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# Table of Contents

- Control Panel Products
- LV / EZ Lockout Valves
- Integrated Fittings
- Accessories
- Ball Valves / Plug Valves
- Quick Couplings
- Hose & Fittings
- Tubing & Fittings
- Safety Guide, Offer of Sale
Control Panel
Products

Section A

Basic Features .......................................................... A2
Push Button Bodies ................................................... A3
Push Buttons ............................................................. A4
Selector Switches ...................................................... A5
Valve Bodies & Accessories ...................................... A6

Dimensions & Assembly ................................................. A7
Legend Plates, Specifications .................................. A8
Mounting ........................................................................ A9
Visual Indicators 22mm (7/8") .................................. A10
Two-Hand Controls .................................................. A11-A12
HUMAN-MACHINE DIALOG requires devices such as push buttons and selector switches to provide command inputs. A wide variety of these devices is available to meet most application needs. Both pneumatic and electrical switch bodies are available to match system technology. All of these devices use the 22 mm (7/8”) mounting standard.

PNEUMATIC VISUAL INDICATORS

An indicator ball is rotated by a pneumatic input, changing the visible color. The ball sits behind a clear plastic window, providing a wide field of view. The visual indicators are available in five brightly colored Day-Glow paints for increased visibility. Like push buttons and selector switches, visual indicators use the 22mm (7/8") mounting standard.

MODULAR PNEUMATIC / ELECTRIC PUSH BUTTONS

As with electrical contact switches, pneumatic valve modules can be mounted on a number of different operating heads.
- Pneumatic normally non passing (NNP) is equivalent to electrical normally open (N.O.).
- Pneumatic normally passing (NP) is equivalent to electrical normally closed (N.C.).

Note: Electrical switches can be stacked, but the rear connection on pneumatic switches prevents stacking. Therefore, when mixing electrical and pneumatic switch bodies on the same operator, the pneumatic switch must be mounted last.
With 3/2 Valve Bodies 5/32" Instant Straight Connections

Flush Push Buttons

Selector Switches

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Color</th>
<th>Function</th>
<th>Type of Switching*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXBB3111BA2</td>
<td>Black</td>
<td>Spring Return</td>
<td>NNP</td>
</tr>
<tr>
<td>PXBB3111BA3</td>
<td>Green</td>
<td>Spring Return</td>
<td>NNP</td>
</tr>
<tr>
<td>PXBB3111BA4</td>
<td>Red</td>
<td>Spring Return</td>
<td>NNP</td>
</tr>
<tr>
<td>PXBB3251BA2</td>
<td>Black</td>
<td>Spring Return</td>
<td>NNP+NP</td>
</tr>
<tr>
<td>PXBB4131BA2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Single Universal 3-Way</td>
</tr>
<tr>
<td>PXBB4131BA3</td>
<td>Green</td>
<td>Spring Return</td>
<td>Single Universal 3-Way</td>
</tr>
<tr>
<td>PXBB4231BA2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Dual Universal 3-Way</td>
</tr>
</tbody>
</table>

* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Note: Mount up to three valves on mounting ring.

Mushroom Head Push Buttons (40mm Diameter)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Color</th>
<th>Function</th>
<th>Type of Switching*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXBB3111BC2</td>
<td>Black</td>
<td>Spring Return</td>
<td>NNP</td>
</tr>
<tr>
<td>PXBB3111BT4</td>
<td>Red</td>
<td>Push-Pull</td>
<td>NNP</td>
</tr>
<tr>
<td>PXBB3121BT4</td>
<td>Red</td>
<td>Push-Pull</td>
<td>NP</td>
</tr>
<tr>
<td>PXBB4131BC2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Single Universal 3-Way</td>
</tr>
<tr>
<td>PXBB4131BT4</td>
<td>Red</td>
<td>Push-Pull</td>
<td>Single Universal 3-Way</td>
</tr>
</tbody>
</table>

* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Note: Mount up to three valves on mounting ring.
For Use With PXBB Valve Bodies and ZBE Electrical Switch Bodies

### Push Buttons

![Push Buttons](image)

