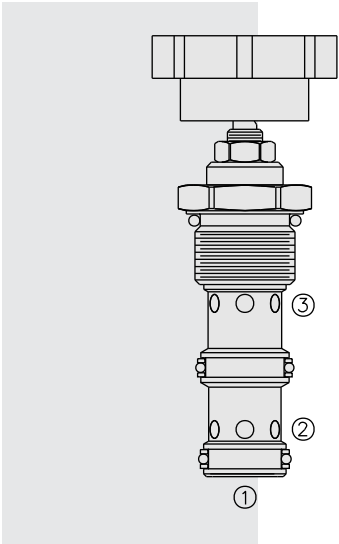


# FR12-33 Flow Regulator, Pressure Compensated



## DESCRIPTION

A screw-in, cartridge-style, adjustable orifice, pressure-compensated, manually-operated, bypass-type hydraulic flow regulating valve. It can be used as a priority-type flow regulator or a restrictive-type 2-way flow regulator when the bypass port is blocked.

## OPERATION

The **FR12-33** maintains a constant flow rate from ③ regardless of load pressure changes in the system downstream of ③, or in the bypass leg at ②. Reverse flow (③ to ①) bypasses the control orifice.

The regulated flow increases from closed to fully open, with counter-clockwise rotation of the knob.

**Note:** When used as a bypass flow control in applications where the priority flow port will be blocked by external valving, bypass pressure drop will increase unless a small amount of leakage is provided for the priority port. Consult factory.

## FEATURES

- Bypass port ② may be fully pressurized.
- Hardened steel parts for long life.
- Quiet, modulated response.
- Industry common cavity.

## RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Flow Rate:** 3-ported regulated flow: 0 to 68 lpm (0 to 18 gpm)  
2-ported regulated flow: 0 to 45 lpm (0 to 12 gpm)

**Input Flow:** 3-ported: 76 lpm (20 gpm) nominal; 114 lpm (30 gpm) max.

**Internal Leakage:** 0.12 lpm (7.3 cu. in./minute) at port 3, at 207 bar (3000 psi)

**Adjustment Torque Required:** 1.7 Nm (15 inch-pounds) at 207 bar (3000 psi)

**Operating Temperature:** -40 to 100°C with standard Buna N seals  
-26 to 204°C with Fluorocarbon seals  
-54 to 107°C 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:** VC12-3; See page 9.112.1

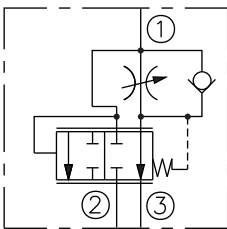
**Cavity Tool:** CT12-3XX; See page 8.600.1

**Seal Kit:** SK12-3X-MM; See page 8.650.1

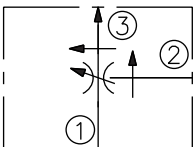
**Knob Kit:** Part Number 6113160

## SYMBOLS

### USASI/ISO:



### 3-Ported:



## PERFORMANCE (Cartridge Only)

