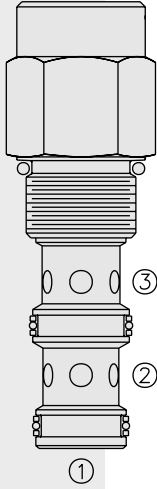


# DIRECTIONAL VALVES

## PD12-35 Piloted 2-Way Spool, Normally Open,



### DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, normally open hydraulic directional valve for two-way circuits requiring remote pilot actuation.

### OPERATION

In neutral (unpiloted), the PD12-35 allows flow from ② to ③. The spring bias chamber is internally vented to ③.

On remote pilot signal at ①, the valve shifts to block ③ to ② bidirectionally.

**Note:** Back pressure at ③ will increase the pilot pressure required at ① to shift, at a ratio of 1:1. Consult factory.

Consult factory for applications where bi-directional flow is required when the valve is in the normal or spring-offset position.

### FEATURES

- Hardened spool and cage for long life.
- Industry common cavity.

### RATINGS

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

**Proof Pressure:** 420 bar (6090 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)

**Pilot Pressure Required:** To Full Spool Shift for 7.6 bar (110 psi) spring:  
8.6 bar (125 psi)

**Oil Volume Required to Full Shift:** 1.32 cc (0.08 cu. in.)

**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

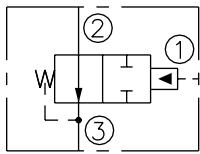
**Cavity:** VC12-3; See page 9.112.1

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

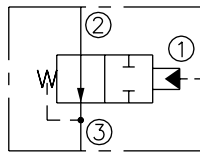
**Seal Kit:** SK12-3X-MM; See page 8.650.1

### SYMBOLS

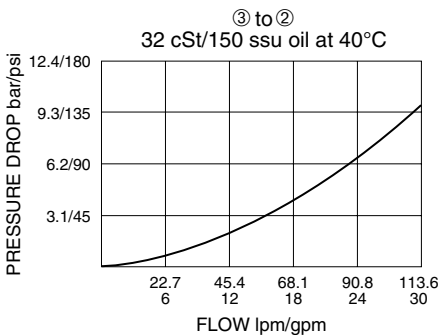
#### USASI:



#### ISO:



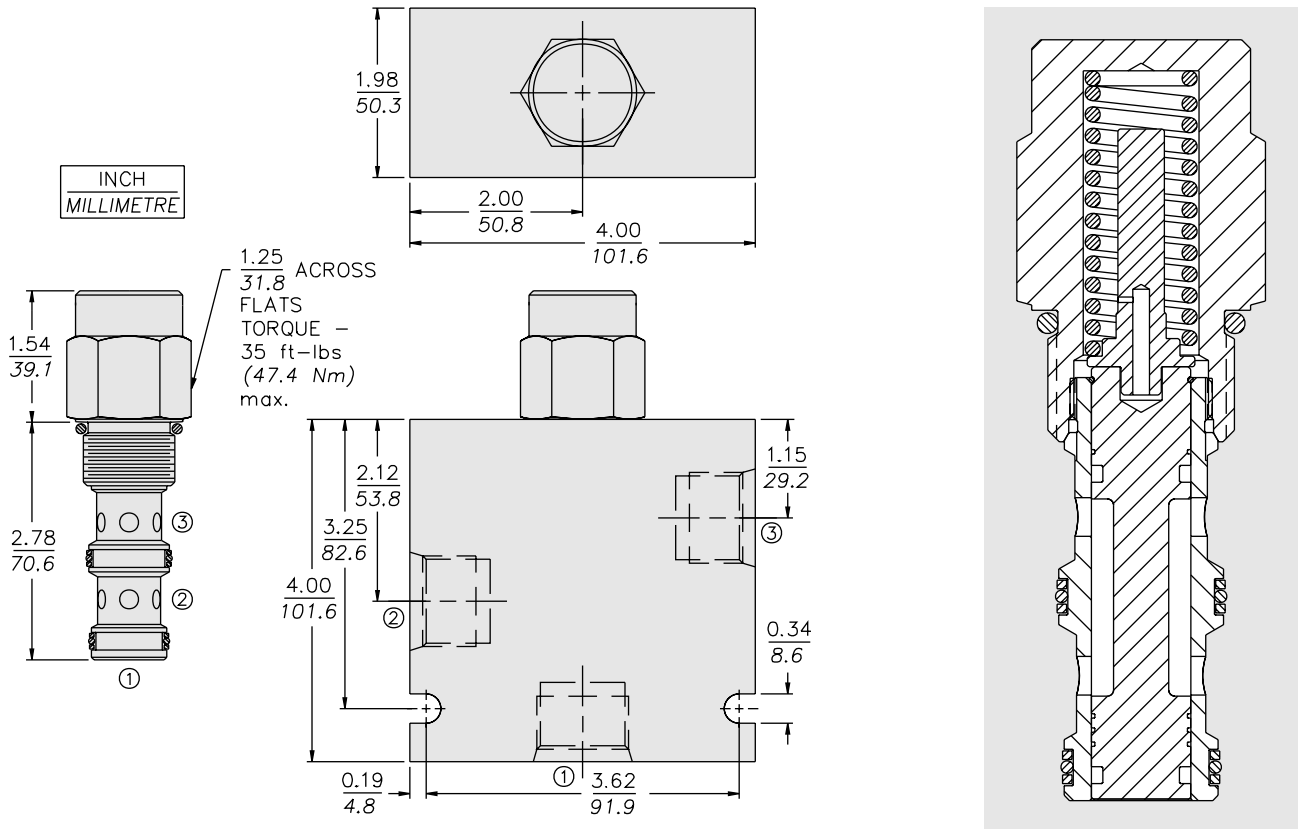
### PERFORMANCE (Cartridge Only)



# Internal Vent

# PD12-35

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.23 kg. (0.50 lbs.); Steel with hardened work surfaces; Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 1.13 kg. (2.50 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.012.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

## TO ORDER

PD12-35 - - -

**Porting**  
 Cartridge Only **0**  
 SAE 8 **8T**  
 SAE 10 **10T**  
 SAE 12 **12T**  
 1/2 in. BSP\* **4B**  
 3/4 in. BSP\* **6B**

\*BSP Body  
 U.K. Mfr. Only

**Bias Spring**  
**110** 7.6 bar (110 psi)  
**170** 11.7 bar (170 psi)

**Seals**  
**N** Buna N (Std.)  
**NS** Buna N with Sealed Spool  
**V** Fluorocarbon  
**VS** Fluorocarbon with Sealed Spool