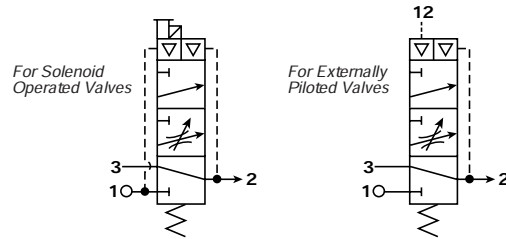


**A**

## O5S Soft Start /Quick Dump Valve

### Features

- Combines Soft Start and Quick Dump Valve in the same body
- Large flow capacities up to 1.6 Cv
- Inline or Modular mounting
- Air Pilot or Solenoid operation
- Soft Start flow easily adjusted



### Operation

When the valve is installed into the pneumatic system and no pilot signal is received in port 12 the air is exhausted through port 3. When a pilot signal is received into port 12 the valve shifts closing the connection between ports 2 and 3. At the same time air flow begins between ports 1 and 2 at a slow rate controlled by the throttling control needle, located on the front of the valve. When the downstream pressure reaches approximately 60PSIG (4 bar) the main valve spool opens allowing full flow through the valve into your system.

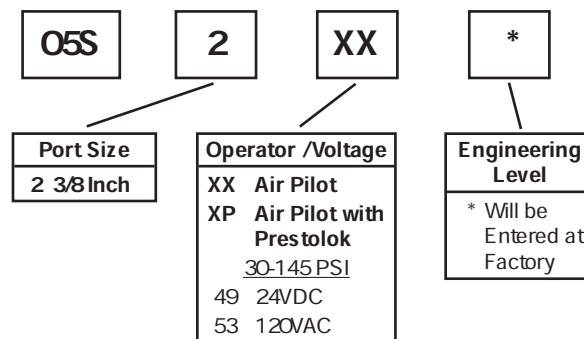
If there is a loss of pilot signal or system pressure at anytime the valve returns to it's initial state venting the down stream pressure through port 3.

The valves pilot signal can either be supplied as a pneumatic pilot directly piped into port 12, on the top of the valve, or through a solenoid pilot mounted on the head. The valve should be mounted downstream of the FRL and with the soft start adjustment needle easily accessible.

**CAUTION:** Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.

**CAUTION:** Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high fbw conditions.

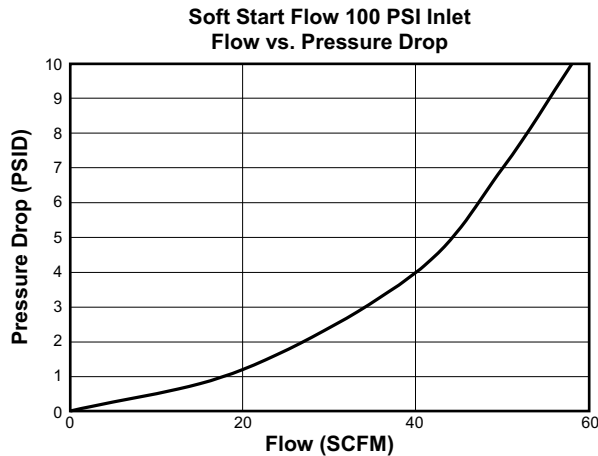
### Ordering Information



**Note:**  
 BSPP Available with Port Blocks Only,  
 Meets ISO 1179-1 Standard.

**Soft Start / Quick Dump Valve**

**Performance Characteristics**



**Table 1:** Shows the relationship between the inlet pressure and downstream pressure at which the main valve opens.

| Inlet Pressure PSIG | Downstream Pressure PSIG |
|---------------------|--------------------------|
| 75                  | 50                       |
| 100                 | 55                       |
| 125                 | 60                       |
| 150                 | 65                       |

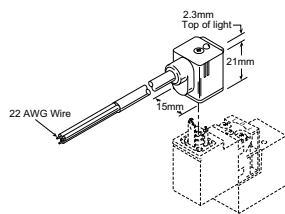
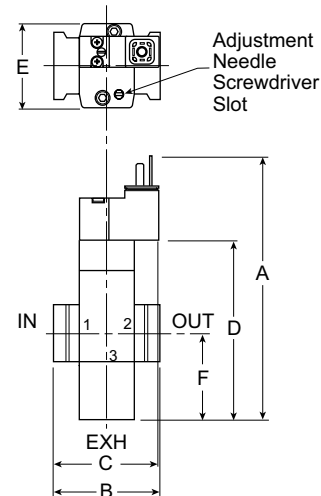
**Table 2:** Product forward Flow Cv and Exhaust Flow Cv.

| Series | Flow Cv | Exhaust Flow Cv |
|--------|---------|-----------------|
| 05S    | 1.3     | 1.6             |

