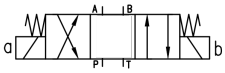
DIRECTION CONTROL VALVE - F4WE6

CETOP 3 | Spool Type | 420bar

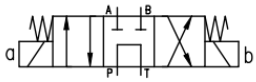


Specification/ Technical Data

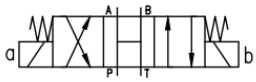
Maximum Pressure	420 bar
Maximum Flow	60 lpm
Max. Pressure in T port	160 bar
Max. Internal Leakage*	20ml/min
Mounting	CETOP 3
Manual Override	Standard
Body Material	SG Iron
Media	Mineral Oil
Oil Temperature Range	+10 to 80°C
Oil Viscosity	ISO VG 46-100
Oil Cleanliness (ISO 4406)	20/18 /15
Orientation	Any
Weight	1.5 - 2.2 Kg

* max internal leakage per 100bar

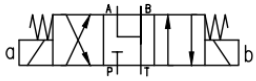
Directional Control Valves (DCV) are spool type valves used in hydraulics to change the oil flow direction using electric solenoids. These valves use wet-pin solenoids in AC or DC voltages and are used for vertical stacking valve assemblies. A variety of spool configurations including 4-pos/3-way and 4-pos/2-way are available with 12, 24VDC and 220VAC. The valves meet the requirement of CETOP3 mounting interface (ISO4401) and are compatible with equivalent valves of other manufacturers.



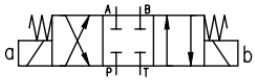
G Spool



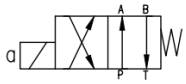
H Spool



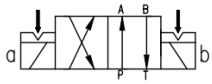
J Spool



E Spool



D Spool



DD Spool

Detent option available only in D spool

Note: Direction control valve F4WE6 will be supplied with bolt-kit and LED solenoid plug

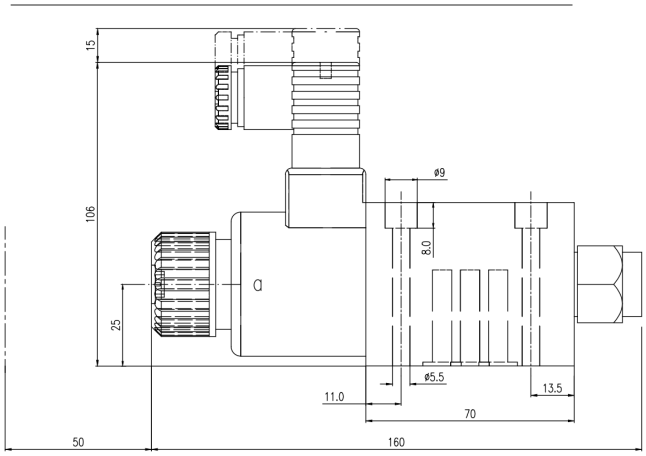
Ordering Information

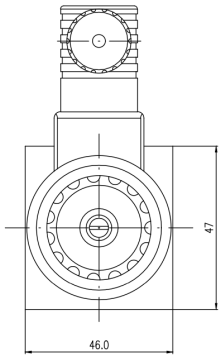
Basic Code	4-way Spool Valve	F4WE
Size/ NG	NG6/ CETOP 3	6
Spool Config.	D, G, J, H, E	D
Spool Type	D - Detent/ Omit - Spring	-
Voltage	G12, G24, A220	G24
Seal Material	NBR	No code
Version		1x

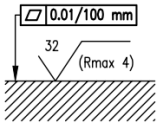
Pressure Drop+	P to A	P to B	A to T	B to T
G Spool	4 (12) bar	4 (12) bar	3 (10) bar	3 (10) bar
H Spool	3 (8) bar	3 (8) bar	3.5 (8) bar	3.5 (8) bar
J Spool	2.5 (9) bar	2.5 (9) bar	2.5 (8.5) bar	2.5 (8.5) bar
E Spool	3 (10) bar	3 (10) bar	3 (8.5) bar	3 (8.5) bar
D Spool	3 (12) bar	3 (12) bar	3 (10) bar	3 (10) bar

+ Measured at 30lpm and (60lpm). Recorded at TOil = 40°C and 68 cSt.

