PBS Series
Power Block Slide
PBS-Series Power Block Slides

**Designed for applications where space is limited.**

The PBS-Series has an internally built-in air cylinder in the carriage assembly, reducing overall length. The carriage assembly is supported by four recirculating linear ball bearings and two hardened guide shafts.

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**A. Carriage:**
Four recirculating linear ball bearings. Easy access mounting and dowel location holes.

**B. Air Cylinder:**
Internally housed in carriage. Low friction U-cup lip seals for long service life.

**C. Tool Bars:**
Standard dowel locating holes and accurately milled locating slots. Machined to accept industry standard shock absorbers, and position proximity switch sensors.

**D. Stroke Adjusting Screw:**
Easy access stroke adjusting screws for exact carriage stroke. Adjustable in both directions.

**E. Guide Shafts:**
Hardened Steel to RC 60-65

**F. Bearings: (Two Choices)**
Four linear ball bearings...greatest load capacity, factory lubricated, built-in wipers, self-aligning.
Four PTFE ball bearings...self-lubricating, self-aligning, long service life, ideal for cleanroom.
Power Block Slides

How to Order

Bore Sizes
075 = 3/4”
100 = 1”
125 = 1-1/4”

Standard Stroke
01 = 1”
02 = 2”
03 = 3”
04 = 4”
05 = 5”
06 = 6” (maximum)

NOTE:
4” is maximum stroke on 3/4” bore
5” is maximum stroke for 1” bore

Bearing Option
LB = Linear Ball
TB = PTFE Bearing

Seal Option
1 = Buna-N Seals

Shock Absorbers
1 = Extend
2 = Retract
3 = Extend and Retract
4 = No Shocks

Sensing Position
A = Single Position Extend
B = Single Position Retract
C = Extend and Retract
D = No Sensing

Sensing Type
Standard Cord Set
4 = Prox Switch - PNP (sourcing)
5 = Prox Switch - NPN (sinking)
6 = No Sensing

Quick Disconnect Cord Set
W = Prox Switch - PNP (sourcing) Straight
V = Prox Switch - NPN (sinking) Straight
U = Prox Switch - PNP (sourcing) 90 Deg.
T = Prox Switch - NPN (sinking) 90 Deg.

Prox switches are 8 mm diameter.

When ordering additional switches:

<table>
<thead>
<tr>
<th>Sensor Description</th>
<th>Standard Cord Set</th>
<th>Quick Disconnect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prox PNP</td>
<td>PROX-8FL2-PN</td>
<td>PROX-8QDS-PN</td>
</tr>
<tr>
<td>Prox NPN</td>
<td>PROX-8FL2-PN</td>
<td>PROX-8QDS-PN</td>
</tr>
</tbody>
</table>

Technical Specifications

<table>
<thead>
<tr>
<th></th>
<th>PBS075</th>
<th>PBS100</th>
<th>PBS125</th>
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</thead>
<tbody>
<tr>
<td>Max. Air Pressure</td>
<td>120 PSI</td>
<td>120 PSI</td>
<td>120 PSI</td>
</tr>
<tr>
<td>Thrust force @ 100 PSI</td>
<td>31 lbs</td>
<td>62 lbs</td>
<td>100 lbs</td>
</tr>
<tr>
<td>Maximum Stroke</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Cylinder Bore Dia.</td>
<td>0.75</td>
<td>1.00</td>
<td>1.25</td>
</tr>
<tr>
<td>F1 Load</td>
<td>90 lbs</td>
<td>275 lbs</td>
<td>520 lbs</td>
</tr>
<tr>
<td>F2 Load</td>
<td>90 lbs</td>
<td>275 lbs</td>
<td>520 lbs</td>
</tr>
<tr>
<td>Deflection @ max Load &amp; Stroke</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td>M2 Moment</td>
<td>120 in.-lbs.</td>
<td>275 in.-lbs.</td>
<td>450 in.-lbs.</td>
</tr>
<tr>
<td>M3 Moment</td>
<td>200 in.-lbs.</td>
<td>750 in.-lbs.</td>
<td>1590 in.-lbs.</td>
</tr>
<tr>
<td>M4 Moment</td>
<td>200 in.-lbs.</td>
<td>750 in.-lbs.</td>
<td>1590 in.-lbs.</td>
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</tbody>
</table>
PBS-Series Power Block Slide Dimensions