<table>
<thead>
<tr>
<th>Plastic Head ZB5**</th>
<th>Metal Head ZB4*</th>
<th>Part Number</th>
<th>Color</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB5AA2</td>
<td>ZB4BA2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Flush</td>
<td></td>
</tr>
<tr>
<td>ZB5AA3</td>
<td>ZB4BA3</td>
<td>Green</td>
<td>Spring Return</td>
<td>Extended</td>
<td></td>
</tr>
<tr>
<td>ZB5AA4</td>
<td>ZB4BA4</td>
<td>Red</td>
<td>Spring Return</td>
<td>Booted</td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>ZB4BA5</td>
<td>Yellow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>ZB4BA6</td>
<td>Blue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB5AL2</td>
<td>ZB4BL2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Extended</td>
<td></td>
</tr>
<tr>
<td>ZB5AL3</td>
<td>ZB4BL3</td>
<td>Green</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB5AL4</td>
<td>ZB4BL4</td>
<td>Red</td>
<td>Spring Return</td>
<td>Booted</td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>ZB4BL5</td>
<td>Yellow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>ZB4BP2</td>
<td>Black</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>ZB4BP3</td>
<td>Green</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>ZB4BP4</td>
<td>Red</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** ZB5*** Model Numbers are Plastic Head Operators

### Mushroom Head Push Buttons

![Mushroom Head Push Buttons](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Color</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BC2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Ø 40mm Head</td>
</tr>
<tr>
<td>ZB4BC3</td>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB4BC4</td>
<td>Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB4BT2</td>
<td>Black</td>
<td>Latching Push-Pull</td>
<td></td>
</tr>
<tr>
<td>ZB4BT3</td>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB4BT84</td>
<td>Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB4BR2</td>
<td>Black</td>
<td>Spring Return</td>
<td>Ø 60mm Head</td>
</tr>
<tr>
<td>ZB4BR3</td>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB4BR4</td>
<td>Red</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* ZB4*** Model Numbers are Metal Head Operators

### Push / Push Buttons

![Push / Push Buttons](image)

<table>
<thead>
<tr>
<th>Part Number*</th>
<th>Color</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BH02</td>
<td>Black</td>
<td>Detent 2-Position</td>
<td>Flush</td>
</tr>
<tr>
<td>ZB4BH03</td>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZB4BH04</td>
<td>Red</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* ZB4**** Model Numbers are Metal Head Operators

### Mounting Accessories

![Mounting Accessories](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB2BZ19</td>
<td>Black</td>
<td>Plastic Guard for 60mm Mushroom Heads</td>
</tr>
<tr>
<td>ZB5AZ905</td>
<td>—</td>
<td>Plastic Head (ZB5) Mounting Nut Tightening Tool</td>
</tr>
</tbody>
</table>

* ZB4**** Model Numbers are Metal Head Operators

BOLD ITEMS ARE MOST POPULAR.
For Use With PXBB Variable Composition Switch Bodies

Selector Switches

Key Operated Selectors

<table>
<thead>
<tr>
<th>Part Number*</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BD2</td>
<td>Maintained</td>
<td>2-Positions</td>
</tr>
<tr>
<td>ZB4BD4</td>
<td>Spring Return from Right to Left</td>
<td></td>
</tr>
<tr>
<td>ZB4BD5</td>
<td>Spring Return to Center from Left and Right</td>
<td>3-Positions</td>
</tr>
<tr>
<td>ZB4BD7</td>
<td>Maintained Right Spring Return from Left to Center</td>
<td>3-Positions</td>
</tr>
<tr>
<td>ZB4BD8</td>
<td>Maintained Left Spring Return from Right to Center</td>
<td>3-Positions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number*</th>
<th>Key Withdrawal</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BG2</td>
<td>Left</td>
<td>2 Maintained Positions</td>
</tr>
<tr>
<td>ZB4BG4</td>
<td>Left and Right</td>
<td></td>
</tr>
<tr>
<td>ZB4BG3</td>
<td>Center</td>
<td>3 Maintained Positions</td>
</tr>
<tr>
<td>ZB4BG5</td>
<td>Left and Right</td>
<td></td>
</tr>
<tr>
<td>ZB4BG7</td>
<td>Center</td>
<td>3-Positions 2 Spring Return to Center</td>
</tr>
</tbody>
</table>

