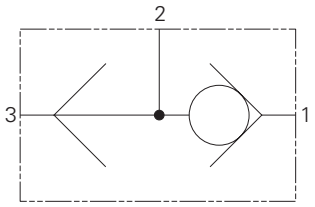
DSV3 ** B - Shuttle Valve

Ball Type, In-line Housing

Up to 170 L/min (45 USgpm) • 350 bar (5000 psi)

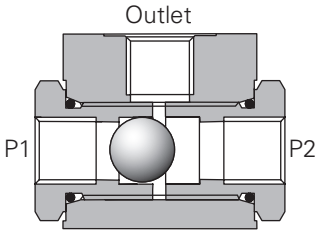


Operation

When a higher pressure is sensed at inlet 1 than at inlet 2 the ball within the cartridge is forced against a seat opening the higher pressure to outlet.

When the higher pressure appears at inlet 2 the ball is forced against the other seat which blocks inlet 1 and opens up inlet 2 to outlet.

Sectional View



Performance Data

Ratings and Specifications

Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49°C (120°F)			
Maximum pressure			210 bar (3000 psi) Aluminum housing 350 bar (5000 psi) Steel housing
Rated flow			6 series - 11 L/min (3 USgpm) 8 series - 24,6 L/min (6.5 USgpm) 12 series - 88,9 L/min (23.5 USgpm) 16 series - 170,3 L/min (45 USgpm)
Internal leakage			Between ports 2 to 1, and 2 to 3 <5 drops/min @ 210 bar (3000 psi)
Temperature range			-40°C to +120°C (-40° to + 248°F)
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	6 series	w/aluminum housing	0,10 kg (0.22 bs)
		w/steel housing	0,30 kg (0.66 lbs)
	8 series	w/aluminum housing	0,28 kg (0.62 lbs)
		w/steel housing	0,90 kg (1.86 lbs)
	12 series	w/aluminum housing	0,75 kg (1.65 lbs)
		w/steel housing	2,25 kg (4.95 lbs)
	16 series	w/aluminum housing	1,76 kg (3.86 lbs)
		w/steel housing	5,25 kg (11.58 lbs)
Seals (2 required)		6 series	154128 (Buna-N) / 396096 (Viton®)
		8 series	154129 (Buna-N) / 396098 (Viton®)
		12 series	154131 (Buna-N) / 396102 (Viton®)
		16 series	154132 (Buna-N) / 396105 (Viton®)

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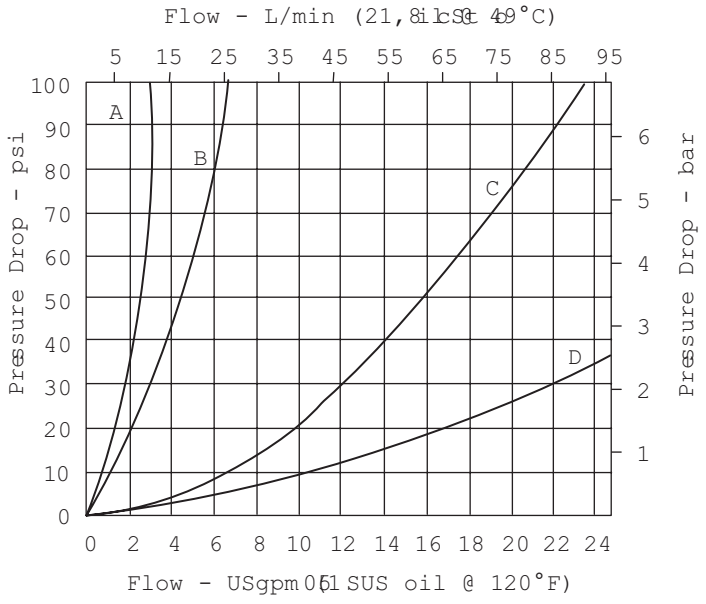
Description

This valve provides a means of sensing the higher pressures between two lines on a hydraulic circuit allowing this line to be used for an auxiliary function such as the removal of a mechanically applied brake, the operation of a gauge or to give a remote pressure sensing line for the control of a separate valve.

