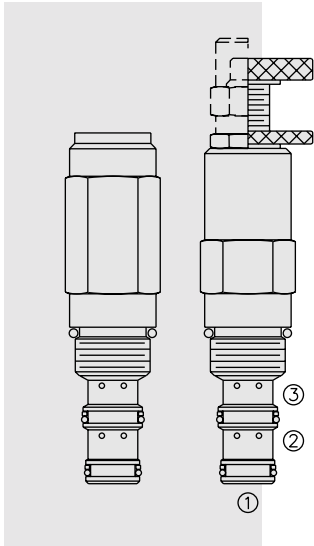


UP10-31 Unloading Pilot, Internal Drain



DESCRIPTION

A screw-in, cartridge-style, remote sequence, pilot unloading valve, with optional fixed “unload/reload” pressure ratios for use in accumulator-type hydraulic systems.

OPERATION

In its steady state, the **UP10-31** blocks flow from ② to ③. On attainment of a pre-determined pressure at ①, the spool shifts to allow flow from ② to ③.

Since the spring chamber is vented at ③, back pressure at ③ will directly (1:1) affect the valve’s setting.

If pressure at ① drops to a level below the ratio-established reload value, the valve will close, blocking flow from ② to ③.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Spring range to 206 bar (3000 psi).
- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi)

Flow: 4 lpm (1 gpm)

Ratio Between Unloading & Reloading Pressure: 60% ±5%; 70% ±5%; 80% ±5%

Pressure Setting Range: 69 to 207 bar (1000 to 3000 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

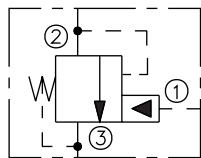
Cavity: VC10-3; See page 9.110.1

Cavity Tool: CT10-3XX; See page 8.600.1

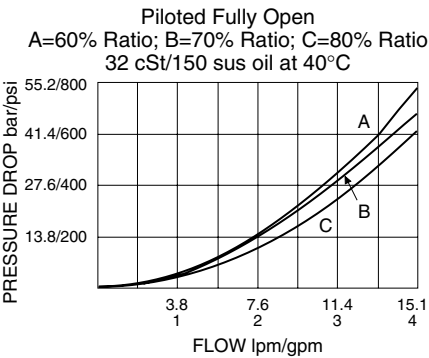
Seal Kit: SK10-3X-MM; See page 8.650.1

SYMBOLS

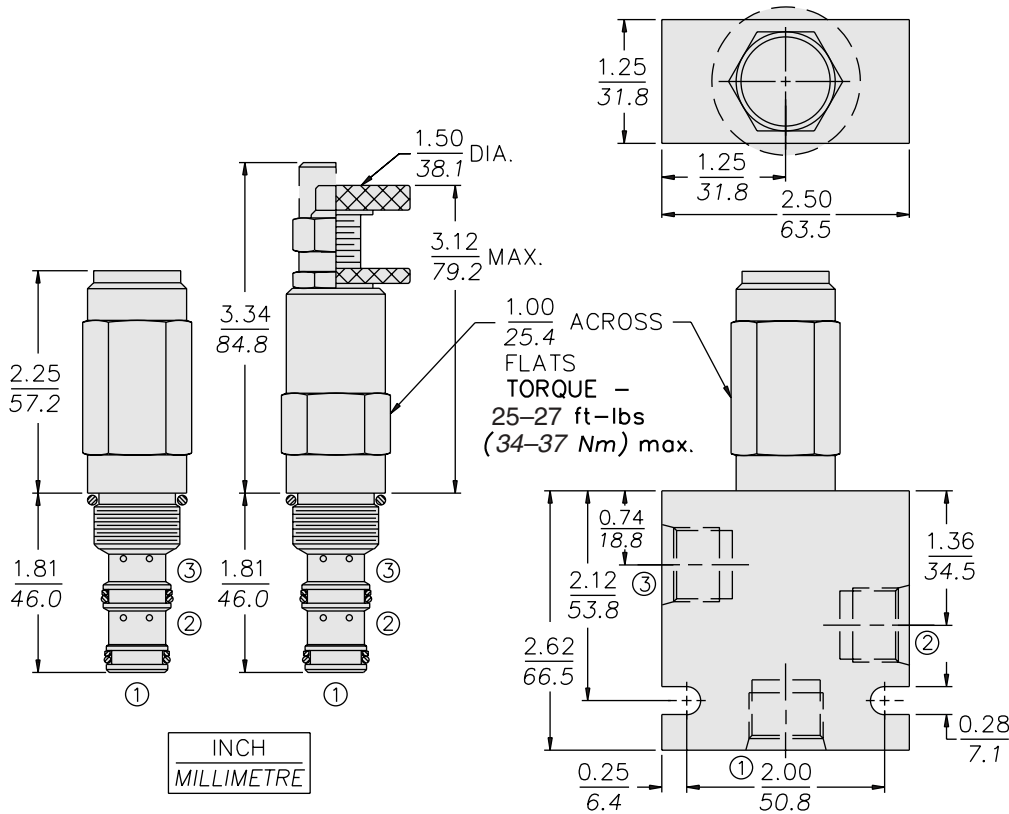
USASI/ISO:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

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

Standard Ported Body: Weight: 0.36 kg. (0.80 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); see page 8.010.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

TO ORDER

UP10-31 - - - - - 30 /

- 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-Adj. **F**
 Factory Preset Hidden Adj. **H**
 (See page 6.003.1)
 Option C w/ Lockwire Holes **L**

- 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**

- Setting in bar[†]**
 (Blank) for Adjustable, or Specify, for example:
M69 69 bar
M207 207 bar
Setting in psi[†]
 (Blank) for Adjustable, or Specify, for example:
10.0 1000 psi
23.5 2350 psi

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

- Pressure Ratio**
60 60% Ratio
70 70% Ratio
80 80% Ratio