<table>
<thead>
<tr>
<th></th>
<th>PBS075</th>
<th>PBS100</th>
<th>PBS125</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>6.500</td>
<td>8.000</td>
<td>9.000</td>
</tr>
<tr>
<td>B</td>
<td>5.875</td>
<td>7.250</td>
<td>8.250</td>
</tr>
<tr>
<td>C</td>
<td>5.000</td>
<td>6.000</td>
<td>7.000</td>
</tr>
<tr>
<td>D</td>
<td>4.000</td>
<td>5.000</td>
<td>5.750</td>
</tr>
<tr>
<td>E</td>
<td>3.000</td>
<td>4.000</td>
<td>4.750</td>
</tr>
<tr>
<td>F</td>
<td>3.500</td>
<td>4.500</td>
<td>5.000</td>
</tr>
<tr>
<td>G</td>
<td>3.375</td>
<td>4.375</td>
<td>4.870</td>
</tr>
<tr>
<td>H</td>
<td>3.000</td>
<td>3.875</td>
<td>4.375</td>
</tr>
<tr>
<td>J</td>
<td>2.9999/3.001</td>
<td>3.874/3.876</td>
<td>4.374/4.376</td>
</tr>
<tr>
<td>K</td>
<td>0.625</td>
<td>0.750</td>
<td>0.750</td>
</tr>
<tr>
<td>L</td>
<td>2.000</td>
<td>2.440</td>
<td>2.730</td>
</tr>
<tr>
<td>M</td>
<td>0.472</td>
<td>0.788</td>
<td>0.985</td>
</tr>
<tr>
<td>N</td>
<td>1.060</td>
<td>1.313</td>
<td>1.813</td>
</tr>
<tr>
<td>P</td>
<td>1.000</td>
<td>1.250</td>
<td>1.750</td>
</tr>
<tr>
<td>R</td>
<td>0.563</td>
<td>0.687</td>
<td>0.938</td>
</tr>
<tr>
<td>S</td>
<td>3.000</td>
<td>3.875</td>
<td>4.375</td>
</tr>
<tr>
<td>T</td>
<td>0.125</td>
<td>0.250</td>
<td>0.250</td>
</tr>
<tr>
<td>U</td>
<td>0.1877/0.1892</td>
<td>0.1877/0.1892</td>
<td>0.1877/0.1892</td>
</tr>
<tr>
<td>V</td>
<td>0.0156</td>
<td>0.156</td>
<td>0.156</td>
</tr>
<tr>
<td>W</td>
<td>0.563</td>
<td>0.688</td>
<td>0.938</td>
</tr>
<tr>
<td>X</td>
<td>2.200</td>
<td>2.200</td>
<td>2.200</td>
</tr>
<tr>
<td>Y</td>
<td>0.063</td>
<td>0.063</td>
<td>0.063</td>
</tr>
<tr>
<td>AA</td>
<td>CLEARANCE FOR 1/4 SHCS</td>
<td>CLEARANCE FOR 5/16 SHCS</td>
<td>CLEARANCE FOR 5/16 SHCS</td>
</tr>
<tr>
<td>BB</td>
<td>1/4-20 X 0.50 DEEP</td>
<td>5/16-18 X 0.63 DEEP</td>
<td>5/16-18 X 0.63 DEEP</td>
</tr>
<tr>
<td>CC</td>
<td>0.1892/0.1877 THRU</td>
<td>0.2505/0.2510 THRU</td>
<td>0.2505/0.2510 THRU</td>
</tr>
<tr>
<td>DD</td>
<td>0.1877/0.1892 X 0.25 DEEP</td>
<td>0.1877/0.1892 X 0.25 DEEP</td>
<td>0.1877/0.1892 X 0.25 DEEP</td>
</tr>
<tr>
<td>EE</td>
<td>1/4-20 THRU</td>
<td>5/16-18 THRU</td>
<td>5/16-18 THRU</td>
</tr>
<tr>
<td>FF</td>
<td>#10-32</td>
<td>#10-32</td>
<td>1/8 NPTF</td>
</tr>
</tbody>
</table>