Standard Black Handle

<table>
<thead>
<tr>
<th>Part Number*</th>
<th>Color</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BS24</td>
<td>Red</td>
<td>Latching Turn to Release</td>
<td>Ø 40mm Head</td>
</tr>
<tr>
<td>ZB4BS14</td>
<td>Red</td>
<td>Key Latching</td>
<td></td>
</tr>
<tr>
<td>ZB4BS64</td>
<td>Red</td>
<td>Latching Turn to Release</td>
<td>Ø 60mm Head</td>
</tr>
<tr>
<td>ZB4BS24</td>
<td>Red</td>
<td>Key Latching</td>
<td></td>
</tr>
</tbody>
</table>

* ZB4*** Model Numbers are Metal Head Operators

Mushroom Head Push Buttons with Key Select

<table>
<thead>
<tr>
<th>Part Number*</th>
<th>Color</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BS24</td>
<td>Red</td>
<td>Latching Turn to Release</td>
<td>Ø 40mm Head</td>
</tr>
</tbody>
</table>

* ZB4**** Model Numbers are Metal Head Operators

BOLD ITEMS ARE MOST POPULAR.
For Use With 22mm (7/8") Metal Operating Heads 5/32" Instant Connections

### 3/2 Valve Bodies with Mounting Ring

- **PXBB3111B**
- **PXBB4131B**

### Specifications

- **Air Quality** – Standard Shop Air, Lubricated or Dry..............40 µm Filtration
- **Flow** –
  - PXBB3*: ....................................................... Cv=.08
  - PXBB4*: ....................................................... Cv=.18
- **Materials** –
  - Body .......................................................... Polyamide
  - Operating Head ....................................... Zinc Alloy & Plastic
- **Operating Positions** – All Positions
- **Operating Pressure** –
  - PXBB3*: ........................................ 15 to 115 PSIG (1 to 9 bar)
  - PXBB4*: ...................................... 15 to 145 PSIG (1 to 10 bar)
- **Ports** ........................................ 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
- **Temperature** –
  - Operating........................................ 5°F to 140°F (-15°C to + 60°C)

### Additional Valve Bodies

- **PXBB3911**
- **PXBB4932**
- **PXBB4931**

### Table

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connections</th>
<th>Function</th>
<th>Type of Switching*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXBB3911</td>
<td>5/32&quot; Instant Straight</td>
<td>3/2</td>
<td>NNP</td>
</tr>
<tr>
<td>PXBB3912</td>
<td>5/32&quot; Instant Swivel</td>
<td>3/2</td>
<td>NP</td>
</tr>
<tr>
<td>PXBB3921</td>
<td>5/32&quot; Instant Straight</td>
<td>3/2</td>
<td>NP</td>
</tr>
<tr>
<td>PXBB3922</td>
<td>5/32&quot; Instant Swivel</td>
<td>3/2</td>
<td>Universal 3-Way</td>
</tr>
<tr>
<td>PXBB4931</td>
<td>5/32&quot; Instant Straight</td>
<td>3/2</td>
<td>Universal 3-Way</td>
</tr>
<tr>
<td>PXBB4932</td>
<td>5/32&quot; Instant Swivel</td>
<td>3/2</td>
<td>Universal 3-Way</td>
</tr>
</tbody>
</table>

*BOLD ITEMS ARE MOST POPULAR.*
Dimensions & Assembly

PXB-B3 Dimensions

PXB-B4 Dimensions

Assembly

Assembling PXB Valves On Mounting Block

Assembling PXB Valves On the Back of the Electrical Contact
# For Push Buttons and Visual Indicators

## Legend Plates for PXBB Devices (22mm)

![ZBY****](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZBY2101</td>
<td>Black / Red Background (White Letters)</td>
</tr>
<tr>
<td>ZBY4101</td>
<td>Yellow / White Background (Black Letters)</td>
</tr>
</tbody>
</table>

### Without Text For Customer Engraving
- ZBY2303: Start
- ZBY2304: Stop
- ZBY2305: Forward
- ZBY2306: Reverse
- ZBY2307: Up
- ZBY2308: Down
- ZBY2309: Right
- ZBY2310: Left
- ZBY2311: On
- ZBY2312: Off
- ZBY2313: Open
- ZBY2314: Close
- ZBY2321: Inch
- ZBY2322: Reset
- ZBY2326: Power On
- ZBY2327: Slow
- ZBY2328: Fast
- ZBY2330: Emergency Stop
- ZBY2334: Run

### With Text For Push Buttons

### With Text For 2-Position Selectors
- ZBY2367: Off-On

### With Text For 3-Position Selectors
- ZBY2387: Hand-Off-Auto

## Blank Legend Plates for Inscription

### For PXBB Devices (2 lines of 11 characters maximum)

Please indicate the required text when ordering.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZBY2002</td>
<td>Black Background / White Letters</td>
</tr>
</tbody>
</table>

## Accessories

![ZBE101](image)

### Electrical Switch Bodies

When combined with pneumatic valves, these contact blocks allow different forms of power to be provided from a single push button.

