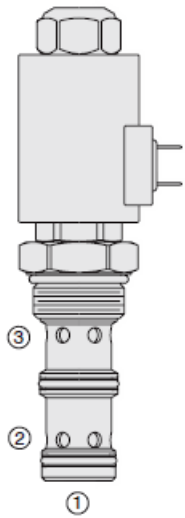


## Overview



### Description

Pv76-30 is a solenoid operated, pressure compensated, spool type, normally closed proportional flow control valve.

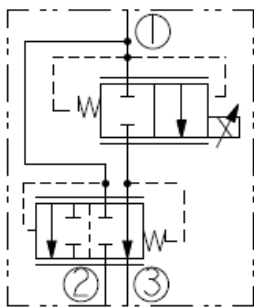
### Operation

The valve CAN be used as priority type flow regulator with pressure compensated regulated and bypass flow. It can also be used as a restrictive type, 2-way, pressure compensated flow regulator when bypass line (port 2) is blocked. The regulated flow is proportional to electric current applied to the solenoid.

### Features

- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Manual Override option.

## Symbol





## Ratings

### Pressure Ratings

|                 |                     |                           |
|-----------------|---------------------|---------------------------|
| Pressure rating | 241 bar (3500 psi)  | - <b>Note:</b> Inlet      |
|                 | 207 bar (3000 psi)  | - <b>Note:</b> Ports 2, 3 |
| Proof pressure  | 345 bar (5000 psi)  |                           |
| Burst pressure  | 896 bar (13000 psi) |                           |

### Flow Ratings

|                          |  |                                |
|--------------------------|--|--------------------------------|
| Flow rating              | <b>!</b> Flow rating for PV76-30A, PV76-30AM, and PV76-30AG<br>85.2 lpm (22.5) - <b>Note:</b> Range A, 2-ported, regulated<br>94.6 lpm (25 gpm) - <b>Note:</b> Range A, 3-ported, regulated<br>121.1 lpm (32 gpm) - <b>Note:</b> Range A, 3-ported, input (bypass open), nominal<br>151.4 lpm (40 gpm) - <b>Note:</b> Range A, 3-ported, input (bypass open), maximum<br>60.6 lpm (16 gpm) - <b>Note:</b> Range B, 2-ported, regulated<br>64.4 lpm (17 gpm) - <b>Note:</b> Range B, 3-ported, regulated<br>83.3 lpm (22 gpm) - <b>Note:</b> Range B, 3-ported, input (bypass open), nominal<br>113.6 lpm (30 gpm) - <b>Note:</b> Range B, 3-ported, input (bypass open), maximum |                                |
| Maximum internal leakage | 0.38 lpm (0.10 gpm)  | - <b>Note:</b> At zero current |

### Temperature Ratings

|                             |                               |  |
|-----------------------------|-------------------------------|--|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | - <b>Note:</b> With buna N seals       |
|                             | -26 to 204 °C (-15 to 400 °F) | - <b>Note:</b> With fluorocarbon seals |
|                             | -54 to 107 °C (-65 to 225 °F) | - <b>Note:</b> With polyurethane seals |
| Storage temperature         | -40 to 70 °C (-40 to 160 °F)  |  |
| Ambient temperature         | -40 to 70 °C (-40 to 160 °F)  |  |

### Other Ratings

|                      |                                 |
|----------------------|---------------------------------|
| Corrosion protection | 960 hr salt spray per ASTM b117 |
|----------------------|---------------------------------|

## Operating Parameters

|                                       |  |
|---------------------------------------|--|
| Fluids                                | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range                 | 7.4 to 420 cSt   |
| Maximum operating contamination level | 18/16/14 per ISO 4406  |