**Dimensions**

| Model | Port Size | A            | B            | C            | D            | E            |
|-------|-----------|--------------|--------------|--------------|--------------|--------------|
| 05S   | 3/8"      | 2.00<br>(51) | 3.53<br>(90) | 1.42<br>(36) | 1.65<br>(42) | 2.03<br>(52) |

Inches (mm)



PS2946J79P

**Kits & Accessories**

- 3-Pin Female Connector Kit\*† ..... PS2932P
- 24VAC Lighted 3-Pin Connector Kit\*† ..... PS294679P
- 120/110VAC Lighted 3-Pin Connector Kit\*† ..... PS294683P
- 3-Pin Connector Kit, 24VAC or 24VDC w/6 Foot Cord\* ..... PS2946J79P
- 3-Pin Connector Kit, 120/110VAC w/6 Foot Cord\* ..... PS2946J83P
- 3/8" Exhaust Silencer (05S) ..... ES37MB

\* Conductors: 2 Poles Plus Ground  
Contact Spacing: 8mm

† Cable Range: 6 to 8mm (0.24 to 0.31 Inch)

**Specifications**

- Exhaust Port ..... 3/8 Inch
- Port Threads – Inlet and Outlet Ports – ..... 3/8 inch  
BSP and BSPT port threads are available through the use of modular port block kits
- Pressure & Temperature Ratings –  
Solenoid – 30 to 145 PSIG (2.1 to 10 bar)  
32°F to 140°F (0°C to 60°C)  
Air Pilot – 30 to 145 PSIG (2.1 to 10 bar)  
32°F to 160°F (0°C to 70°C)  
Air Pilot with Prestolok Adaptor – 30 to 145 PSIG (2.1 to 10 bar)  
32°F to 150°F (0°C to 65°C)

**CAUTION:** The actual maximum pressure and temperature ratings noted above for valves with Prestolok fittings, are dependent upon the type of tubing that is used.

Weight ..... 12.7 oz. (0.36 kg)

**Materials of Construction**

- Body ..... Aluminum
- Seals ..... Nitrile
- Slide Rings ..... Lubricant Filled Thermoplastic
- Springs ..... Stainless Steel



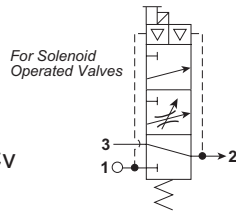
**Soft Start / Quick Dump Valve**



**06S & 07S Soft Start / Quick Dump Valve**

**Features**

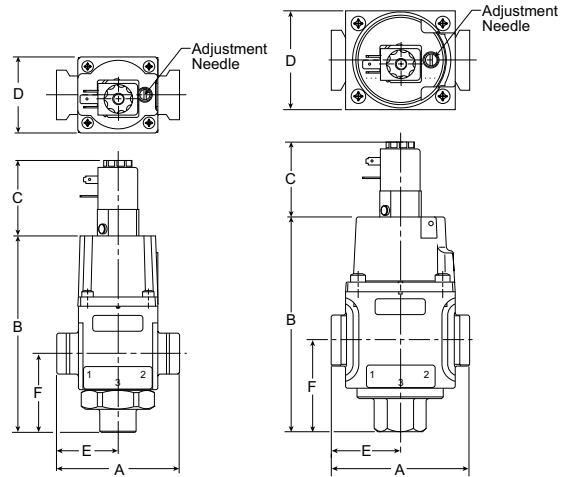
- Combines Soft Start and Quick Dump Valve in the same body
- Large flow capacities up to 5.7 Cv
- Inline or Modular mounting
- Soft Start flow easily adjusted



**06S**



**07S**



**06S**

**07S**

**Dimensions:**

| Model | Port Size | A            | B             | C            | D            | E            | F            |
|-------|-----------|--------------|---------------|--------------|--------------|--------------|--------------|
| 06S   | 3/8"      | 3.36<br>(85) | 5.40<br>(137) | 2.07<br>(53) | 2.08<br>(53) | 1.68<br>(43) | 2.17<br>(55) |
| 07S   | 1/2"      | 3.81<br>(96) | 5.96<br>(151) | 2.07<br>(53) | 2.74<br>(70) | 1.91<br>(48) | 2.54<br>(65) |

Inches (mm)

**Operation**

When the valve is installed into the pneumatic system and pilot operator receives no signal, the air is blocked at Port 1. When a pilot signal is received at pilot operator, the valve shifts closing the connection between Ports 2 and 3. At the same time air flow begins between Ports 1 and 2 at a slow rate controlled by the needle valve located on the top of the valve. When the down stream pressure reaches approximately 60% of the supply pressure, the main valve spool opens allowing full flow through the valve into the system. If pilot signal or system pressure is lost, the valve returns to it's initial state venting the down stream pressure through Port 3.

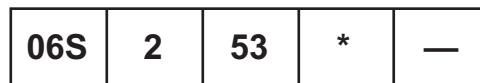
Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.