**Electrical Specification:** 240V, 10Amp

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Type of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZBE101</td>
<td>Normally Open (NO)</td>
</tr>
<tr>
<td>ZBE102</td>
<td>Normally Closed (NC)</td>
</tr>
</tbody>
</table>

**Note:** Plastic Mounting Ring ZB5AZ009 to be used with ZB5 Plastic Operating Heads. Metal Mounting Ring ZB4BZ009 to be used with ZB4 Metal Operating Heads.

### Mounting Ring for Valve Bodies, Switch Bodies and Operating Heads

To make up a complete push button with one to three switching elements with 5/32" instant connections, use this mounting block and select the operating heads and bodies in this Section.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BZ009</td>
<td>Metal Mounting Ring</td>
</tr>
<tr>
<td>ZB5AZ009</td>
<td>Plastic Mounting Ring</td>
</tr>
</tbody>
</table>

To make up a complete selector switch with one or two switching elements with 5/32" instant connections, use this mounting block and select the operating heads and bodies in this Section.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB4BZ009</td>
<td>Metal Mounting Ring</td>
</tr>
<tr>
<td>ZB5AZ009</td>
<td>Plastic Mounting Ring</td>
</tr>
</tbody>
</table>

**Note:** To release push button from mounting ring, pull lever on top of mounting ring up and remove push button operator. To assemble push button operator to mounting ring, align arrows and snap into place.

### BOLD ITEMS ARE MOST POPULAR.
**Functionality Explanation**

<table>
<thead>
<tr>
<th>Fluid Power</th>
<th>Universal Description</th>
<th>Electrical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>Symbol</td>
<td>Function</td>
</tr>
<tr>
<td>Normally Closed (N.C.)</td>
<td><img src="image" alt="2-Way" /></td>
<td>2-Way Normally Non-Passing (NNP)</td>
</tr>
<tr>
<td>Normally Open (N.O.)</td>
<td><img src="image" alt="2-Way" /></td>
<td>3-Way Normally Passing (NP)</td>
</tr>
</tbody>
</table>

### Type of Switching
Universal 3-Way: Valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

- **NP**: Normally Non-Passing.
- **NNP**: Normally Non-Passing.
- **NP + NNP**: Double Switch Body, Both Normally Non-Passing.
- **NNP + NP**: Normally Non passing and Normally-Passing.
- **NP + NP**: Both Normally Passing.

### Combination of Output Devices on a Single Mounting Block
Up to 3 output devices (valves or electrical contacts) can be mounted side by side on 1 mounting block.

**Note**: The central position can only be activated by push button heads.

- Side by Side Combination
- Combination by Mounting Valves On the Back of the Electrical Contact

---

**Assembling Output Devices and Heads on ZB5 Series Mounting Block**

**Replacement Old Style Mounting**
With 5/32" Instant Connections

22mm Visual Indicators

Specifications

Air Quality –
Standard Shop Air, Lubricated or Dry, 40µm Filtration

Materials –
Body .................................................................Polyamide
Operating Head .................................Zinc Alloy & Plastic

Number of Operations with Dry Air at 90 PSI (6 bar) and
68°F (20°C) - Frequency 1 Hz ..............1 million Operations
Mushroom Head .................................300,000 Operations

Operating Positions ..........................All Positions

Operating Pressure ..............15 to 115 PSIG (1 to 8 bar)

Ports –
Standard: 5/32" Instant for Semi- Rigid Nylon or
Polyurethane Tube
10-32 UNF Available.

Temperature –
Operating ..........................32°F to 122°F (0°C to + 50°C)
Storage ..................-22°F to 140°F (-30°C to +60°C)

Part Numbers

Visual Indicators, 22mm (7/8")

22mm Visual Indicators

Notes:
• The Pneumatic Indicators are black in one position and colored in the other. The colored position corresponds either to the presence of a pressure (“ON” Indicator) or the absence of pressure (“OFF” Indicator).
• For Legend Plates, see page F9.