## Properties

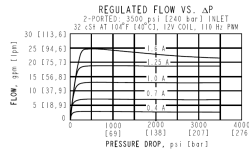
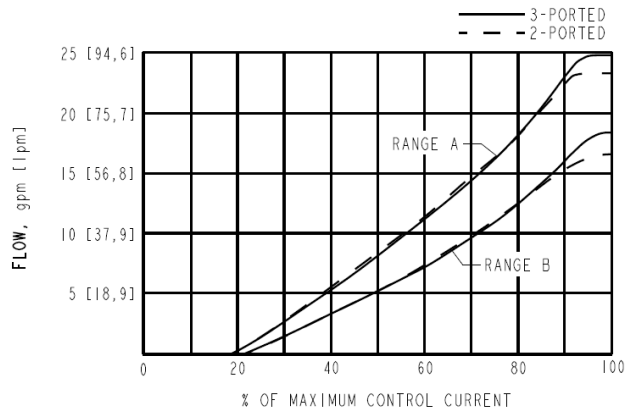
|                              |   |   |
|------------------------------|---|---|
| Unit weight                  | 0.6 kg (1.3 lb)                             | - <b>Note:</b> PV76-30A, PV76-30B                         |
|                              | 0.64 kg (1.4 lb)                            | - <b>Note:</b> PV76-30AM, PV76-30BM                       |
|                              | 0.73 kg (1.6 lb)                            | - <b>Note:</b> PV76-30AG, PV76-30BG                       |
| Internal wetted surface area | 468 cm <sup>2</sup> (72.6 in <sup>2</sup> ) | - <b>Note:</b> PV76-30A, PV76-30B                         |
|                              | 473 cm <sup>2</sup> (73.3 in <sup>2</sup> ) | - <b>Note:</b> PV76-30AM, PV76-30AG, PV76-30BM, PV76-30BG |

## Electrical Parameters

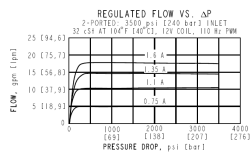
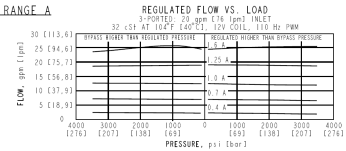
|                         |  |                          |
|-------------------------|--|--------------------------|
| Maximum control current | 1600±100 mA  | - <b>Note:</b> 12 V coil |
|                         | 800±50 mA  | - <b>Note:</b> 24 V coil |
| Threshold current       | <b>!</b> PV76-30A/AM/AG<br>300±100 mA - <b>Note:</b> 12 V coil<br>150±50 mA - <b>Note:</b> 24 V coil |                          |

## Performance

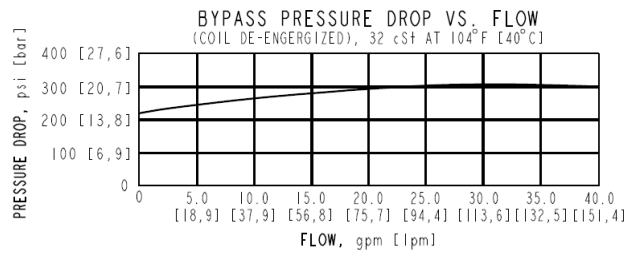
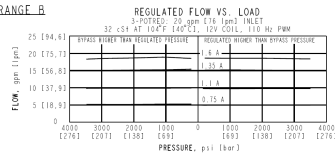
REGULATED FLOW VS. CURRENT  
3000 psi [207 bar] LOAD AT PORT 3  
12V COIL, 110 Hz PWM, 32 cSt AT 104°F [40°C]