NOTE: Shocks & Flow Controls are recommended.
### PBS Series Switch Information

**PBS Series Gantry**

**Power Block Slides**

**PBS Series Switch Information**

**PBS Series Gantry**

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**Quick Disconnect Cables**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Type</th>
<th>Operating Voltage</th>
<th>Current Rating</th>
<th>Cable Material</th>
<th>Protection</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXCST</td>
<td>Straight 5 m Cable (3 x 26 Gauge wire)</td>
<td>60 AC/75 DC</td>
<td>3 A</td>
<td>PUR</td>
<td>IP 68, III</td>
<td>M8</td>
</tr>
<tr>
<td>PXC90</td>
<td>90° 5 m Cable (3 x 26 Gauge wire)</td>
<td>60 AC/75 DC</td>
<td>3 A</td>
<td>PUR</td>
<td>IP 68, III</td>
<td>M8</td>
</tr>
</tbody>
</table>

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**Prox Switch (PNP & NPN NO) Flying Leads - PROX-8FL2-PN**

- **3-Wire DC PNP;**
- **2-Wire DC PNP/NPN**
- **Normally Open**
- **Operating Voltage 10-30 VDC**
- **Current Rating 100 mA**
- **Minimum Load Current 2 mA**
- **Leakage Current < .5 mA**
- **Overload Protection**
- **Reverse Polarity Protection**
- **Voltage Drop < 2.8V**
- **Current Consumption < 10 mA**
- **Switching Frequency > 1000 Hz**
- **Ambient Temperature 0°C to 70°C**
- **Protection IP 67, III**
- **Hysteresis 1 - 15% OF Sr**
- **Operating Distance 0 - 2.4mm**
- **Correction Factor Mild Steel=1, Stainless Steel=.7, Brass=.5, Alum.=.4, Copper=.3**
- **Housing Material Brass with Bronze Coated**
- **Function Display Switching Status Yellow LED**
- **Connection PVC Cable, 2m, 3 x .14mm²**
- **Remarks**
  - *Only in 2-Wire Operation*  
  - **Only in 3-Wire Operation**
Prox Switch (PNP & NPN NO) 8 mm connector - PROX-8QDS-PN

Electrical Design
- 3-Wire DC PNP
- 2-Wire DC PNP/NPN
  - Normally Open
  - 10-30 VDC
  - 100 mA
  - < .5 mA (Non-Latching)
  - Yes
  - < 2.8V
  - < 10 mA**
  - > 1000 Hz
  - 0°C to 60°C
  - IP 67, III
  - 1 - 15% Of Sr
  - 0 - 2.4mm

- Operating Voltage
- Current Rating
- Minimum Load Current
- Leakage Current
- Short Circuit Protection
- Overload Protection
- Reverse Polarity Protection
- Voltage Drop
- Current Consumption
- Switching Frequency
- Ambient Temperature
- Protection
- Hysteresis
- Operating Distance
- Correction Factor
- Housing Material
- Brass with Bronze Coated
- Blue Steel=.7
- Brass=.5
- Stainless Steel=.4
- Copper=.3
- M8 Connector
- *Only in 2-Wire Operation
- **Only in 3-Wire Operation
- 2 M8 Lock Nuts Included

Remarks
- *Switches are not designed for wet environments. Please see your distributor for additional information.

Agency Approvals

*Switches are not designed for wet environments. Please see your distributor for additional information.