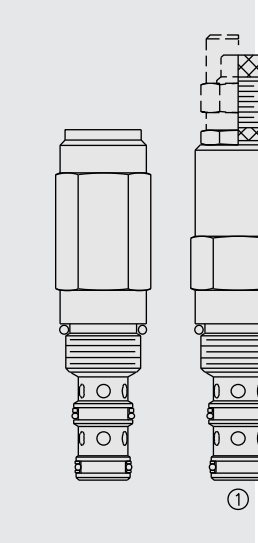
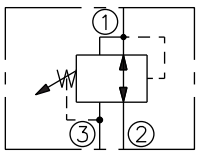
Blue rectangles are links to other catalog pages.

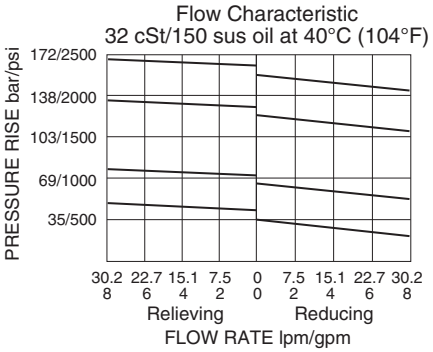
# PR10-32 Pressure Reducing/Relieving




## ISO SYMBOL




## PERFORMANCE (Cartridge Only)




## DESCRIPTION

A screw-in, cartridge-style, direct-acting, 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. It is intended for use in stable input flow circuits.

## OPERATION

In its steady state, the **PR10-32** 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 at approximately 10 bar (150 psi) over the reducing setting.

**Note:** Direct-acting PR series valves may not be suitable for some static load applications. Consult factory.

## FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 145 bar (2100 psi).
- Hardened spool and cage for long life.
- Industry common cavity.

## RATINGS

**Operating Pressure:** 207 bar (3000 psi) at Port 1 & 2; 68.9 bar (1000 psi) at Port 3

**Proof Pressure:** 517.1 bar (1500 psi) at Port 1 & 2; 103.4 bar (1500 psi) at Port 3

**Burst Pressure:** 1034 bar (15000 psi)

**Flow Rating:** 8 gpm (30.3 lpm)

**Internal Leakage 2 to 3:** 82 ml/minute (5 cu. in/minute) max. at ΔP 207 bar (3000 psi)

**Standard Spring Range (Reducing Function):** 2.4 to 27.6 bar (35 to 2100 psi) Shown in To Order section. Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown. **If the valve is adjusted beyond the recommended maximum pressure range for F and H style adjuster options, the valve may not open to relieve pressure.**

**Temperature:** -40 to 100°C (-40 to 212°F) with standard Buna seals;
-26 to 204°C (-15 to 400°F) with fluorocarbon seals;
-54 to 107°C (-65 to 225°F) with polyurethane 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 sus); See Temperature and Oil Viscosity, page 9.060.1