Single Solenoid

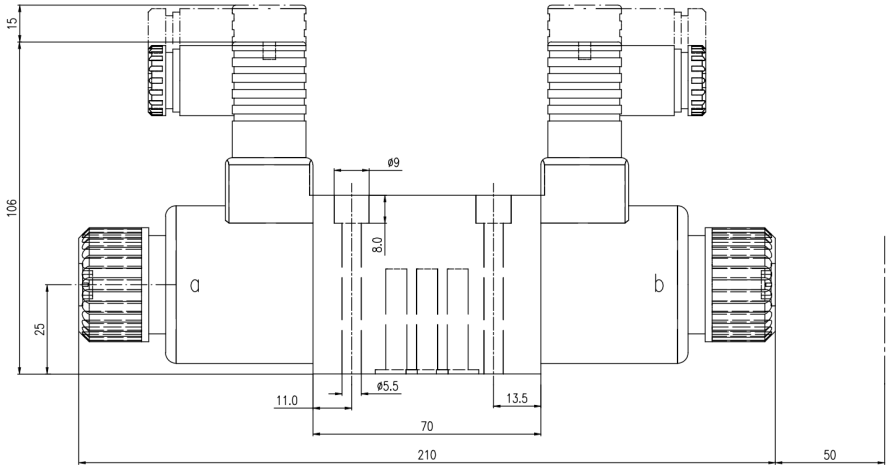


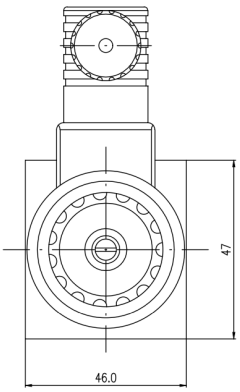


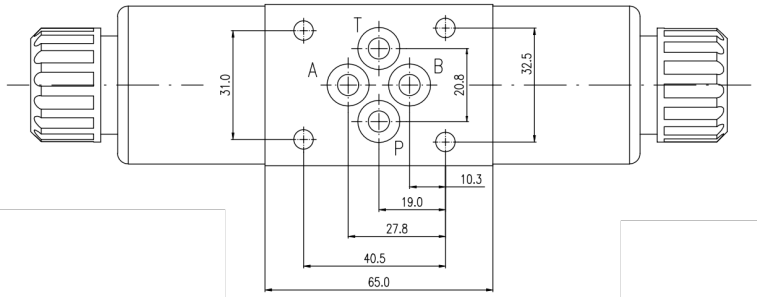


Valve Mounting Bolts M5 x 50mm x 4nos
Tightening Torque 9N-m
Face O ring 9.0 x 1.75mm x 4nos/ NBR

Double Solenoid







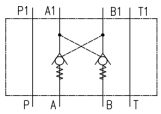
All dimensions in mm

Spares List

Seal Kit	SSVF4WE61x
Solenoid Coil 12VDC	PN01885R00
Solenoid Coil 24VDC	PN02005R00
Solenoid Coil 220VAC	PN01924R00

PILOT OPERATED CHECK VALVE - FZ2S6

CETOP 3 | Sandwich Type | 315bar



Specification/ Technical Data

Maximum Pressure	315 bar
Maximum Flow	60 lpm
Cracking Pressure	1.5 bar
Type	Sandwich
Mounting	CETOP 3
Area Ratio	A1:A2=1:3
Body Material	SG Iron
Media	Mineral Oil
Oil Temperature Range	+10 to 80°C
Oil Viscosity	ISO VG 46-100
Oil Cleanliness (ISO 4406)	20/18 /15
Orientation	Any
Weight	0.8 Kg

Note: Sandwich DPOCV for A and B line available upon request against volumes

Ordering Information

Basic Code	Sandwich DPOCV	FZ2S
Size/ NG	NG6/ CETOP 3	6
Spool Config.	AB line	AB
Seal Material	NBR	No code
Version		1x

Sandwich type double pilot operated check valves (DPOCV) or sandwich isolator valve are used in hydraulic circuits for leak free closure of A & B ports for long periods of time. These valves are designed as internally piloted-to-open using pressure signal from opposite actuator port. The valves meet the requirement of CETOP 3 mounting interface (ISO4401) and used in vertical stacking assemblies.