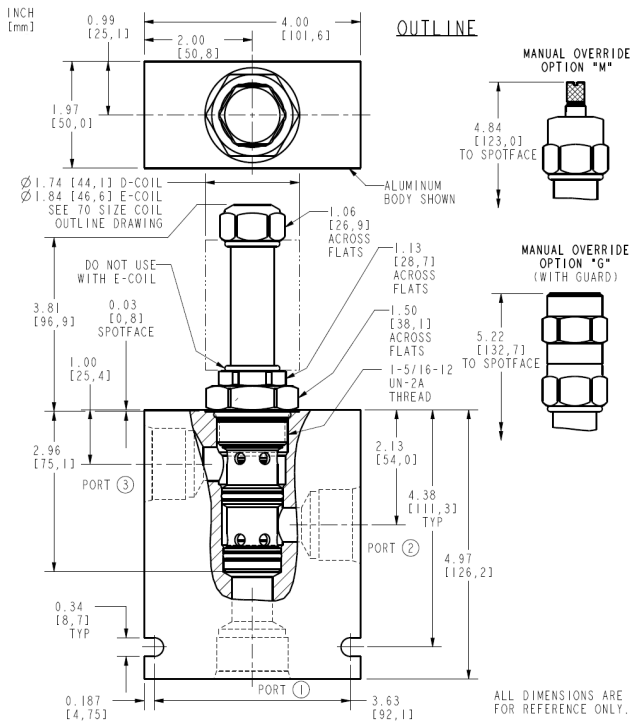
FLOW RANGE A



FLOW RANGE B



## Dimensions



## Installation Specifications

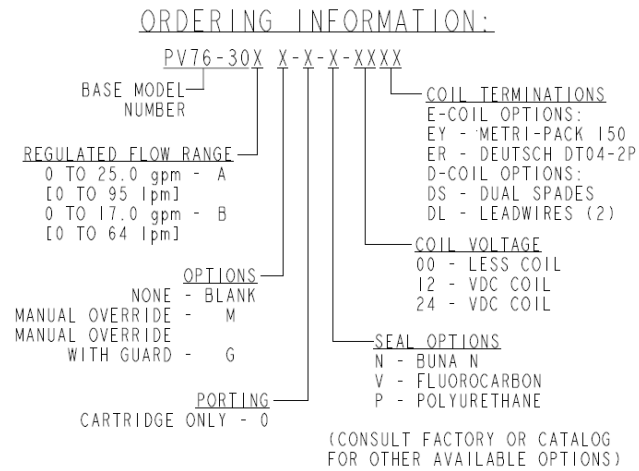
|                               |                                   |
|-------------------------------|-----------------------------------|
| Cavity                        | VC16-3                            |
| Cartridge installation torque | 67.8 N-m (50 ft-lb)               |
| Coil nut torque               | 13.6 to 16.3 N-m (10 to 12 ft-lb) |
| Guard cap torque              | 7 to 9 N-m (5 to 7 ft-lb)         |
| Orientation restriction       | None                              |



## Accessories

|          |            |                             |
|----------|------------|-----------------------------|
| Seal kit | SK16-3N-MM | - <b>Note:</b> Buna N       |
|          | SK16-3V-MM | - <b>Note:</b> Fluorocarbon |
|          | SK16-3P-MM | - <b>Note:</b> Polyurethane |

## Order Code



### Model Options

#### PV76-30ADE-H-J-L

#### D Max Regulated Flow

| CODE | DESCRIPTION                                    |
|------|--|
| A    | 0 to 95 lpm (0 to 25.0 gpm) Max Regulated Flow |
| B    | 0 to 64 lpm (0 to 17 gpm) Max Regulated Flow   |

#### E Manual Override

| CODE  | DESCRIPTION   |
|-------|---|
| BLANK | NONE  |
| G     | Variable Position Override, Red Knurled Knob with Cover Cap |
| M     | Variable Position Override, Red Knurled Knob                |

#### H Line Body

| CODE | DESCRIPTION         |
|------|---------------------|
| 0    | No Body             |
| 12T  | Aluminum SAE 12     |
| 16T  | Aluminum SAE 16     |
| 16TD | Ductile Iron SAE 16 |

#### J Seal

| CODE | DESCRIPTION   |
|------|---------------|
| N    | Buna-N        |
| V    | Fluorocarbon  |
| P    | Polyurethane  |
| U    | PPDI Urethane |

#### L Coil

| CODE | DESCRIPTION |
|------|-------------|
| 0    | No Coil     |



| CODE   | DESCRIPTION                                     |
|--------|---|
| 12DG   | 12 VDC, D-Coil, DIN 43650                       |
| 12DL   | 12 VDC, D-Coil, Dual Lead Wires                 |
| 12DL/W | 12 VDC, D-Coil, Dual Lead Wires with Weatherpak |
| 12DS   | 12 VDC, D-Coil, Dual Spade                      |
| 12ER   | 12 VDC, E-Coil, Deutsch                         |
| 12EY   | 12 VDC, E-Coil, Metri-Pack 150                  |
| 24DG   | 24 VDC, D-Coil, DIN 43650                       |
| 24DL   | 24 VDC, D-Coil, Dual Lead Wires                 |
| 24DS   | 24 VDC, D-Coil, Dual Spade                      |
| 24ER   | 24 VDC, E-Coil, Deutsch                         |