The valves pilot signal is through a solenoid pilot mounted on the head. The valve should be mounted downstream of the FRL and with the soft start adjustment needle easily accessible.

**CAUTION:** Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.

**CAUTION:** Do not restrict the inlet of valves.

**Ordering Information**



| Series     |                               |
|------------|-------------------------------|
| <b>06S</b> | Soft Start / Quick Dump Valve |
| <b>07S</b> | Soft Start / Quick Dump Valve |

| Port Size               |
|-------------------------|
| <b>2</b> 3/8 Inch (06S) |
| <b>3</b> 1/2 Inch (07S) |

| Operator / Voltage                     |
|--|
| 30-145 PSI                             |
| <b>49</b> 24VDC*                       |
| <b>53</b> 120/60 Hz*                   |
| 145-200 PSI                            |
| <b>69</b> 24VDC**                      |
| <b>73</b> 120/60 Hz**                  |
| <b>MDB1</b> M12 Male Connector, 4 Pole |

| Engineering Level            |
|------------------------------|
| * Will be Entered at Factory |

| Thread Type / Label |
|---------------------|
| <b>Blank</b> NPT    |
| <b>1*</b> BSPP (G)  |

\* 3/8 & 1/2 inch meet ISO 1179-1 Standard.

**BOLD ITEMS ARE MOST POPULAR.**

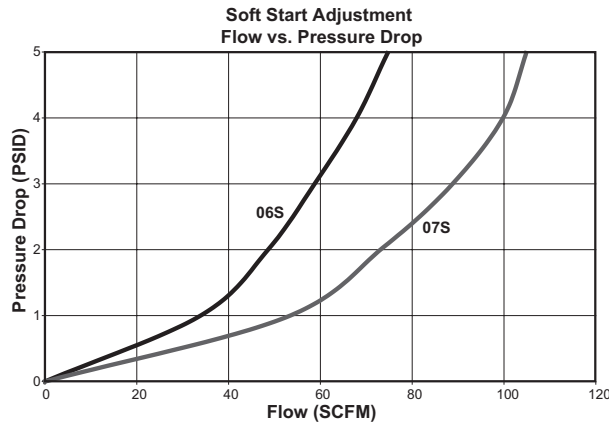
\* For Voltage Options 49 and 53, use 22mm connectors

\*\* For Voltage Options 69 and 73, use 30mm connectors



**Soft Start / Quick Dump Valve**

**Performance Characteristics**



**Table 1:** Shows the relationship between the inlet pressure and downstream pressure at which the main valve opens.

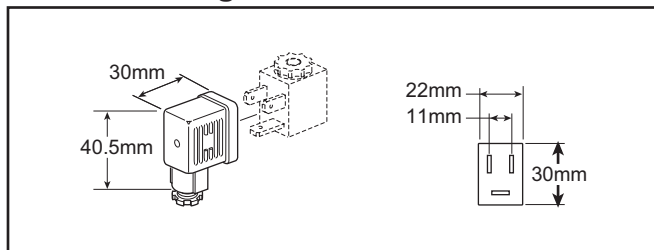
| Inlet Pressure PSIG | Downstream Pressure PSIG |     |
|---------------------|--------------------------|-----|
|                     | 06S                      | 07S |
| 75                  | 55                       | 52  |
| 100                 | 67                       | 68  |
| 125                 | 80                       | 82  |

**Table 2:** Product forward Flow Cv and Exhaust Flow Cv.

| Series | Flow Cv | Exhaust Flow Cv |
|--------|---------|-----------------|
| 06S    | 4.1     | 3.4             |
| 07S    | 5.7     | 4.6             |



**22mm Rectangular 3-Pin**

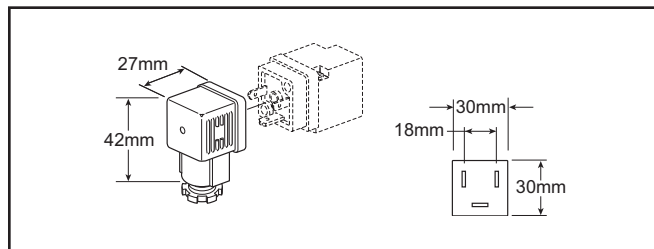


| Connector  | Connector with 6' (2m) Cord | Description       |
|------------|-----------------------------|-------------------|
| PS2429BP   | PS2429JBP                   | Unlighted         |
| PS243079BP | PS2430J79BP*                | Light – 24VDC     |
| PS243083BP | PS2430J83BP*                | Light – 120V/60Hz |

\* LED with surge suppression.  
**Note:** Max  $\phi$ 6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

**Engineering Data:**  
Conductors: 2 Poles Plus Ground; Cable Range (Connector Only): 6 to 8mm (0.24 to 0.31 Inch); Contact Spacing: 11mm

