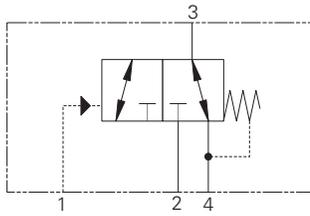


# PTS13-12 - Pilot to Shift Valve

Pilot operated, directional control valve  
113 L/min (30 USgpm) • 350 bar (5000 psi)



## Operation

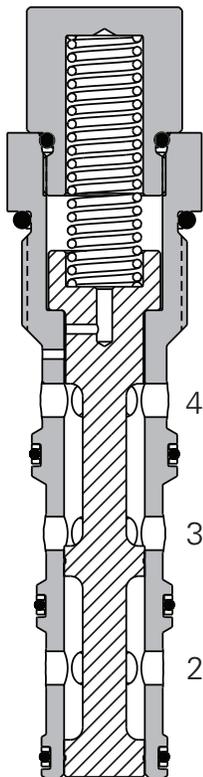
This valve allows flow between ports 3 and 4 while blocking port 2 until sufficient pressure has been applied to port 1 and the spring bias is overcome.

At this time, flow is directed between port 2 and port 3 while blocking port 4. During the cross-over transition, all ports are blocked. The spring chamber for this valve is vented to port 4.

## Features

Hardened, ground and honed sleeve and spool for low internal leakage. Working pressure 350 bar.

## Sectional View



## Performance Data

### Ratings and Specifications

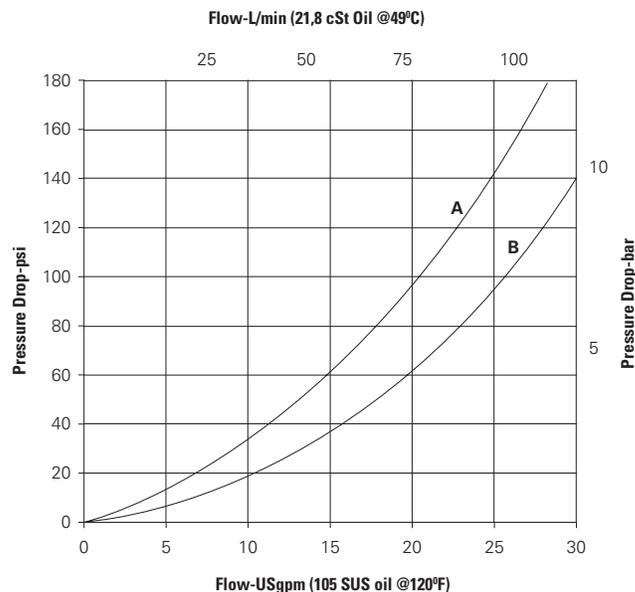
Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49°C (120°F)

Typical application pressure (all ports)	350 bar (5000 psi)
Cartridge fatigue pressure (infinite life)	350 bar (5000 psi)
Rated flow	113 L/min (30 USgpm)
Internal leakage	210 cc/min (13in <sup>3</sup> /min) @ 350 bar (5000 psi)
Temperature range	-40° to 120°C (-40° to 248°F)
Pilot pressures	80 - 5,5 bar (80 psi) 120 - 8,3 bar (120 psi) 160 - 11,0 bar (160 psi)
Pilot displacement volume	0,49 cm <sup>3</sup> (0.02 in <sup>3</sup> )
Cavity	C-12-4
Fluids	All general purpose hydraulic fluids such as: MIL-H-5606, SAE 10, SAE 20, etc.
Filtration	Cleanliness code 18/16/13
Standard housing materials	Aluminum or Steel
Weight cartridge only	0.32 kg (0.70 lbs)
Seal kit	02-160979 (Buna-N), 02-160980 (Viton <sup>®</sup> )

Viton is a registered trademark of E.I. DuPont

## Pressure Drop Curves

Cartridge only



## Description

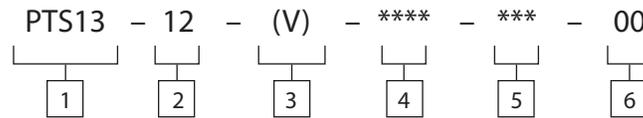
This is a 3-way 2 position, high pressure pilot operated, directional control valve ideal for selecting a function when the pilot pressure is applied or removed.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# PTS13-12 - Pilot to Shift Valve