Dimensions

PXVF1••

<table>
<thead>
<tr>
<th>Black Plastic Bezel</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number “ON” Indicator</td>
<td>Part Number “OFF” Indicator</td>
</tr>
<tr>
<td>PXVF131</td>
<td>PXVF1213</td>
</tr>
<tr>
<td>PXVF141</td>
<td>PXVF1214</td>
</tr>
<tr>
<td>PXVF151</td>
<td>PXVF1215</td>
</tr>
<tr>
<td>PXVF161</td>
<td>PXVF1216</td>
</tr>
<tr>
<td>PXVF111</td>
<td>PXVF1211</td>
</tr>
</tbody>
</table>

Minimum distance between centers

PXVF131
Pre-Assembled Two-Hand Control Enclosure

Features

• The pre-assembled two-hand control enclosure occupies both hands of an operator by requiring nearly simultaneous operation of two pushbuttons
• Poppet – snap-acting (no spools)
• Same air as in cylinders – Filtration: 40 micron
• No lubrication required

General Characteristics

Operating Pressure ...................... 40 to 120 PSI (3 to 8 bar)
Permissible Fluids –
  Air or neutral gas 40 micron filtration, lubricated or dry
Flow at 90 PSI (6 bar) ..................... 7 SCFM (200 l/mm ANR)
Operating Temperature ........... -5°F to 140°F (-15°C to 60°C)
  Below 40°F (5°C), an air dryer is required
Storage Temperature .................. -40°F to 160°F (-40°C to 70°C)
Number of operations with dry air at 90 PSI (6 bar), 68°F (20°C), frequency 1 Hz .............. 1 Million Operations

Vibration resistance –
  Conforms to section 19-2 of bureau Véritas regulations.... (November 1987)

Materials –
  Body ...................................................... Glass Filled Nylon
  Operating Head .............................. Zinc Alloy and Plastic

Connections: ........................................... 5/32” instant

Operation

• Output “S” will appear only if “A” and “B” are simultaneously operated (within .5 seconds or less of each other).

  If the operator actuates only one pushbutton, either “A” or “B”, or if both “A” and “B” are actuated but at an interval greater than .5 seconds, output “S” will not appear.

  Output “S” is regenerated by supply “P”. Output “S” will therefore disappear if supply “P” is cut off.

  Output “S” will disappear if either “A” or “B” is released.

  If output “S” disappears for any reason, “A” and “B” must be nearly simultaneously actuated to again provide output “S”.

  Since output “S” is regenerated it appears sharply, at full force (snap-acting), and is quickly exhausted upon deactivation. In addition the module is not affected by the length or diameter of tubing used for output “S”.

Part Number | Connections
--- | ---
PXPC111 | 5/32” Instant

WARNING

These devices should NOT be used in any application involving rotary clutch presses. Two hand control modules do not of themselves insure the safety of any machine. Users and original equipment manufacturers are responsible for making sure that installations meet all relevant safety regulations.

Dimensions

Inches (mm)

![Dimensions Diagram]
Control Module & Repair Parts

Two-Hand Control Module

![PXPA11](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXPA11</td>
<td>5/32&quot; Instant</td>
</tr>
</tbody>
</table>

Dimensions

![PXPA11](image)

Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40μm Filtration
Flow at 90 PSI (6 bar) in SCFM (l/min ANR) .................. 7 (200)

Materials –
Body ............................................................................ Polyamide
Operating Head ..................................................... Zinc Alloy & Plastic
Nominal Bore Ø in Inches (mm) .......... 7/64" (2.5)
Number of Operations with Dry Air at 90 PSI (6 bar) and
68°F (20°C) - Frequency 1 Hz ................. 1 million Operations
Operating Positions .......................................................... All Positions
Operating Pressure ......................... 40 to 115 PSIG (3 to 8 bar)
Ports –
5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
Temperature –
Operating ..............................................32°F to 122°F (0°C to + 50°C)
Storage ............................................. -22°F to 140°F (-30°C to + 60°C)
Vibration resistance:
Conforms to section 19-2 of bureau Véritas regulations
(November 1987)

![WARNING](image)

These devices should NOT be used in any application involving
toary clutch presses. Two hand control modules do not of
themselves insure the safety of any machine. Users and original
equipment manufacturers are responsible for making sure that
installations meet all relevant safety regulations.