**30mm Square 3-Pin**



| Connector  | Connector with 6' (2m) Cord | Description       |
|------------|-----------------------------|-------------------|
| PS2028BP   | PS2028JBP                   | Unlighted         |
| PS203279BP | PS2032J79BP*                | Light – 24VDC     |
| PS203283BP | PS2032J83BP*                | Light – 120V/60Hz |

\* LED with surge suppression.  
**Note:** Max  $\phi$ 6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

**Engineering Data:**  
Conductors: 2 Poles Plus Ground; Cable Range (Connector Only): 8 to 10mm (0.31 to 0.39 Inch); Contact Spacing: 18mm

**Kits & Accessories**

- 06 Modular Body Connectors ..... PS754P
- 07 Modular Body Connectors ..... PS854P
- 1/2" Exhaust Silencer ..... ES50MB
- 3/4" Exhaust Silencer ..... ES75MB

**Specifications**

- Exhaust Ports**
  - 06S ..... 1/2 Inch
  - 07S ..... 3/4 Inch
- Inlet and Outlet Ports**
  - 06S ..... 3/8 Inch
  - 07S ..... 1/2 Inch
- Maximum Pressure –**
  - Standard Coil ..... 145 PSIG (10.0 bar)
  - High Pressure Coil ..... 200 PSIG (13.8 bar)
- Minimum Operating Pressure** ..... 30 PSIG (2.1 bar)
- Temperature Ratings** ..... 40°F to 120°F (4°C to 49°C)
- Weight**
  - 06S ..... 2.25 lbs. (1.02 kg)
  - 07S ..... 3.75 lbs. (1.70 kg)

**Materials of Construction**

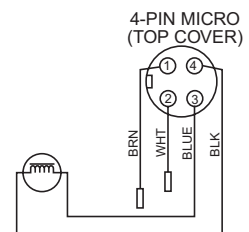
- Body ..... Aluminum
- Bottom Plug ..... Brass

**Connections**

Central M12 Male Connector, 4 Pole

ISO 20401

| Pin Number | Function   | Color |
|------------|--|-------|
| 1          | 24V Supply   | Brown |
| 2          | 0 to 10V or 4 to 20mA Control Signal<br>Ri = 100k $\Omega$ | White |
| 3          | 0V (GND) Supply  | Blue  |
| 4          | 24V Alarm Output Signal                                    | Black |



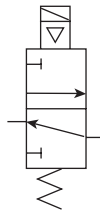
**Solenoid Quick Dump Valve**

**A**

**06T & 07T Solenoid Quick Dump Valve**

**Features**

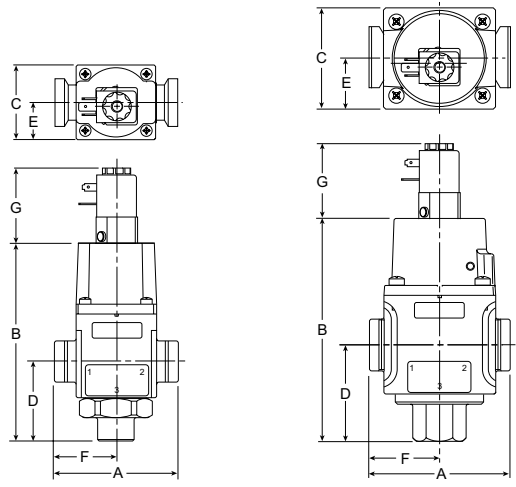
- Shuts off incoming pressure while rapidly exhausting downstream pressure
- Large exhaust flow capacities up to 5.0 Cv
- Solenoid operation
- Non-locking manual override
- Inline or Modular Mounting



06T



07T



06T

07T

**Dimensions:**

| Model | Port Size | A            | B             | C            | D            | E            | F            | G            | H            |
|-------|-----------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 06T   | 3/8"      | 3.36<br>(85) | 5.40<br>(137) | 2.08<br>(53) | 2.17<br>(26) | 1.04<br>(43) | 1.68<br>(43) | 2.07<br>(53) | 1.90<br>(48) |
| 07T   | 1/2"      | 3.81<br>(96) | 5.96<br>(151) | 2.74<br>(70) | 2.55<br>(65) | 1.37<br>(35) | 1.91<br>(48) | 2.07<br>(53) | 1.90<br>(48) |

Inches (mm)

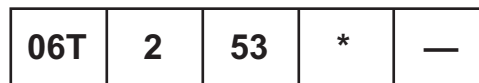
**Operation**

The solenoid quick dump valves are high flow, normally closed, 3-Port, 2-Position directional control valves. Upon energizing the solenoid, inlet air is applied to the top of the piston. The piston pushes against the spring and opens the main valve providing full flow air to the downstream. When the solenoid is de-energized, the main valve closes allowing downstream air to exhaust rapidly through the bottom plug. The bottom plug is tapped so that exhaust may be piped away or fitted with a muffler.

