

Low side, 3-position, hot oil shuttle valve with delayed shift

Capacity:
40 gpm (160 L/min.)

Functional Group:

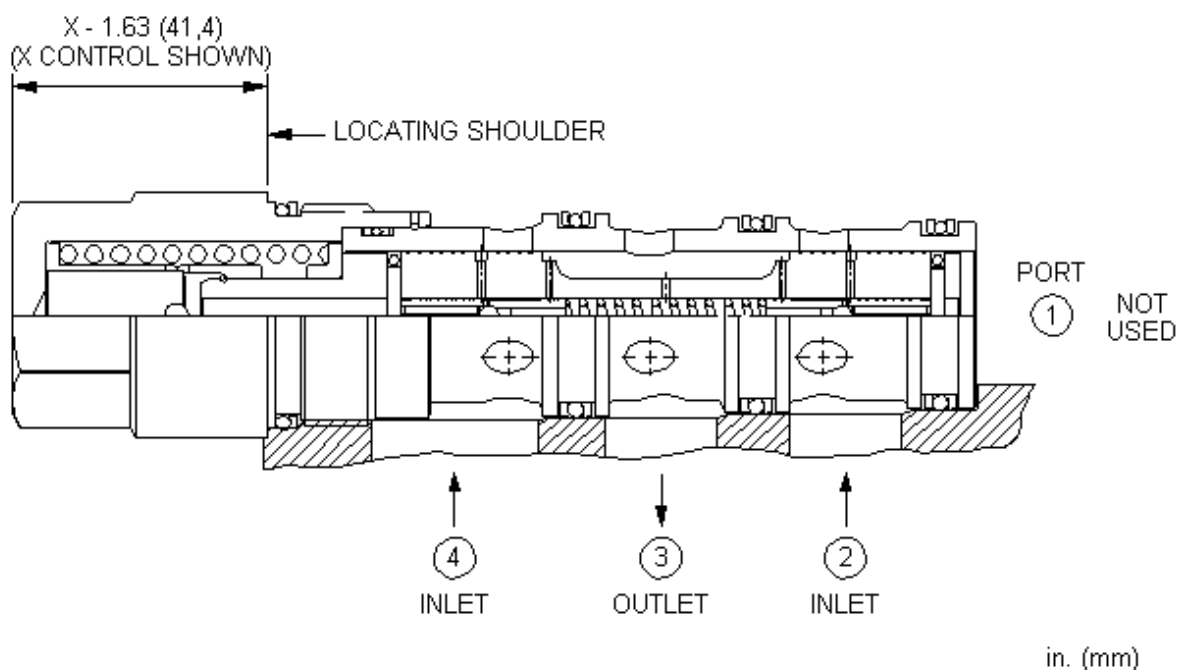
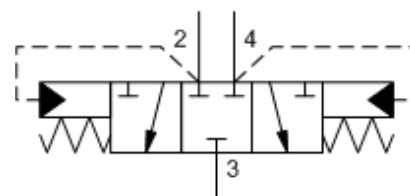
Products : Cartridges : Shuttle Valve : 4-Port : Low Side (Hot Oil), Delay Shift, 3 Position

Model:

DSFD

Product Description

Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3). The delay shift shuttle prevents flow transients downstream of the hot oil circuit.

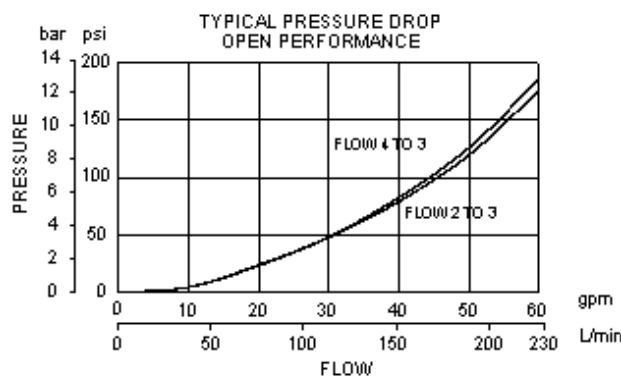


Technical Features

- The valve is designed to center quickly and stay centered until conditions are correct for it to open as explained in the next 2 technical features.
- The valve prevents flow transients downstream of the hot oil relief in 2 ways. The shuttle stays centered until one side of the transmission actually becomes the low side. Once a low side has been established the valve opens in a controlled fashion after a delay of about 2 seconds.
- The valve centers and remains centered as long as pressures at ports 2 and 4 are both at or above a value equal to 300 psi (20 bar) plus the setting of the hot oil relief. For instance, if the hot oil relief is set at 200 psi (14 bar) the shuttle will not open unless one side of the transmission drops below 500 psi (34 bar).
- The spool incorporates a hydraulic stop that eliminates mechanical impact and therefore the potential for internal damage.
- The hydraulic stop results in a small pilot flow from the high side work port (port 2 or 4) to the common port (port 3).
- A unique feature due to the hydraulic stop is that the hot oil relief setting can be confirmed with the transmission in neutral.
- Although this valve goes into a 4-port cavity, the nose (port 1) is not used.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

Technical Data

	U.S. Units	Metric Units
Cavity	T-33A	
Capacity	40 gpm	160 L/min.
Maximum Operating Pressure	5000 psi	350 bar
Pilot Flow	23 in ³ /min.	0,38 L/min.
Series (from Cavity)	Series 3	
Valve Hex Size	1 1/4 in.	31,8 mm
Valve Installation Torque	150 - 160 lbf ft	200 - 215 Nm
Seal Kits - Cartridge	Buna: 990-033-007	
Seal Kits - Cartridge	Viton: 990-033-006	
Model Weight	1.69 lb.	0.77 kg.

**DSFD-XEN****Control****Standard Options****X** Not Adjustable**Shifting Pressure****Standard Options****E** 75 psi (5 bar)**Seal Material****Standard Options****N** Buna-N**V** Viton