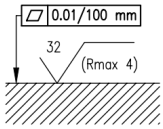
The valve allows free flow in direction A1 to A and B1 to B subject to the cracking pressure and in direction A to A1 and B to B1, the oil flow is blocked. However, the valve can be opened using internal pilot line.

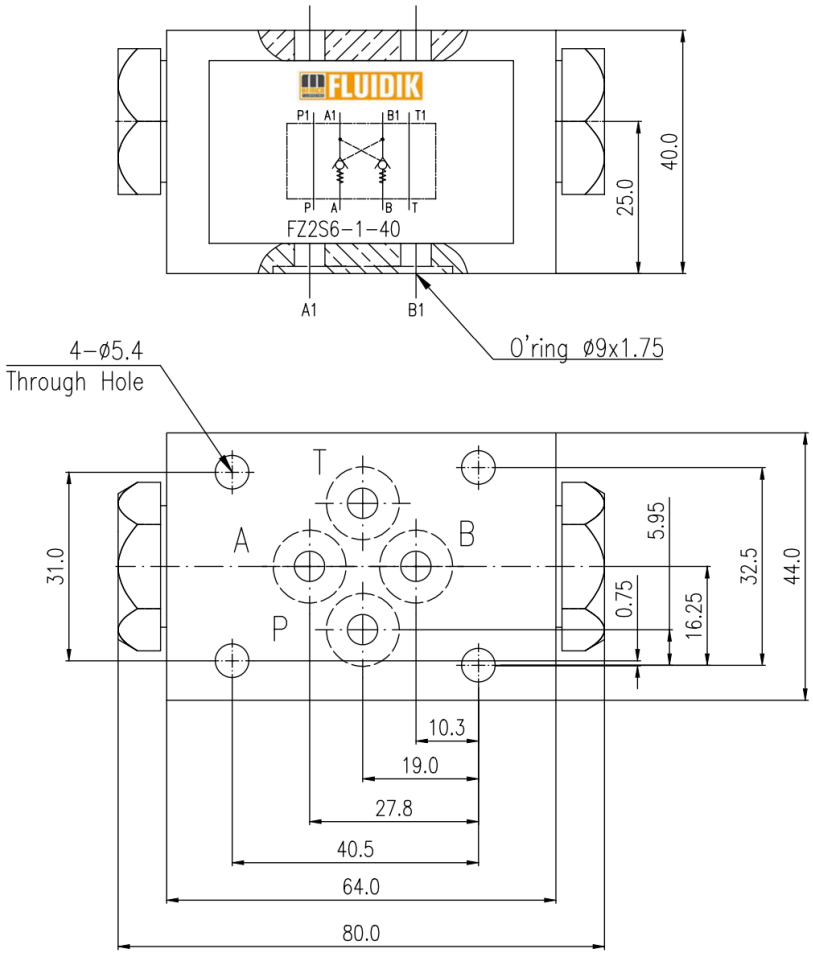
The valve finds usage in hydraulic cylinder applications for pressure holding function. During forward operation, the oil flows from A1 to A (free flow) and the pilot line opens the valve in B line thereby allowing oil from rod side to move to tank. In the retraction stroke, the oil flows from B1 to B (free flow) and pilot line opens valve in A line to tank, thereby allowing retraction of cylinder.

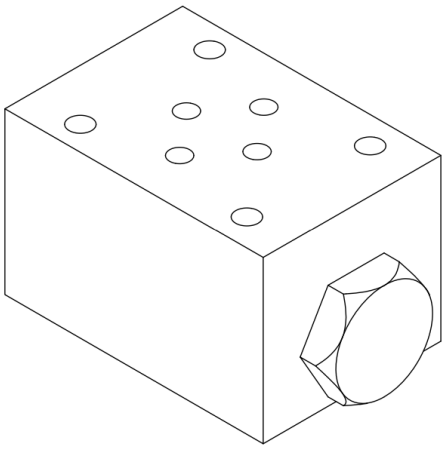
When there is no oil flow from A1 to A or B1 to B, the check valves in both A & B lines are seated and the pressure in the cylinder is locked thereby achieving the required functionality.

