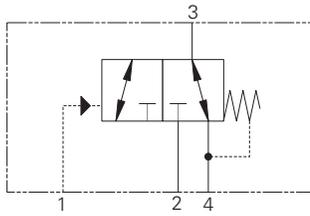


# PTS13-10 - Pilot to Shift Valve

Pilot operated, directional control valve  
30 L/min (8 USgpm) • 350 bar (5000 psi)



## Operation

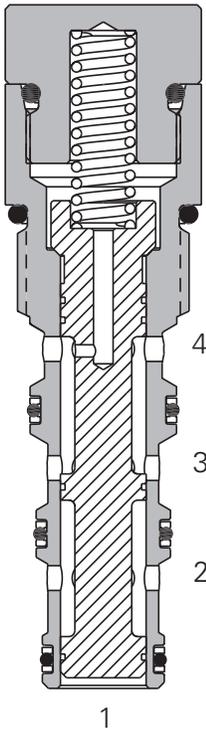
This valve allows flow between ports 3 and 4 while blocking port 2 until sufficient pressure has been applied to port 1 and the spring bias is overcome.

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

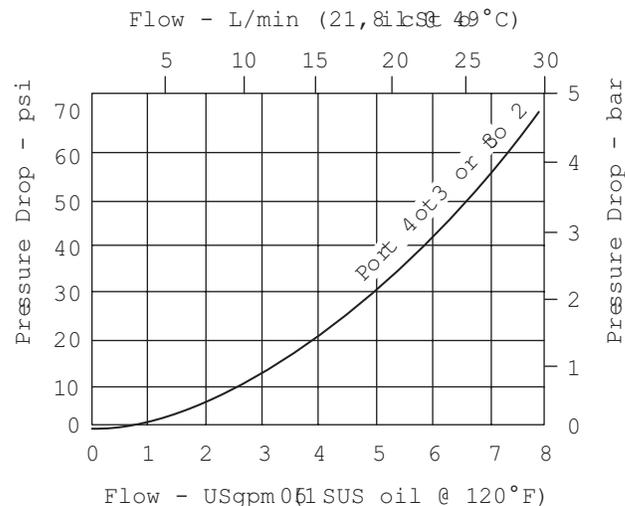
Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49°C (120°F)

Typical application pressure (all ports)	350 bar (5000 psi)
Cartridge fatigue pressure (infinite life)	350 bar (5000 psi)
Rated flow	30 L/min (8 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	40 - 2,75 bar (40 psi) 80 - 5,5 bar (80 psi) 160 - 11,0 bar (160 psi)
Pilot displacement volume	0,49 cm <sup>3</sup> (0.02 in <sup>3</sup> )
Cavity	C-10-4
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	0,14 kg (0.32 lbs)
Seal kit	889625 (Buna-N), 566080 (Viton <sup>®</sup> )

Viton is a registered trademark of E.I. DuPont

## Pressure Drop Curves

Cartridge only



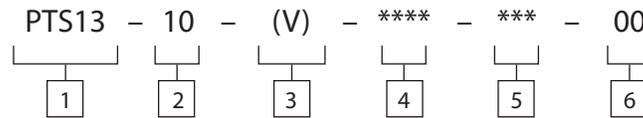
## Description

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.

# PTS13-10 - Pilot to Shift Valve

Pilot operated, directional control valve  
30 L/min (8 USgpm) • 350 bar (5000 psi)

## Model Code



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

**2** Size  
10 - 10 size

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

**4** Port Size  
0 - Cartridge only

Code	Port Size	Housing Number		
		Aluminum Light duty	Aluminum Fatigue rated	Steel
A3B	3/8" BSPP	02-179705		
A6T	SAE 6	566161		
A2G	1/4" BSPP		02-185804	
A3G	3/8" BSPP		02-185805	
A6H	SAE 6		02-185802	
A8H	SAE 8		02-185803	
S2G	1/4" BSPP			02-175139
S3G	3/8" BSPP			02-175140
S6T	SAE 6			02-175137
S8T	SAE 8			02-175138

See section J for housing details.

**5** Pilot to shift (nominal)  
40 - 2,75 bar (40 psi)  
80 - 5,5 bar (80 psi)  
160 - 11,0 bar (160 psi)

**6** Special features  
00 - None  
(Only required if valve has special features, omitted if "00")

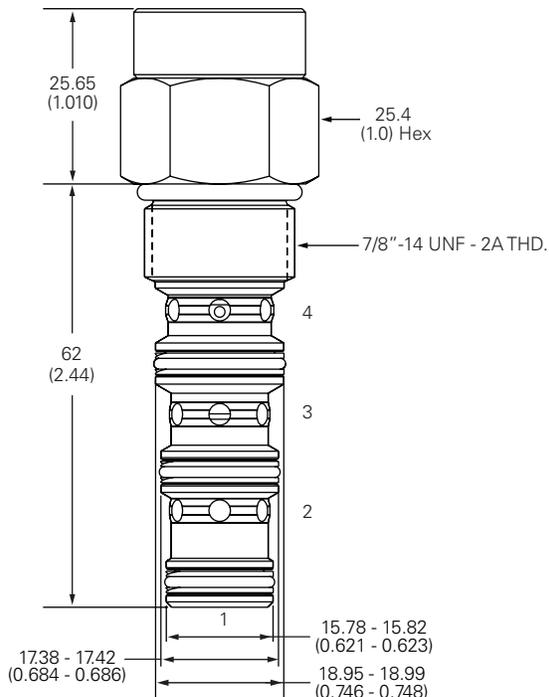
## Dimensions

mm (inch)

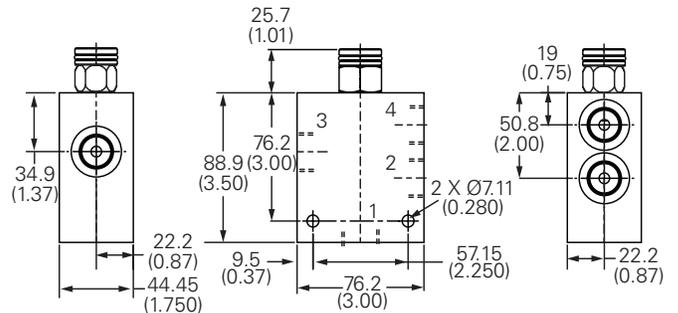
Torque cartridge in aluminum housing 47-54 Nm (35-40 ft. lbs)

Torque cartridge in steel housing 136-149 Nm (100-110 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).