Assy: X1 5/8" shaft 02-X1-IA-KIT
- Input Shaft Assy: X2 7/8" shaft, Washdown 02-X2-IA-KITW
- Input Shaft Assy: X2 7/8" shaft 02-X2-IA-KIT
- Input Shaft Assy: X3 1-1/8" shaft, Washdown 02-X3-IA-KITW
- Input Shaft Assy: X3 1-1/8" shaft 02-X3-IA-KIT
- Input Shaft Assy: X4 1-3/8" shaft, Washdown 02-X4-IA-KITW
- Input Shaft Assy: X4 1-3/8" shaft 02-X4-IA-KIT

Pneumatic Control Valves* (Requires kit below)
- Control Valve, 434A Series
  - Manifold Mounted, 120 VAC/60Hz, 1.0 Cv 09-56-A3NN-00
  - Manifold Mounted, 24 VDC, 1.0 Cv 09-56-A3NN-00
- Control Valve, 35A Series, 120 VAC/60Hz, .25 Cv, ship loose 01-56-147-08
- Control Valve, 35A Series, 7.3 watt 24 VDC, .21 Cv, ship loose 01-56-148-08

*Note: All valves are washdown duty. Explosion Proof available.
Select a brake with a rating equal to or greater than the torque calculated. Several torque ratings are available in each brake size. Use the following tables to select the appropriate torque. Please contact your local distributor, rep or the factory for application assistance.

Torque can be determined for moderate inertial loads using the formula: \[ \text{TORQUE ft./lbs.} = \frac{\text{motor Hp} \times 5250 \times 1.5}{\text{RPM at Brake}} \]

The correct size X Class brakes can be selected using motor frame size and required brake torque. The following tables indicate the proper size X Class brake based on various motor frame sizes.

The Posistop® X Class C-face mount adds a new level of convenience to this classic configuration. An innovative Clamped-Split-Quill absolutely stops play that could deform the key and keyway in high-torque, rapid cycling applications. The new clamp design splits the input quill four ways at 90° intervals. A clamp collar fits over the quill to give 360° clamping effect when tightened down. The keyway is centered in one of the splits in the quill to securely lock the key on both sides.

The Posistop® X Class brakes may be mounted in three configurations (horizontal, vertical input up and vertical input down) to allow the most flexibility in machine design.
Operating Specifications

### XB1 & XB2 Technical Specifications

<table>
<thead>
<tr>
<th>Thermal Rating (HP Sec/Min)</th>
<th>Max. KE per Engagement (Ft. Lbs.)</th>
<th>Piston Volume (Cu. In.)</th>
<th>Inertia WK^2 (Lb. Ft.)^2</th>
<th>Max. Speed (RPM)</th>
<th>Weight (Lbs.)</th>
<th>Oil Capacity (Ounces)</th>
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<tbody>
<tr>
<td>XB1</td>
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<td>578</td>
<td>.9</td>
<td>.0130</td>
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Contact Force Control for any missing specifications that were not available at printing time.

### XB3 Technical Specifications

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<tr>
<th>Thermal Rating (HP Sec/Min)</th>
<th>Max. KE per Engagement (Ft. Lbs.)</th>
<th>Piston Volume (Cu. In.)</th>
<th>Inertia WK^2 (Lb. Ft.)^2</th>
<th>Max. Speed (RPM)</th>
<th>Weight (Lbs.)</th>
<th>Oil Capacity (Ounces)</th>
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<tbody>
<tr>
<td>XB3</td>
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<td>1712</td>
<td>.9</td>
<td>.0174</td>
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### XB4 Technical Specifications

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<thead>
<tr>
<th>Thermal Rating (HP Sec/Min)</th>
<th>Max. KE per Engagement (Ft. Lbs.)</th>
<th>Piston Volume (Cu. In.)</th>
<th>Inertia WK^2 (Lb. Ft.)^2</th>
<th>Max. Speed (RPM)</th>
<th>Weight (Lbs.)</th>
<th>Oil Capacity (Ounces)</th>
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<tbody>
<tr>
<td>XB4</td>
<td>CF</td>
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### XB5,6 Technical Specifications

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<th>Thermal Rating (HP Sec/Min)</th>
<th>Max. KE per Engagement (Ft. Lbs.)</th>
<th>Piston Volume (Cu. In.)</th>
<th>Inertia WK^2 (Lb. Ft.)^2</th>
<th>Max. Speed (RPM)</th>
<th>Weight (Lbs.)</th>
<th>Oil Capacity (Ounces)</th>
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<tr>
<td>XB5,6</td>
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<td>.2011</td>
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<td>42</td>
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Contact Force Control for any missing specifications that were not available at printing time.