Notes: These two-hand control modules provide an output signal
upon nearly concurrent operation of two pushbuttons.

Two-Hand Control Module Guard

![PPRL15](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Base Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRL15</td>
<td>PXPC111</td>
</tr>
</tbody>
</table>

Two Hand Repair Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXPA11</td>
<td>1</td>
<td>Control Module</td>
</tr>
<tr>
<td>PXBB3111B</td>
<td>2</td>
<td>Valve Body &amp; Mounting Ring</td>
</tr>
<tr>
<td>ZB4BR*</td>
<td>2</td>
<td>Push Button</td>
</tr>
<tr>
<td>PPRL15</td>
<td>2</td>
<td>Control Module Guard</td>
</tr>
</tbody>
</table>

* 2 = Black, 3 = Green, 4 = Red
Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

⚠️ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS ("PRODUCTS") CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.


1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Parker and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user’s performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.
2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
   • Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
   • Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
   • Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.9.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.com.


4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
   • Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
   • Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
   • Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
   • Any observed improper system or component function: Immediately shut down the system and correct malfunction.
   • Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
   • Remove excessive dirt, grime and clutter from work areas.
   • Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user’s responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
   • Previous performance experiences.
   • Government and / or industrial standards.
   • When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
   • Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – Lockout / Tagout).
   • Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
   • Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
   • Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
   • After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
   • Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.
Pneumatic Products Offer of Sale

The goods, services or work (referred to as the “Products”) offered by Parker-Hannifin Corporation, its subsidiaries, groups, divisions, and authorized distributors (“Seller”) are offered subject to the terms and conditions set forth below. Acceptance of Seller’s offer by Buyer (together referred to in this agreement as the “Offer of Sale” and Buyer as the “Buyer”) is contingent upon, and will be governed by all of the terms and conditions contained in this Offer of Sale. Buyer’s order for any Products specified in Buyer’s purchase document or Seller’s offer, proposal or quote (“Quote”) attached to the purchase order, when communicated to Seller verbally, or in writing, shall constitute acceptance of this offer.

1. Terms and Conditions. Seller’s willingness to offer Products for sale or accept an order for Products is subject to the terms and conditions contained in this Offer of Sale or any newer version of the same, published by Seller electronically at www.parker.com/sales赦/or otherwise at any contrary or additional terms or conditions of Buyer’s order or any other document or other communication issued by Buyer.

2. Price; Payment. Prices stated on Seller’s Quote are valid for thirty (30) days, except as expressly otherwise stated therein, and do not include any sales, use, or other taxes or duties required by law. Seller reserves the right to modify prices to account for any raw material price fluctuations. Unless otherwise specified by Seller, all prices are F.C.A., Seller’s facility (INCOTERMS 2010). Payment is subject to credit approval and payment for all amounts due within thirty (30) days from the date of invoice. Extra (as defined by Seller) for such order may increase prices specified by Seller (or alter) to the extent permitted by Buyer’s Credit Department). Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law.

3. Shipment; Delivery; Title and Risk of Loss. All delivery dates are approximate. Seller is not responsible for damages resulting from any delay. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placing the shipment on Buyer’s carrier at Seller’s facility. Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyer’s request during the delivery periods indicated will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and expense reasonably incurred by Seller for additional shipping charges incurred by Buyer due to Buyer’s acts or omissions.

4. Warranty. Seller warrants that the Products sold hereunder shall be free from defects in material or workmanship for a period of twelve (12) months from the date of invoice or thirty (30) days from the time of delivery, whichever occurs earlier. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer: DISCLAIMER OF WARRANTY: THIS WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY MADE BY SELLER TO PRODUCTS PURCHASED FROM SELLER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

5. Cancellation and Commencement of Actions. Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to the Seller within ten (10) days of delivery. No claims against Seller shall be allowed unless asserted in writing within thirty (30) days after delivery. Buyer shall notify Seller of any alleged breach of contract within ten (10) days or after the date the defect is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

6. LIMITATION OF LIABILITY. IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT IS SELLER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS A RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCT OR THEREOF, OR FOR ANY INJURY, LOSS OR DAMAGE OF ANY NATURE INCURRED WITHOUT SELLER’S WRITTEN CONSENT, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER BE LIABLE UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.

7. User Responsibility. The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product and assuring that all application, maintenance, service and safety and warning requirements of the application are met. The user must analyze all aspects of the application and follow applicable industry standards and Product information. If Seller provides Product or system options based on data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.