**CAUTION:** Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.

**CAUTION:** Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.

**Ordering Information**



| Series |                           |
|--------|---------------------------|
| 06T    | Solenoid Quick Dump Valve |
| 07T    | Solenoid Quick Dump Valve |

| Port Size        |
|------------------|
| 2 3/8 Inch (06T) |
| 3 1/2 Inch (07T) |

| Operator / Voltage                     |
|--|
| 30-145 PSI                             |
| 49 24VDC*                              |
| 53 120/60 Hz*                          |
| 145-200 PSI                            |
| 69 24VDC**                             |
| 73 120/60 Hz**                         |
| <b>MDB1 M12 Male Connector, 4 Pole</b> |

| Engineering Level            |
|------------------------------|
| * Will be Entered at Factory |

| Thread Type / Label |
|---------------------|
| <b>Blank NPT</b>    |
| 1* BSPP (G)         |

\* 3/8 & 1/2 inch meet ISO 1179-1 Standard.

**BOLD ITEMS ARE MOST POPULAR.**

\* For Voltage Options 49 and 53, use 22mm connectors

\*\* For Voltage Options 69 and 73, use 30mm connectors



**Solenoid Quick Dump Valve**

**Performance Characteristics**

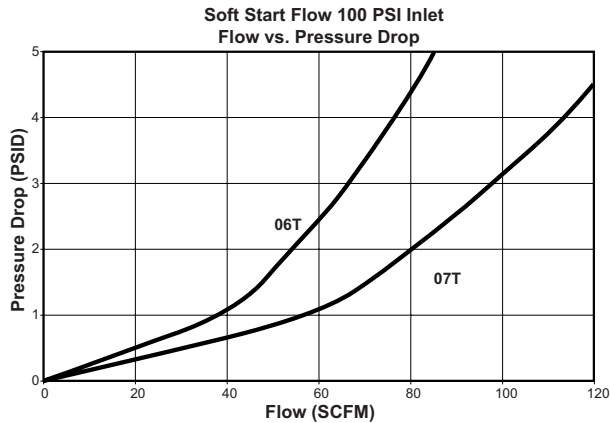
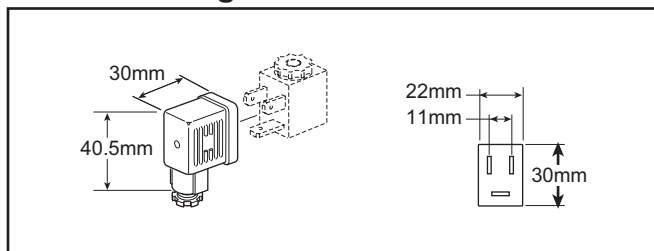


Table 2: Product forward Flow Cv (1 to 2).

| Series | Flow Cv | Exhaust Flow Cv |
|--------|---------|-----------------|
| 06T    | 3.7     | 4.1             |
| 07T    | 5.5     | 5.0             |



**22mm Rectangular 3-Pin**



| Connector  | Connector with 6' (2m) Cord | Description       |
|------------|-----------------------------|-------------------|
| PS2429BP   | PS2429JBP                   | Unlighted         |
| PS243079BP | PS2430J79BP*                | Light – 24VDC     |
| PS243083BP | PS2430J83BP*                | Light – 120V/60Hz |

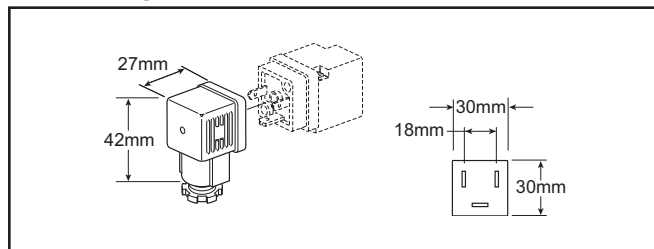
\* LED with surge suppression.

**Note:** Max ø6.5mm cable size required for connector w/o 6' (2m) cord.  
IP65 rated when properly installed.

**Engineering Data:**

Conductors: 2 Poles Plus Ground; Cable Range (Connector Only):  
6 to 8mm (0.24 to 0.31 Inch); Contact Spacing: 11mm

**30mm Square 3-Pin**



| Connector  | Connector with 6' (2m) Cord | Description       |
|------------|-----------------------------|-------------------|
| PS2028BP   | PS2028JBP                   | Unlighted         |
| PS203279BP | PS2032J79BP*                | Light – 6-24VDC   |
| PS203283BP | PS2032J83BP*                | Light – 120V/60Hz |

\* LED with surge suppression.

