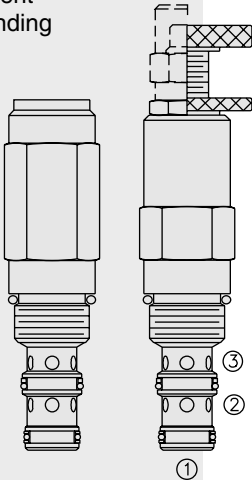


# PRESSURE CONTROLS

## PR50-36 Pressure Reducing/Relieving, Pilot-Operated

Patent Pending



### DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic pressure reducing/relieving valve with internal pilot and internal spring chamber drain, designed to act as a pressure-regulating device for secondary circuits.

### OPERATION

In its steady state, the **PR50-36** allows flow to pass bidirectionally from ② to ①, with the spring chamber constantly drained at ③.

On attainment of a pre-determined pressure at ①, the cartridge shifts to restrict input flow at ②, thereby regulating pressure at ①. In this mode, the valve will also relieve ① to ③.

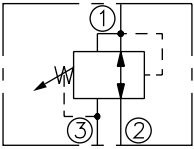
Deadband (from reducing to relieving) pressure rise over reduced pressure setting:  
Non-flow condition: approximately 0.55 bar (8 psi); with flow: approximately 2.1 bar (30 psi).

### FEATURES

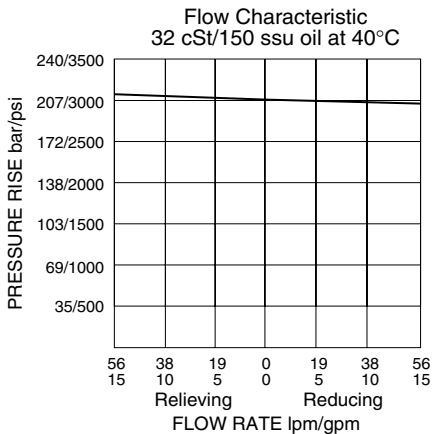
- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 345 bar (5000 psi).
- Hardened spool and cage for long life.
- Industry common cavity.

### SYMBOLS

USASI/ISO:



### PERFORMANCE (Cartridge Only)



### RATINGS

**Operating Pressure:** 345 bar (5000 psi)

**Flow:** See Performance Chart

**Pilot Orifice:** Pilot-operated through 0.51 mm (0.020 inch) hole

**Standard Spring Ranges (Reducing Function):** 27.6 to 103.4 bar (400 to 1500 psi);  
103.4 to 206.9 bar (1500 to 3000 psi); 206.9 to 344.8 bar (3000 to 5000 psi)

**Temperature:** -40 to 120°C with standard Buna seals

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of  
7.4 to 420 cSt (50 to 2000 ssu)