8. Loss to Buyer’s Property. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer’s property, will be considered obsolete and may be destroyed by Seller after two (2) consecutive years has elapsed without Buyer ordering the items manufactured using such property. Buyer shall not be responsible for any loss or damage to such property while in Seller’s possession or control.

9. Special Tooling. A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller’s property notwithstanding payment of any consideration by Buyer. A special tooling event will Buyer agree under the Uniform Commercial Code to which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any change in the legal or equitable ownership of such apparatus, Buyer agrees that he has the right to alter, modify, or otherwise dispose of any special tooling or other property in its sole discretion at any time.

10. Buyer’s Obligation; Rights of Seller. To secure payment of all sums due or otherwise, Seller retains a security interest in all Products delivered to Buyer and this agreement is subject to a Security Agreement under the Uniform Commercial Code for Buyer, Buyer authorizes Seller as its attorney to execute and file on Buyer’s behalf all documents Seller deems necessary to perfect its security interest.

11. Improper Use and Indemnity. Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer’s employees, or any other person, arising out of: (a) improper selection, application or misuse of terms or conditions of Buyer’s order or any other document or other communication issued by Buyer; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller’s use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Products; or (d) Buyer’s failure to comply with these terms, conditions or the agreement. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.

12. Cancellations and Changes. Buyer may not cancel or modify or cancel any order for any reason, except with Seller’s written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller may change Product features, specifications, designs and availability.

13. Limitation on Assignment. Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller.

14. Force Majeure. Seller does not assume the risk and is not liable for delay or failure to perform any of Seller’s obligations by reason of events or circumstances beyond its reasonable control (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery, war or armed conflict, shortages of materials, or any other cause beyond Seller’s reasonable control.

15. Waiver and Severability. Failure to enforce any provision of this agreement will not invalidate that provision; nor will any such failure prejudice Seller’s right to enforce that provision at any future. Invaldation of any provision of this agreement or any rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.

16. Termination. Seller may terminate this agreement for any reason at any time or after thirty (30) days prior to delivery by written notice or request to Seller. Seller’s rights under this agreement, in writing, if Buyer: (a) breaches any provision of this agreement (b) appoints a trustee, receiver or custodian for all or any part of Buyer’s property (c) files a petition for voluntary or involuntary bankruptcy on its own behalf, or on behalf of a subsidiary party (d) files an assignment for an assignment for the benefit of creditors; or (e) dissolves its business or liquidates all or a majority of its assets.

17. Governing Law. This agreement and the sale and delivery of all Products are to be governed and interpreted in accordance with the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to this agreement.

18. Indemnity for Infringement of Intellectual Property Rights. Seller is not liable for any infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against all infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that a Product sold pursuant to this agreement infringes the Intellectual Property Rights of a third party, Seller’s obligation to defend and indemnify Buyer is conditioned on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller will, at Buyer’s sole expense and option, make such changes, modifications or additions to the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and refund the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller is not liable for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringement resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section constitute Seller’s sole and exclusive liability and Buyer’s sole and exclusive remedy for infringement of Intellectual Property Rights.

19. Entire Agreement. This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are hereby merged. The terms contained herein may not be modified unless in writing and signed by an authorized representative of Seller.

20. Compliance with Laws. Buyer agrees to comply with all applicable laws, regulations, policies and procedures, including, but not limited to: trade laws of the United States in America, and the country or countries in which Buyer may operate, including without limitation the U. K. Bribery Act, the U.S. Foreign Corrupt Practices Act (FCPA), the U.S. Anti-Kickback Act ("Anti-Kickback Act") and the U.S. Food Drug and Cosmetic Act ("FDCA") each as currently amended, the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), and agrees to indemnify and hold Seller harmless from the consequences of any violation of such statutes by the Buyer or any of its employees or agents. Buyer agrees to comply with the provisions of the U. K. Bribery Act, the FCPA, the FDA, and the Anti-Kickback Act, and certifies that Buyer will adhere to the requirements thereof. In particular, Buyer represents and agrees to comply with all applicable laws, rules or regulations of direct or indirect to any governmental official, any foreign political party or official thereof, any candidate for foreign political office, or any commercial entity or person, for the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller.

Pneumatic Products Airline Accessories

Pneumatic Products Airline Accessories

Richland, Michigan

05/14