**Note:** Max ø6.5mm cable size required for connector w/o 6' (2m) cord.  
IP65 rated when properly installed.

**Engineering Data:**

Conductors: 2 Poles Plus Ground; Cable Range (Connector Only):  
8 to 10mm (0.31 to 0.39 Inch); Contact Spacing: 18mm

**Kits & Accessories**

- 06T Repair Kit ..... PHRKS75
- 07T Repair Kit ..... PHRKS105
- 06 Modular Body Connectors ..... PS754P
- 07 Modular Body Connectors ..... PS854P
- 1/2" Exhaust Silencer ..... ES50MB
- 3/4" Exhaust Silencer ..... ES75MB

**Specifications**

- Exhaust Ports**
  - 06T ..... 1/2 Inch
  - 07T ..... 3/4 Inch
- Inlet and Outlet Ports**
  - 06T ..... 3/8 Inch
  - 07T ..... 1/2 Inch
- Maximum Pressure –**
  - Standard Coil ..... 145 PSIG (10.0 bar)
  - High Pressure Coil ..... 200 PSIG (13.8 bar)
- Minimum Operating Pressure** ..... 30 PSIG (2.1 bar)
- Temperature Ratings** ..... 40°F to 120°F (4°C to 49°C)
- Weight**
  - 06T ..... 2.25 lbs. (1.02 kg)
  - 07T ..... 3.75 lbs. (1.70 kg)

**Materials of Construction**

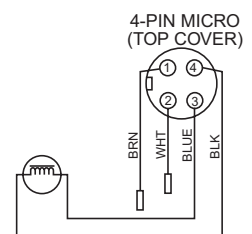
- Body ..... Aluminum
- Bottom Plug ..... Brass

**Connections**

Central M12 Male Connector, 4 Pole

ISO 20401

| Pin Number | Function  | Color |
|------------|---|-------|
| 1          | 24V Supply  | Brown |
| 2          | 0 to 10V or 4 to 20mA Control Signal<br>Ri = 100k Ω | White |
| 3          | 0V (GND) Supply                                     | Blue  |
| 4          | 24V Alarm Output Signal                             | Black |

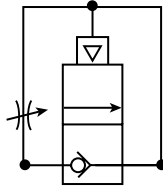


**A**

**06P & 07P Auto Pilot Soft Start Valve**

**Features**

- Smooth start-up of pneumatic system
- Air pilot operation
- Large flow capacities up to 5.5 Cv
- Inline or Modular Mounting



**06P**



**07P**

**Operation**

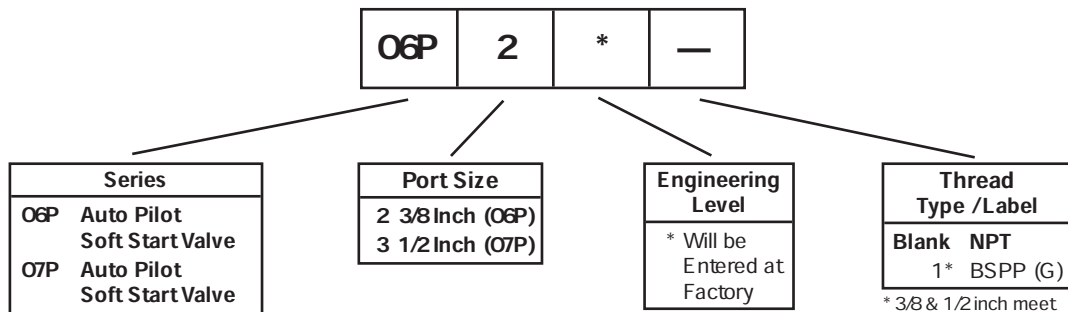
When pressure is supplied to the inlet port, gradual filling of the downstream system occurs through the adjustable needle valve. The piston opens the main valve when the downstream side of the valve reaches approximately 60% of the supply pressure. The ramp up time to reach the switch over pressure is adjustable via the needle valve in the cover.

The Auto pilot soft start valve is not intended to be used as a shut off valve and should always be placed after a shut off valve.

**CAUTION:** Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.

**CAUTION:** Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high fbw conditions.

**Ordering Information**

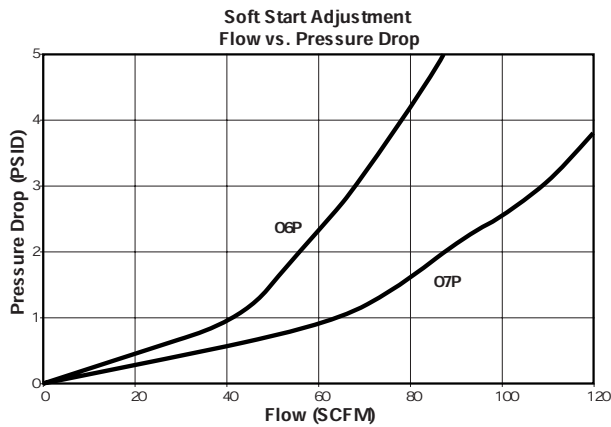


\* 3/8 & 1/2 inch meet ISO 1179-1 Standard.