Pressure Drop

ABCD



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

EATON Powering Business Worldwide

Integrated Hydraulics An Eaton Brand

DSV3 ** B - Shuttle Valve

Ball Type, In-line Housing

Up to 170 L/min (45 USgpm) • 350 bar (5000 psi)

Model Code

DSV3 – ** (V) – B – ** – ***

1 2 3 4 5 6

1 Function

DSV3 - Shuttle Valve

2 Size

6 - 6 Size
8 - 8 Size
12 - 12 Size
16 - 16 Size

3 Seals

Blank - Buna-N
V - Viton

4 Style

B - Ball

5 Housing Material

A - Aluminum
S - Steel

6 Port Size

6 Series
1 - 1/8" NPTF

8 Series
2 - 1/4" NPTF
6T - SAE 6

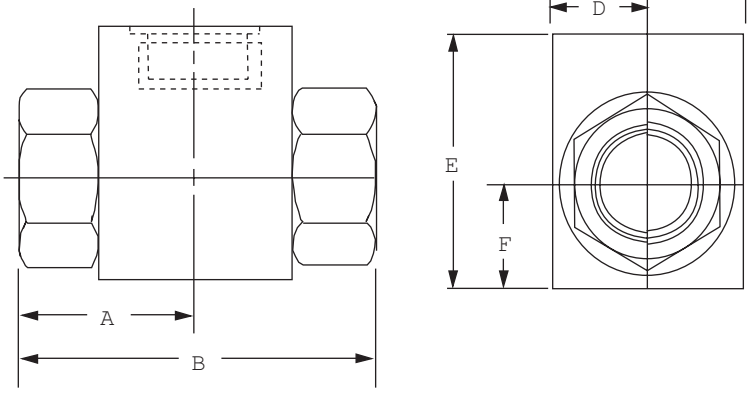
12 Series
4 - 1/2' NPTF
8T - SAE 8

16 Series
6 - 3/4" NPTF
12T - SAE 12

Dimensions

mm (inch)

Cartridge Only
Basic Code
DSV3



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).

Model Number	A	B	C	D	E	F
DSV3-6-B-A1	22,2 (0.87)	44,5 (1.75)	19,0 (0.75)	9,5 (0.37)	25,4 (1.00)	9,5 (0.37)
DSV3-6-B-S1	22,2 (0.87)	44,5 (1.75)	20,6 (0.81)	10,3 (0.41)	31,7 (1.25)	12,7 (0.50)
DSV3-8-B-A2	23,8 (0.94)	47,6 (1.87)	25,4 (1.00)	12, 7 (0.50)	38,1 (1.50)	12,7 (0.50)
DSV3-8-B-S2	23,8 (0.94)	47,6 (1.87)	31,7 (1.25)	15,9 (0.63)	43,7 (1.72)	15,9 (0.63)
DSV3-8-B-A6T	23,8 (0.94)	47,6 (1.87)	25,4 (1.00)	12, 7 (0.50)	38,1 (1.50)	12,7 (0.50)
DSV3-8-B-S6T	23,8 (0.94)	47,6 (1.87)	31,7 (1.25)	15,9 (0.63)	43,7 (1.72)	15,9 (0.63)
DSV3-12-B-A4	31,7 (1.25)	63,5 (1.50)	38,1 (1.50)	19,1 (0.75)	50,8 (2.00)	19,1 (0.75)
DSV3-12-B-S4	31,7 (1.25)	63,5 (1.50)	43,7 (1.72)	21,8 (0.86)	57,5 (2.25)	22,2 (0.88)
DSV3-12-B-A8T	31,7 (1.25)	63,5 (1.50)	38,1 (1.50)	19,1 (0.75)	50,8 (2.00)	19,1 (0.75)
DSV3-12-B-S8T	31,7 (1.25)	63,5 (1.50)	43,7 (1.72)	21,8 (0.86)	57,5 (2.25)	22,2 (0.88)
DSV3-16-B-A6	47,6 (1.88)	95,3 (3.75)	47,6 (1.88)	23,8 (0.94)	63,5 (2.50)	23,8 (0.97)
DSV3-16-B-S6	47,6 (1.88)	95,3 (3.75)	50,0 (1.97)	25,0 (0.98)	62,7 (2.47)	25,4 (1.00)
DSV3-16-B-A12T	47,6 (1.88)	95,3 (3.75)	47,6 (1.88)	23,8 (0.94)	63,5 (2.50)	23,8 (0.97)
DSV3-16-B-S12T	47,6 (1.88)	95,3 (3.75)	50,0 (1.97)	25,0 (0.98)	62,7 (2.47)	25,4 (1.00)