

# DPS2-16 - Logic element

Differential pressure sense valves  
189 L/min (50 USgpm) • 210, 350 bar (3000, 5000 psi)

## Functional symbols

See pages I-142 & I-143

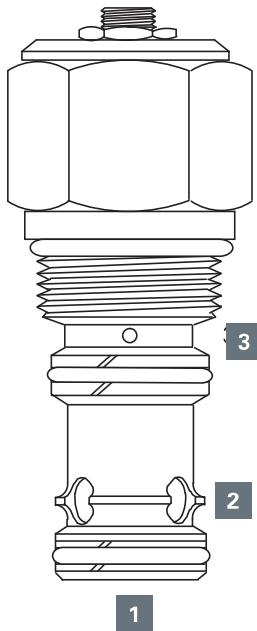
## Operation

This valve is used as a main section of a pilot controlled valve assembly. This valve has multiple uses when used with either directional control, flow control or pressure control cartridges. Refer to application examples.

## Features

Hardened and ground and honed working components. Cartridge construction for maximum mounting flexibility. Low leakage with poppet valves and 350 bar pressure rating

## 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	Spool type: 290 bar (4200 psi) Poppet type: 210 bar (3000 psi) or 350 bar (5000 psi)
Rated flow	189 L/min (50 USgpm)
Pilot ratio	Spool type P, V, R, F: 1:1
Internal leakage	Poppet type B, S, T: 2:1
Temperature range	spool type: 82 cm <sup>3</sup> /min. (5 in <sup>3</sup> /min) max @ 290 bar (4200 psi) poppet type: Port 1 to 2: < 5 drops/min max @ 350 bar (5000 psi)
Cavity	-40° to 120° C (-40° to 248° F)
Standard housing materials	C-16-3S
Fluids	Aluminium
Filtration	All general purpose hydraulics fluids such as: MIL-H-5606, SAE 10, SAE 20 etc
Weight cartridge only	Cleanliness code 18/16/13
Seal kit	0,35 kg (0.78 lbs) 889659 (Buna-N), 02-165871 (Viton®)

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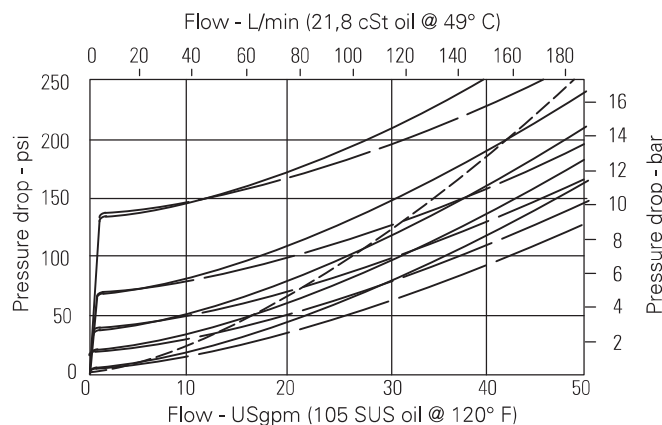
## Description

These are normally open or closed logic elements with or without a control orifice. They can be used as main valves for the control of high flows using small pilot cartridges, as compensators or load sense elements.

## Pressure drop curve

Cartridge only

————— B/S/T models  
- - - - - P/V models  
- - - - - F/R models

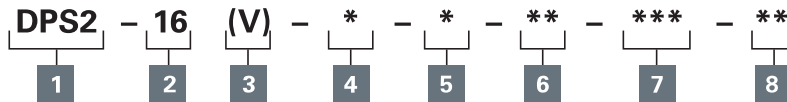


Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# DPS2-16 - Logic element

Differential pressure sense valves  
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## Model code