**BOLD ITEMS ARE MOST POPULAR.**



**Performance Characteristics**



**Table 1:** Shows the relationship between the inlet pressure and downstream pressure at which the main valve opens.

| Inlet Pressure PSIG | Downstream Pressure PSIG |     |
|---------------------|--------------------------|-----|
|                     | 06P                      | 07P |
| 75                  | 45                       | 25  |
| 100                 | 60                       | 33  |
| 125                 | 75                       | 38  |
| 150                 | 85                       | 45  |

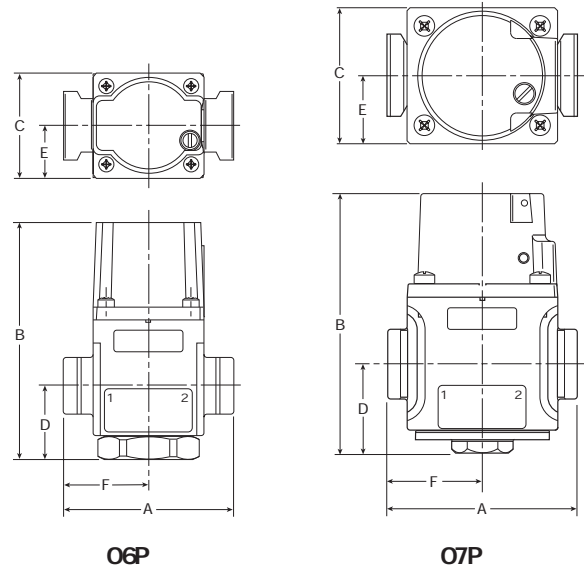
**Table 2:** Product forward Flow Cv (1 to 2).

| Series | Flow Cv |
|--------|---------|
| 06P    | 3.8     |
| 07P    | 5.5     |

**Dimensions:**

| Model | Port Size | A            | B             | C            | D            | E            | F            |
|-------|-----------|--------------|---------------|--------------|--------------|--------------|--------------|
| 06P   | 3/8"      | 3.36<br>(85) | 4.70<br>(119) | 2.08<br>(53) | 1.48<br>(38) | 1.04<br>(26) | 1.68<br>(43) |
| 07P   | 1/2"      | 3.81<br>(96) | 5.21<br>(132) | 2.07<br>(53) | 1.80<br>(46) | 1.37<br>(35) | 1.91<br>(48) |

Inches (mm)



**Repair Kits**

- 06P Repair Kit .....PHRKSS75
- 07P Repair Kit .....PHRKSS105
- 06 Modular Body Connectors ..... PS 754P
- 07 Modular Body Connectors ..... PS 854P

**Materials of Construction**

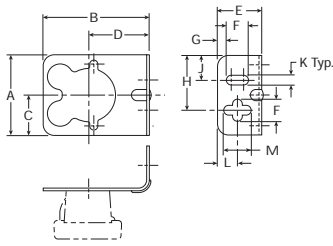
- Body ..... Aluminum
- Bottom Plug –
- 06P ..... Brass
- 07P ..... Zinc

**Specifications**

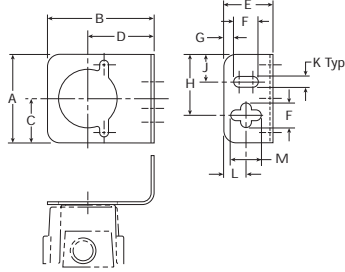
- Maximum Pressure ..... 300PSIG (20.7 bar)
- Minimum Operating Pressure ..... 30PSIG (2.1 bar)
- Temperature Ratings ..... 40°F to 120°F (4°C to 49°C)
- Opens to Full Flow ..... 60% Supply Pressure
- Weight –
- 06P ..... 2.75 lb. (1.25 kg)
- 07P ..... 4.50 lb. (2.04 kg)

**A**

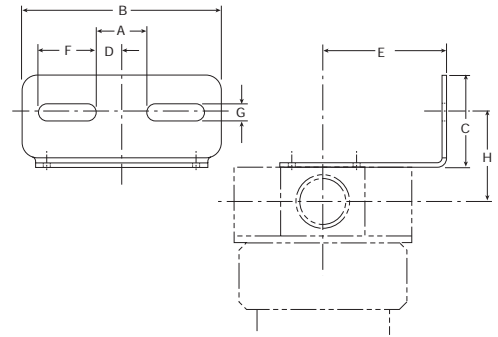
**Mbunting Bracket Kits**



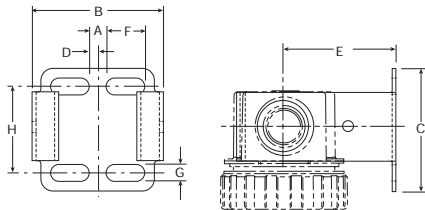
**PS 417BP**  
 (Includes Panel Mbunt Nut)



