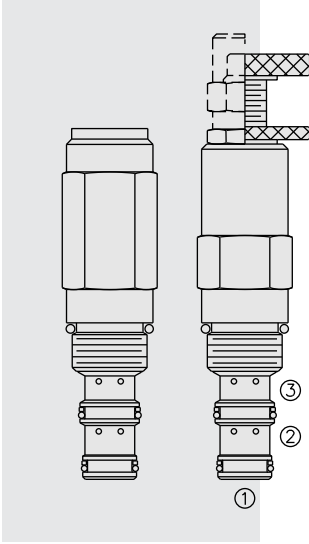


PRESSURE CONTROLS

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: 3.8 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 sus); See Temperature and Oil Viscosity, page 9.060.1

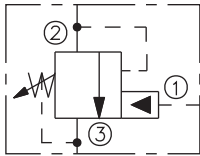
Installation: No restrictions; See page 9.020.1

Cavity: VC10-3; See page 9.110.1

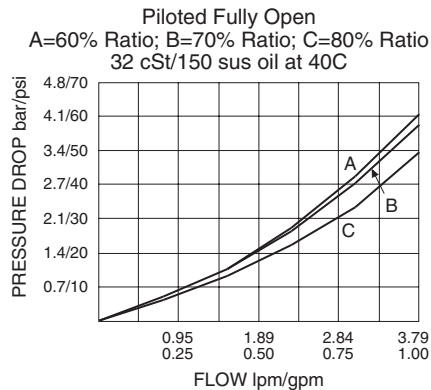
Cavity Tool: CT10-3XX; See page 8.600.1

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

SYMBOL

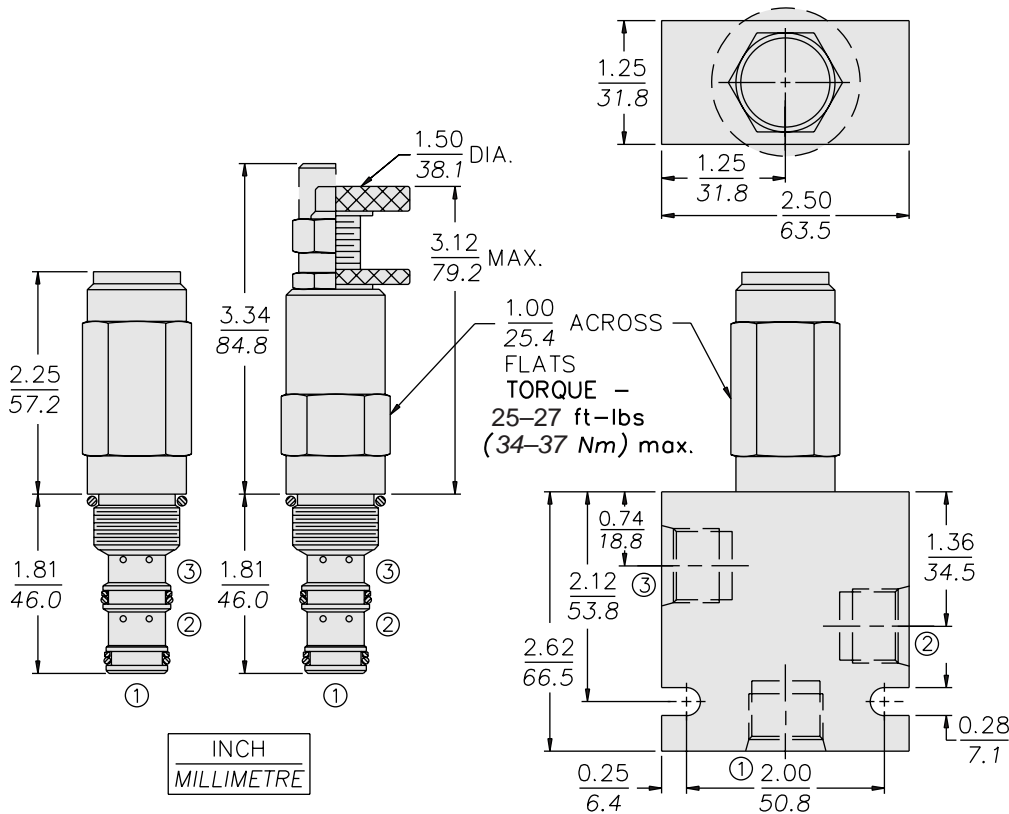


PERFORMANCE (Cartridge Only)



Note: This valve, the UP10-31, is the replacement for the obsolete UP10-30.

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 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

TO ORDER

UP10-31 - - - - 30 /

<p>Adjustment Option</p> <ul style="list-style-type: none"> 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 Adjustment (See page 6.003.1) H Option C w/Lockwire Holes L 	<p>Porting</p> <ul style="list-style-type: none"> Cartridge Only 0 SAE 6 6T SAE 8 8T 1/4 in. BSP* 2B 3/8 in. BSP* 3B 	<p>Seals</p> <ul style="list-style-type: none"> Buna N (Std.) N Fluorocarbon V 	<p>Setting in bar[†]</p> <ul style="list-style-type: none"> (Blank) for Adjustable, or Specify, for example: M69 69 bar M207 207 bar <p>Setting in psi[†]</p> <ul style="list-style-type: none"> (Blank) for Adjustable, or Specify, for example: 10.0 1000 psi 23.5 2350 psi 	<p>Pressure Ratio</p> <ul style="list-style-type: none"> 60 60% Ratio 70 70% Ratio 80 80% Ratio
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*BSP Body; U.K. Mfr. Only

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