### 1 Function

**DPS2** - Differential pressure sensing

### 2 Size

**16** - 16 size

### 3 Seal material

**Blank** - Buna-N

**V** - Viton®

### 4 Function

**B** - Poppet, vent to open, N/C

**S** - Poppet, vent to open, N/C

**T** - Poppet, bi-directional, pilot to close, 2:1 ratio, N/C

**P** - Spool, N/C (L/S element)

**V** - Spool, N/C

**R** - Spool, pressure reducing, N/O

**F** - Spool, flow control, N/O (hydrostat)

### 5 Port size

**0** - Cartridge only

Code	Port size	Housing number
<b>Aluminium</b>		
<b>4B</b>	3/4" BSPP	02-175471*
<b>12T</b>	SAE 12	566414*
<b>10H</b>	SAE 10	876725
<b>12H</b>	SAE 12	876727
<b>4G</b>	1/2" BSPP	02-160676
<b>6G</b>	3/4" BSPP	876726

\* Light duty housing  
See section J for housing details.

### 6 Stroke adjustment

**F** - None

**S** - Stroke adjustments

"S" adjustment is not available with F and R functions.

### 7 Differential pressure

**Note:** Code based on pressure in psi  
**005** - 0,35 bar (5 psi)+\*

**020** - 1,40 bar (20 psi)+\*

**040** - 2,80 bar (40 psi)

**080** - 5,50 bar (80 psi)

**160** - 11,0 bar (160 psi)

+ Not available with the "B", "S" and "T" poppet.

\* The operating back pressure at port 3 should never be less than 1.3 times the spring set pressure.

### 8 Special features

**00** - 210 bar (3000 psi) rated valve

**AA** - 350 bar (5000 psi) rated valve (poppet type only).

(Only required if valve has special features, omit if "00".)

## Dimensions

mm (inch)

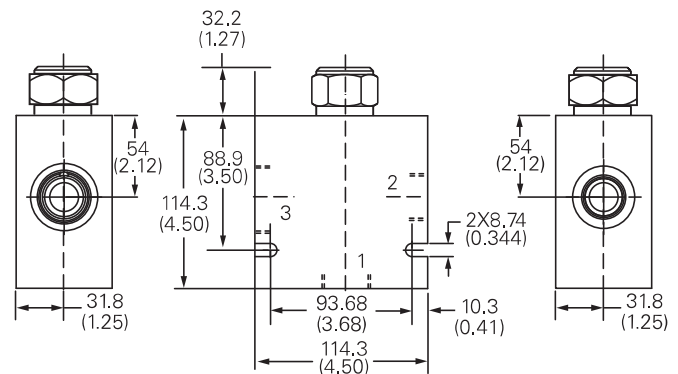
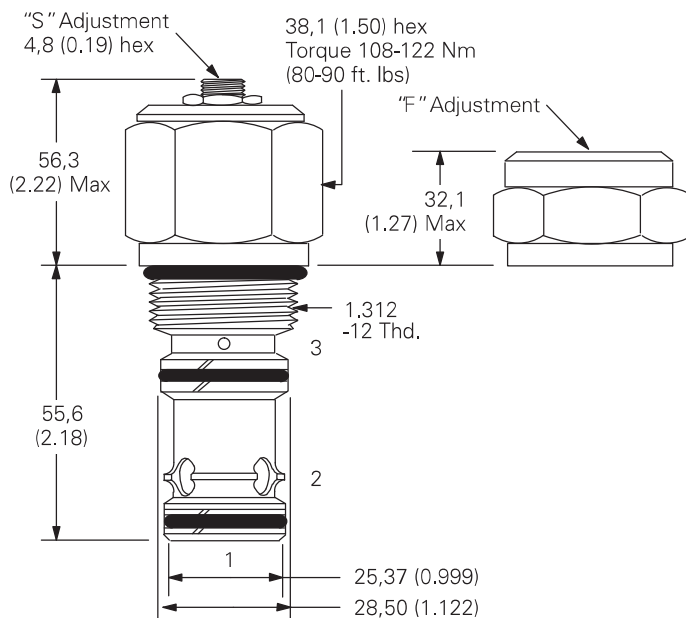
### Cartridge only

Torque cartridge in housing

**A** - 108-122 Nm (80-90 ft lbs)

**S** - 136-149 Nm (100-110 ft lbs)

## Installation drawing



### 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).

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