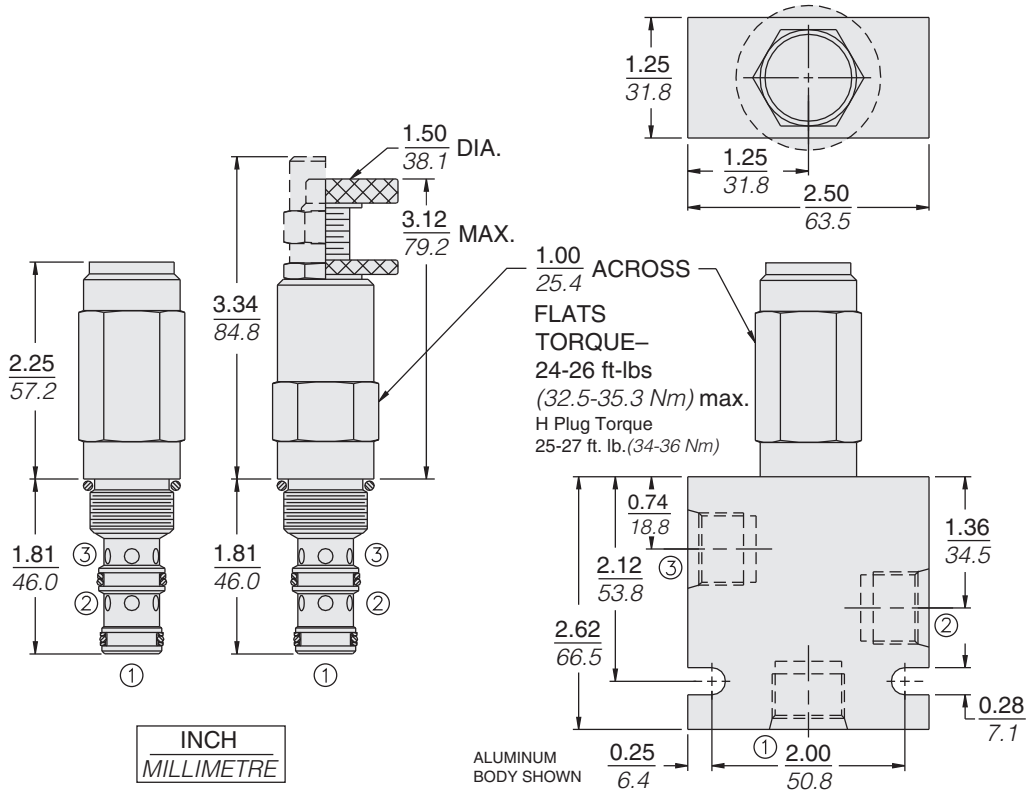
**Installation:** No restrictions; See page 9.020.1

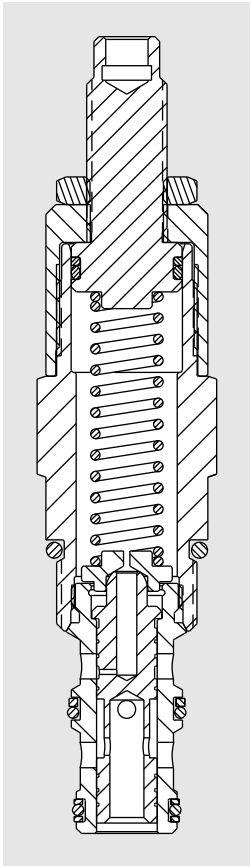
**Cavity:** VC10-3; See page 9.110.1

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

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

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.27 kg (0.60 lb) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard. Anodized aluminum knobs and caps.

**Standard Ported Body:** Weight: Varies from 0.24 to 0.29 kg (0.54 to 0.65 lb) depending on adjustment option; Anodized high-strength aluminum alloy, rated to 240 bar (3500 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1.

## TO ORDER

**PR10-32__ - _____ - ___ - ____ / _____**

**Adjustment Option**

| | |
|---|---|
| 1/4 in. Hex Allen Head | **A** |
| 1-1/2 in. Dia. Alum. Knob | **B** |
| Option A w/Cover Cap | **C** |
| Factory Preset Non-Adjst. | **F*** |
| Factory Preset Hidden Adjust. See page 6.003.1 | **H*** |
| Option C w/Lockwire Holes | **L** |

*** If the valve is adjusted beyond the recommended maximum pressure range for the F and H style adjuster options, the valve may not open to relieve system pressure.**

**Porting**

| | |
|---|---|
| Cartridge Only | **0** |
| SAE 6 | **6T** |
| SAE 8 | **8T** |
| 1/4 in. BSP* | **2B** |
| 3/8 in. BSP* | **3B** |

*BSP Body; U.K. Mfr Only

**Seals**

| | |
|---|---|
| Buna N (Std.) | **N** |
| Fluorocarbon | **V** |
| Polyurethane | **P** |

**Spring Range**

| | |
|---|---|
| **1** | 2 to 9 bar (35 to 125 psi) |
| **4** | 5 to 28 bar (80 to 400 psi) |
| **8** | 14 to 55 bar (200 to 800 psi) |
| **15** | 21 to 103 bar (300 to 1500 psi) |
| **21** | 28 to 145 bar (400 to 2100 psi) |

**NOTE:** Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown above.

**Setting in bar**

(Blank)† for Adjustable, or Specify, for example:
**M100** 100 bar

**Setting in psi**

(Blank)† for Adjustable, or Specify, for example:
**3.6** 360 psi

†Adjustable valves will be preset to approx. 50% of spring max. potential.