Note: It is recommended to use J and H spools with DPOCV and not E and G spools for efficient performance and better pressure holding in neutral position from the valve.

Dimensional Details







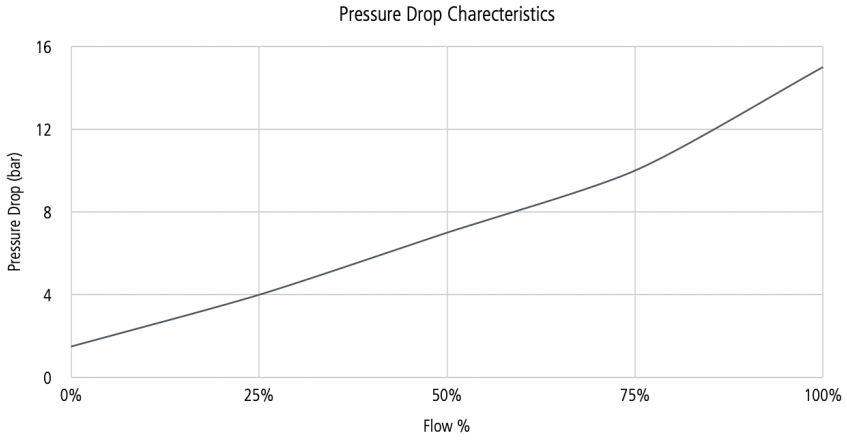
All dimensions in mm

Spares List

Seal Kit	SSVF4WE61x

Performance Chart

Recorded at TOil = 40°C and 68 cSt.



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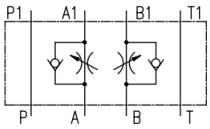
DOUBLE THROTTLE CHECK VALVE - FZ2FS6

CETOP 3 | Sandwich Type | 315bar



Specification/ Technical Data

Maximum Pressure	315 bar
Maximum Flow	60 lpm
Type	Sandwich
Mounting	CETOP 3
Control	Meter-in/ out
Pressure Compensation	No
Body Material	SG Iron
Media	Mineral Oil
Oil Temperature Range	+10 to 80°C
Oil Viscosity	ISO VG 46-100
Oil Cleanliness (ISO 4406)	20/18 /15
Orientation	Any
Weight	1.2 Kg

Sandwich type double throttle cum check valves are used in hydraulic circuits to limit the oil flow in A and B ports. The valves allow free flow of oil from ports A to A1 and B to B1 via the by-pass check valves. In oil flow direction A1 to A and B1 to B, the adjustable throttle can be used to throttle the flow as per requirement. The valves are designed to be used in meter-out (discharge throttle) and/ or meter-in (supply throttle) circuits dependent on position of seal plate (or O ring plate).

The valves meet the requirement of CETOP3 mounting interface (ISO4401) and are compatible with equivalent valves of other manufacturers.

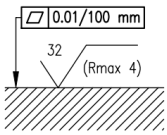
*Meter-in or Meter-out is dependent on position of seal plate supplied as standard with valve

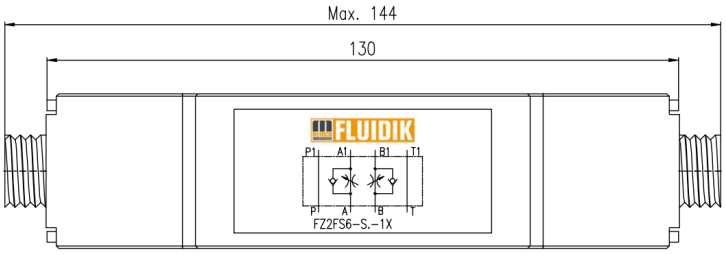
Ordering Information

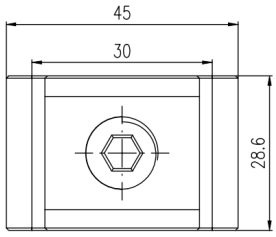
Basic Code	Sandwich DPOCV	FZ2FS
Size/ NG	NG6/ CETOP 3	6
Control	A&B line	AB
Type*	S1-Meter-in/ S2-Meter-out	No code
Seal Material	NBR	No code
Version		1x