**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC10-3; See page 9.110.1

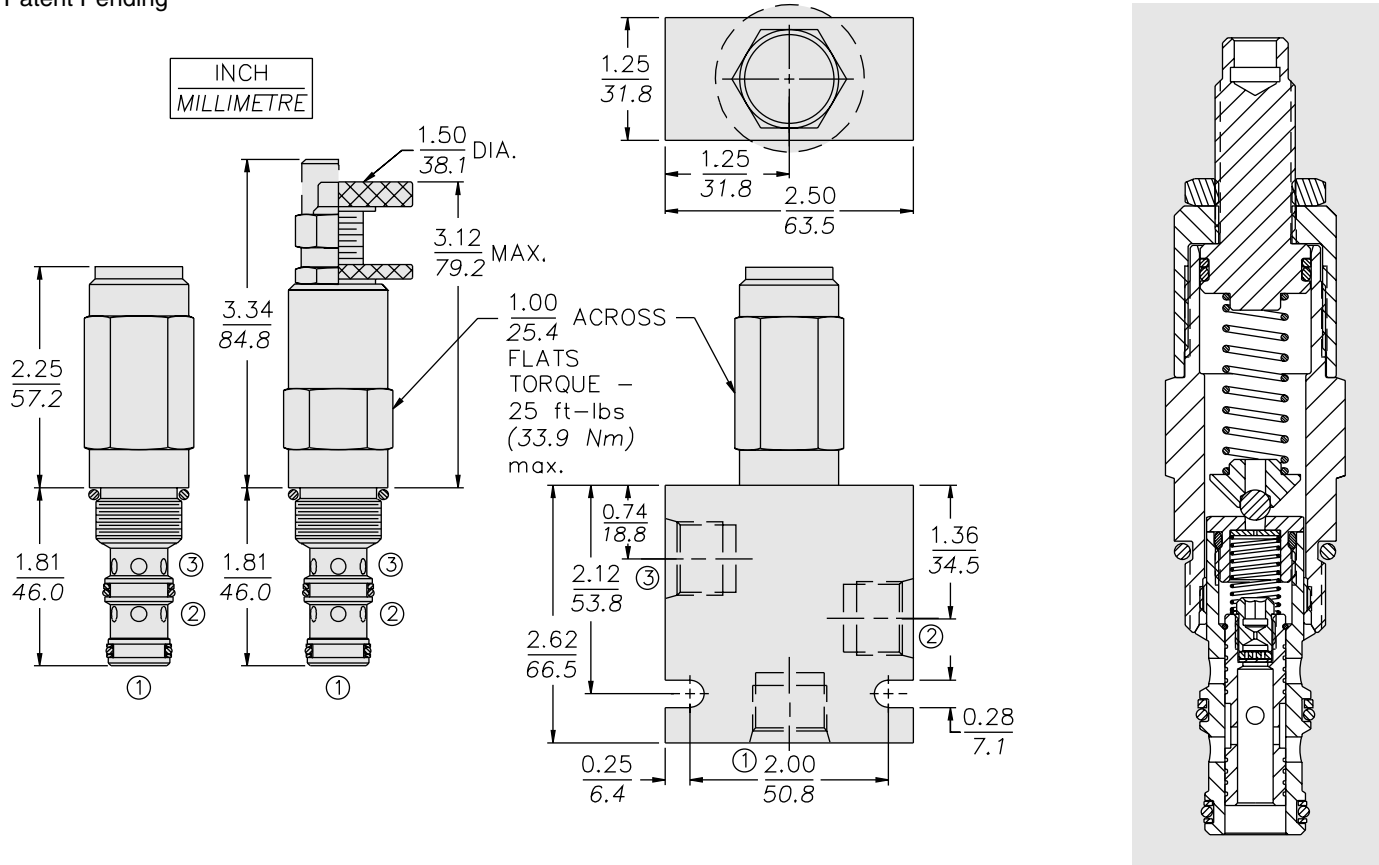
**Cavity Tool:** CT10-3XX; See page 8.600.1

**Seal Kit:** SK10-3P-BM; See page 8.650.1

# PR50-36

## DIMENSIONS

Patent Pending



## MATERIALS

**Cartridge:** Weight: 0.27 kg. (0.60 lbs.);  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Polyurethane O-rings and  
Fluorocarbon back-ups standard.  
Anodized aluminum knobs and caps.

**Ported Body:** Weight: 0.64 kg.  
(1.41 lbs.); Steel, zinc-plated (code  
"S"); or **Ductile Iron (code "D")**  
**standard**, consult factory for weight,  
dimensions may differ; rated to  
345 bar (5000 psi); See page  
8.010.1.

## TO ORDER

<b>PR50-36</b>		-		-		-		/	
<b>Adjustment Option</b>									
1/4 in. Hex Allen Head	<b>A</b>								
1-1/2 in. Dia. Alum. Knob	<b>B</b>								
Option A w/Cover Cap	<b>C</b>								
Factory Preset Non-Adj.	<b>F</b>								
Factory Preset Hidden Adj.	<b>H</b>								
(See page 6.003.1)									
Option C w/ Lockwire Holes	<b>L</b>								
<b>Porting</b>									
Cartridge Only	<b>0</b>								
SAE 6 (Ductile)	<b>6TD</b>								
SAE 6 (Steel)	<b>6TS</b>								
<b>Seals</b>									
Polyurethane	<b>P</b>								
								<b>Setting in bar<sup>†</sup></b>	
								(Blank) for Adjustable, or Specify, for example:	
								<b>M25</b> 25 bar	
								<b>M100</b> 100 bar	
								<b>Setting in psi<sup>†</sup></b>	
								(Blank) for Adjustable, or Specify, for example:	
								<b>9.0</b> 900 psi	
								<b>23.5</b> 2350 psi	
								<sup>†</sup> Adjustable valves will be preset to approx. 50% of spring max. potential.	
								<b>Spring Range</b>	
								<b>15</b> 27.6 to 103.4 bar (400 to 1500 psi)	
								<b>30</b> 103.4 to 206.9 bar (1500 to 3000 psi)	
								<b>50</b> 206.9 to 344.8 bar (3000 to 5000 psi)	