### How to Order

- **X** = X Class Brake
- **B** = Unit Size (1)
- **S** = Spring Set (3)
- **H** = Options (9)
- **XB** = Input Module (2)
- **TORQUE** (5, 6, 7) Lb. Ft.
- **OPTIONS** (9)
- **FRAME** (Size)

Contact Force Control for Technical Specifications not given.
New Posistop® X Class brakes let you eliminate the typical line stops, the frequent brake repairs and replacements. Here’s the reliability you need for today’s 24/7 manufacturing demands. Here’s speed and precision that can let you run at higher cycle rates and quality levels, or design new machines for higher performance.

Value engineering gives you X times the performance possible from conventional dry brakes:

- 10X longer design life – designed for over 6 million cycles.
- Clamped-Split-Quill reduces keyway problems in aggressive applications.

**MORE NUMBERS YOU’LL LIKE:**

- Up to 50% lower cost per index than disposable dry brakes.
- Up to 88% lower internal inertia delivers ultra-quick acceleration and reduced power consumption.

No ordinary brakes, Posistop® X Class units use proprietary oil-shear technology perfected over more than 30 years by Force Control Industries. Posistop® X Class brake units have proven themselves in the toughest production environments, including automotive, lumber, building materials, packaging, warehousing, and food processing – where there is absolutely no time for downtime.

With the X Class, Force Control transforms oil-shear technology into affordable, off-the-shelf designs. Six standard models – XB1, XB2, XB3, XB4, XB5 and XB6, mostly stocked, cover the most popular size ranges for brakes. Convenient double C-face or motor brake mounting and handy Clamped-Split-Quill allow drop-in, bolt-up installation.
**Dimensions**

**Coupler Brake Dimensions**

**Motor Brake Dimensions**

Dimensions are subject to change without notice. Certified Installation Drawings are available upon request.

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**Brake Input Dimensions (Inches)**

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
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<td>4.50</td>
<td>5.88</td>
<td>6.64</td>
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<tr>
<td>XB2</td>
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<td>4.44</td>
<td>4.44</td>
<td>5.68</td>
<td>6.64</td>
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<tr>
<td>XB3</td>
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<td>6.64</td>
<td>6.64</td>
</tr>
<tr>
<td>XB4</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
<td>6.64</td>
<td>6.64</td>
</tr>
</tbody>
</table>

**Brake Output Dimensions (Inches)**

<table>
<thead>
<tr>
<th>Size</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>XB1</td>
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<td>1.50</td>
<td>3.88</td>
<td>4.88</td>
<td>9.00</td>
</tr>
<tr>
<td>XB2</td>
<td>2.06</td>
<td>1.73</td>
<td>3.88</td>
<td>4.88</td>
<td>9.00</td>
</tr>
<tr>
<td>XB3</td>
<td>2.63</td>
<td>2.24</td>
<td>4.13</td>
<td>5.13</td>
<td>10.50</td>
</tr>
<tr>
<td>XB4</td>
<td>3.13</td>
<td>2.24</td>
<td>4.63</td>
<td>5.63</td>
<td>10.50</td>
</tr>
</tbody>
</table>

CF = Consult Factory

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**Dimensions (Coupler Brake with Mounting Feet and Male Input Shaft)**

**XB1 & XB2 Posistop X Class Brakes**

**XB3 & XB4 Posistop X Class Brakes**

See Std. XB1 & XB2 coupler brake for the remaining dimensions.

See Std. XB3 & XB4 coupler brake for the remaining dimensions.