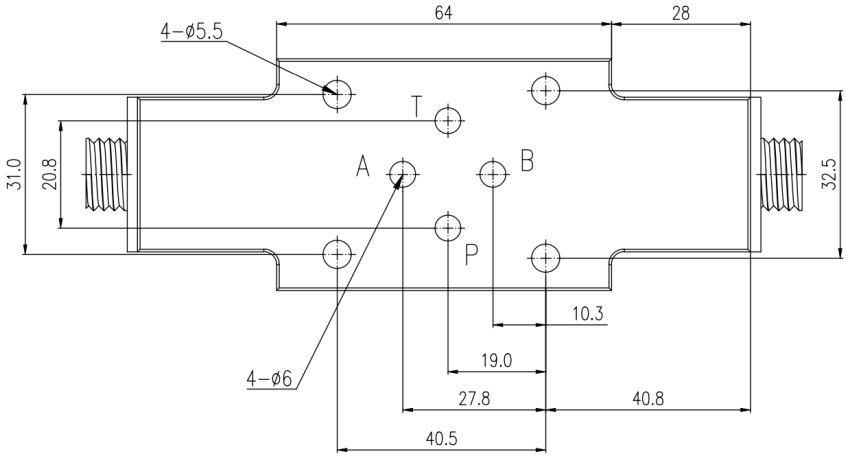
To adjust the oil flow rate, tighten or loosen the adjustment screw in clockwise or counter-clockwise direction. Rotating it clock-wise direction decreases the flow and counterclockwise increases the flow. Use the numbering on the valve adjustment screw as reference and, if required, use lock-nut (not in scope) to lock/ fix the adjusted throttle spool position.

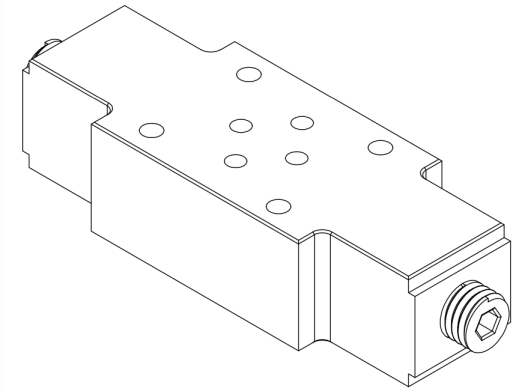
Dimensional Details







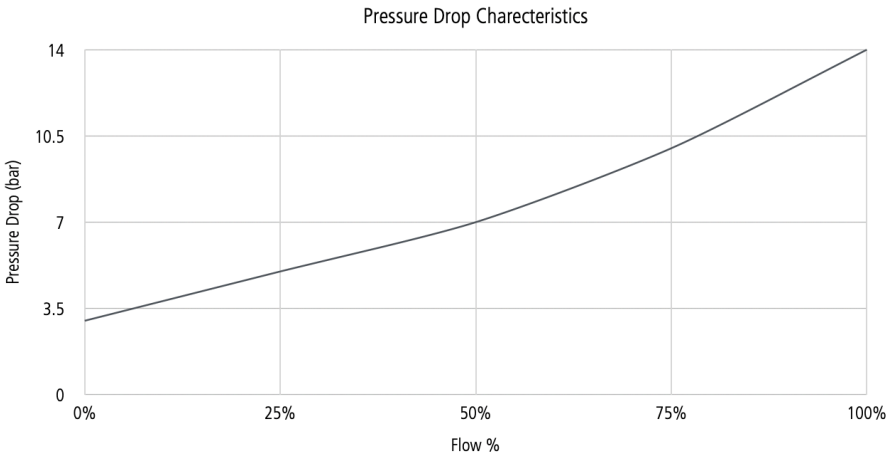




Face O ring 9.0 x 1.75mm x 4nos/ NBR

Performance Chart

Recorded at TOil = 40°C and 68 cSt.