Pilot operated, directional control valve  
113 L/min (30 USgpm) • 350 bar (5000 psi)

## Model Code



**1** Function  
PTS13 - Pilot to shift valve

**2** Size  
12 - 12 size

**3** Seals  
Blank - Buna-N  
V - Viton®

**4** Port Size  
0 - Cartridge only

Code	Port Size	Housing Number	
		Aluminum	Steel
A4G	1/2" BSPP	5986431-001	
A6G	3/4" BSPP	5986432-001	
A8H	SAE 8	5986433-001	
A10H	SAE 10	5986434-001	
A12H	SAE 12	5986436-001	
S6G	3/4" BSPP		5991073-001
S10T	SAE 10		5991074-001
S12T	SAE 12		5991075-001

See section J for housing details.

**5** Pilot to shift (nominal)  
80 - 5,5 bar (80 psi)  
120 - 8,3 bar (120 psi)  
160 - 11,0 bar (160 psi)

**6** Special features  
04- 'F Type' fixed type w/closed transition  
03- 'C Type' cap adjustable type w/closed transition  
05- 'K Type' knob adjustable type w/closed transition  
06- 'S Type' screw adjustable type w/closed transition  
09- 'F Type' fixed type w/ open transition

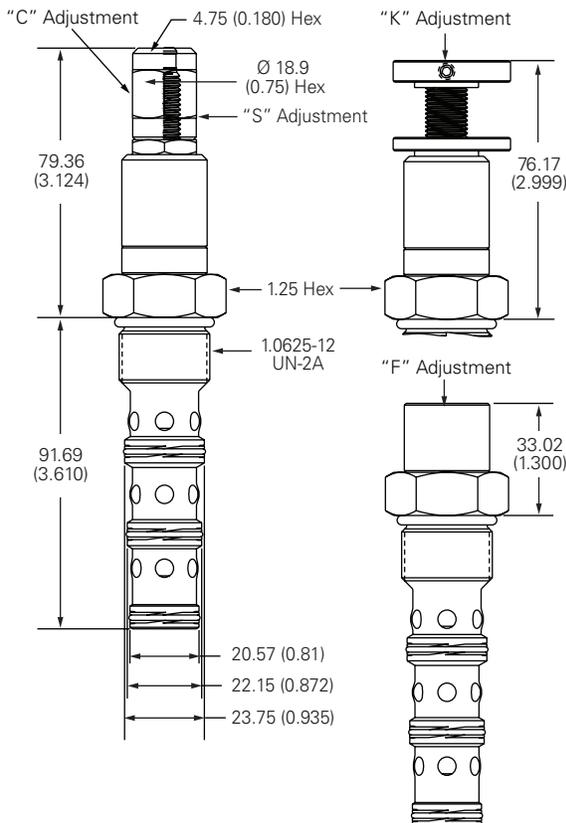
## Dimensions

mm (inch)

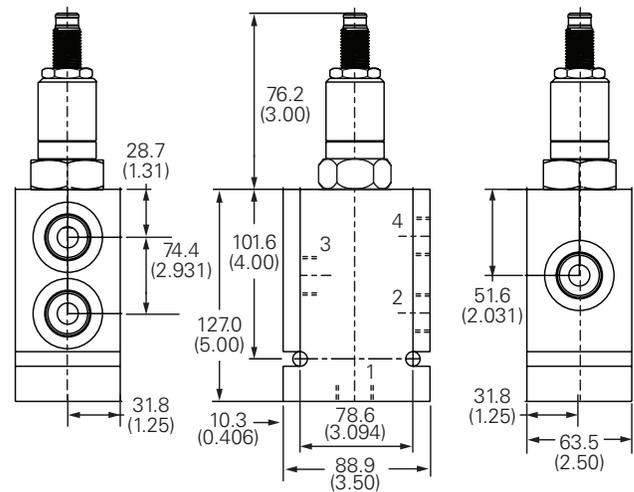
Torque cartridge in aluminum housing 81-95 Nm (60-70 ft. lbs)

Torque cartridge in steel housing 102-115 Nm (75-85 ft. lbs)

### Cartridge Only



### Installation Drawing (Steel)



### WARNING

Aluminum housings can be used for pressures up to 210 bar (3000 psi). Steel housings must be used for operating pressures above 210 bar (3000 psi).