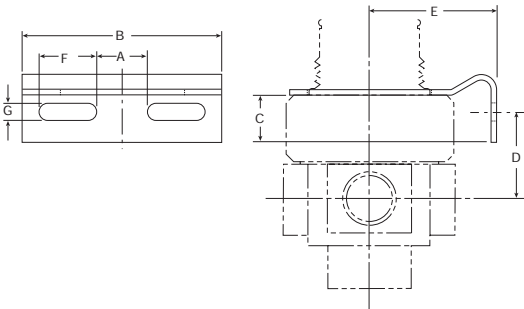
**PS 419**  
 (Includes Panel Mbunt Nut)



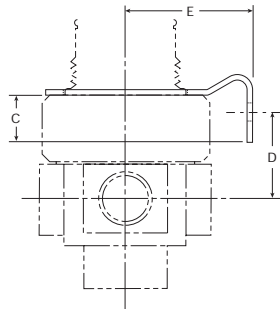
**PS 743P, PS 843P**



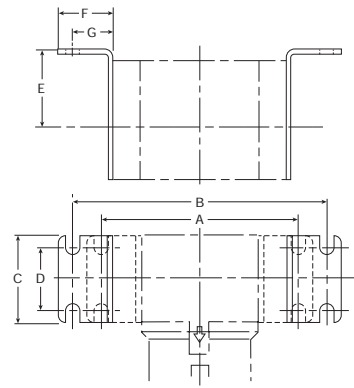
**PS 943P**



**PS 707P & PS 807P**  
 (Includes Panel Mbunt Nut)



**PS 963P**  
 (Includes Aluminum Panel Mbunt Nut)



**P3NKA00MW**

**Dimensions**

| A             | B             | C            | D            | E            | F            | G            | H            | J            | K           | L            | M            | Kit  |
|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--|
| 1.80<br>(46)  | 2.37<br>(60)  | 0.90<br>(23) | 1.35<br>(34) | 1.00<br>(25) | 0.50<br>(13) | 0.20<br>(5)  | 1.24<br>(31) | 0.56<br>(14) | 0.22<br>(6) | 0.45<br>(11) | 0.62<br>(16) | <b>PS 417BP</b><br>(10F, 14F, P3A, 14R, 14E) |
| 1.80<br>(46)  | 2.17<br>(55)  | 0.90<br>(23) | 1.35<br>(34) | 1.00<br>(25) | 0.50<br>(13) | 0.20<br>(5)  | 1.24<br>(31) | 0.56<br>(14) | 0.22<br>(6) | 0.45<br>(11) | 0.62<br>(16) | <b>PS 419</b><br>(04L)                       |
| 0.84<br>(21)  | 3.25<br>(83)  | 1.50<br>(38) | 0.42<br>(11) | 2.00<br>(51) | 0.94<br>(24) | 0.28<br>(7)  | 1.44<br>(37) | —            | —           | —            | —            | <b>PS 743P</b><br>(06F, 11F, 06L, 16L)       |
| 1.00<br>(25)  | 3.94<br>(100) | 1.57<br>(40) | 0.50<br>(13) | 2.19<br>(56) | 1.25<br>(32) | 0.28<br>(7)  | 1.68<br>(43) | —            | —           | —            | —            | <b>PS 843P</b><br>(07F, 12F, 07L, 17L)       |
| 0.28<br>(7)   | 2.12<br>(54)  | 2.00<br>(51) | 0.14<br>(4)  | 1.85<br>(47) | 0.63<br>(16) | 0.28<br>(7)  | 1.41<br>(36) | —            | —           | —            | —            | <b>PS 943P</b><br>(05F, 15F, 15L)            |
| 0.84<br>(21)  | 2.59<br>(66)  | 0.49<br>(12) | 1.02<br>(26) | 1.85<br>(47) | 0.61<br>(15) | 0.28<br>(7)  | —            | —            | —           | —            | —            | <b>PS 963P</b><br>(05R, 10R, 05E, 27E)       |
| 0.84<br>(21)  | 3.26<br>(83)  | 0.77<br>(20) | 1.46<br>(37) | 2.00<br>(51) | 0.94<br>(24) | 0.28<br>(7)  | —            | —            | —           | —            | —            | <b>PS 707P</b><br>(06R, 06E, 11R)            |
| 1.00<br>(25)  | 3.94<br>(100) | 0.65<br>(17) | 1.68<br>(43) | 2.19<br>(56) | 1.25<br>(32) | 0.28<br>(7)  | —            | —            | —           | —            | —            | <b>PS 807P</b><br>(07R, 07E, 12R)            |
| 6.22<br>(158) | 8.19<br>(208) | 2.75<br>(70) | 1.97<br>(50) | 2.36<br>(60) | 1.77<br>(45) | 1.30<br>(33) | —            | —            | —           | —            | —            | <b>P3NKA00MW</b><br>(P3NF, P3NR, P3NE, P3NL) |

inches (mm)