+ Measured over check valve with throttle valve closed

All dimensions in mm

Spares List

Seal Kit	SSVF4WE61x

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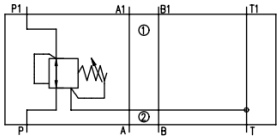
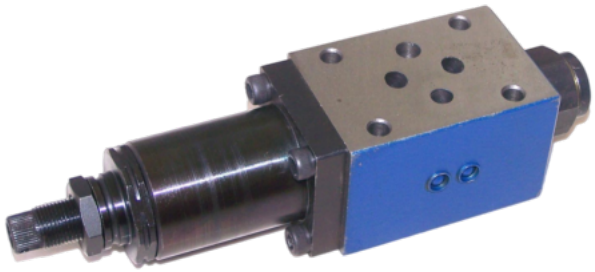
PRESSURE REDUCING VALVE - FZDR6

CETOP 3 | Sandwich Type | 315bar



Specification/ Technical Data

Maximum Inlet Pressure	315 bar
Maximum Flow	30 lpm
Secondary Control Pressure	150bar
Type	Sandwich
Mounting	CETOP 3
Back Pressure	Up to 60 bar
Body Material	SG Iron
Media	Mineral Oil
Oil Temperature Range	+10 to 80°C
Oil Viscosity	ISO VG 46-100
Oil Cleanliness (ISO 4406)	20/18 /15
Orientation	Any
Weight	1.2 Kg



Note: A line control available in 75bar version only

Ordering Information

Basic Code	Sandwich Pr. Reducing	FZDR
Size/ NG	NG6/ CETOP 3	6
Type	Direct Operated	D
Control Line	P or A line	P or A*
Adjustment	1 - set screw type	1
Sec. Pressure	75/ 150bar	75
Variant	Internal pilot, w/o check valve	YM
Seal Material	NBR	No code
Version		1x

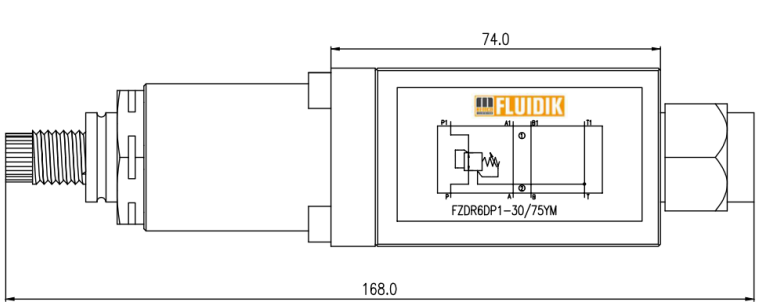
Sandwich pressure reducing valves FZDR6 are commonly used in hydraulics to reduce pressures in one segment or branch of circuit. These are 3-way direct operated valves in sandwich design suitable for vertical stacking with CETOP3 (ISO4401) mounting interfaces. The reduced pressure (secondary pressure) can be monitored through gauge port available as standard on the valve.

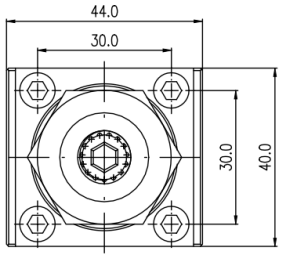
These valves are direct operated type with pressure reducing in P or A lines as option. The standard valves are internally piloted with external pilot oil return. When the primary pressure is lower than the secondary pressure setting, the oil flows from P to P1 without any intervention of the reducing valve, but the pressure is monitored through internal pilot line. When the primary pressure increases beyond the secondary pressure setting, the secondary pressure is maintained as per setting.

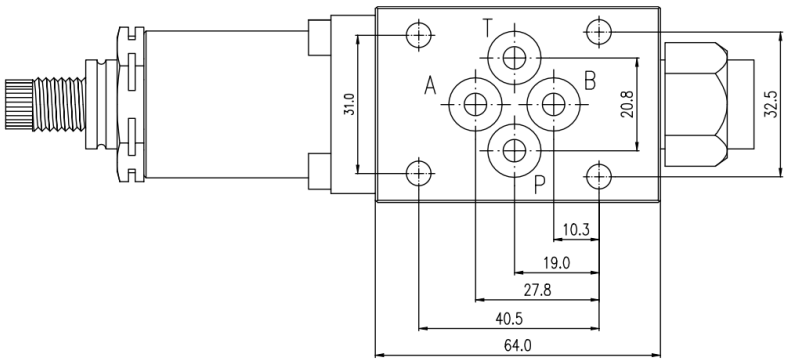
In the event of fluctuations in actuator side and secondary pressure increases, the valve relieves the additional pressure and functions as a reducing cum relieving valve.

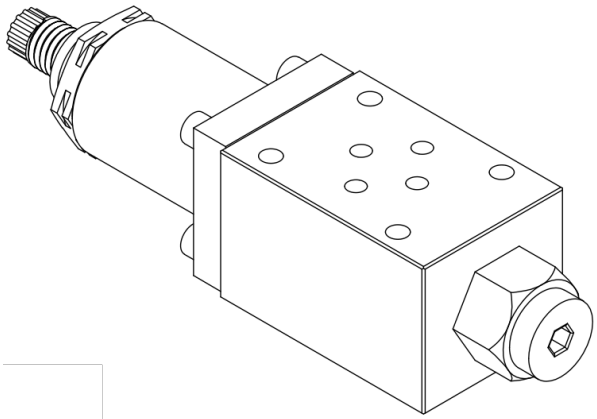
The secondary pressure may be increased by adjusting the screw in clock-wise direction and rotation in counter clock-wise direction will reduce the set pressure. The FZDR6 valves are sensitive to flow through the valves and refer the flow Vs minimum adjustment graph when selecting the suitable valve for the application.

Dimensional Details





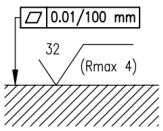




All dimensions in mm

Spares List

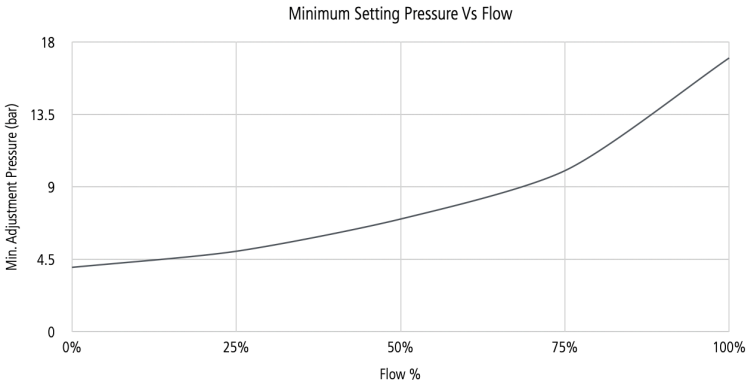
Seal Kit	SSVF4WE61x

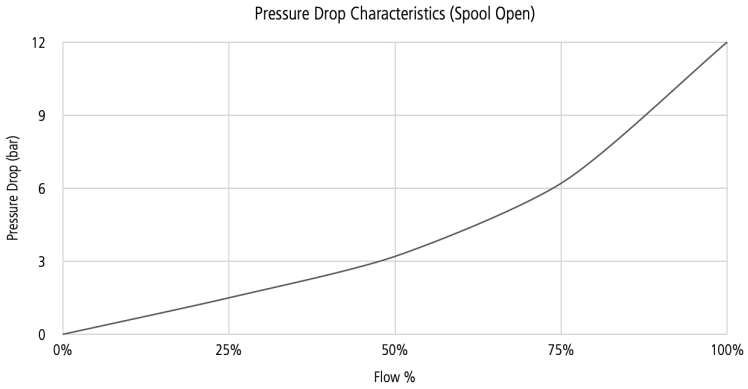


Face O ring 9.0 x 1.75mm x 4nos/ NBR

Performance Chart

Recorded at TOil = 40°C and 68 cSt.





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