



Vent-to-open, spring biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

Capacity:
300 gpm (1100
L/min.)

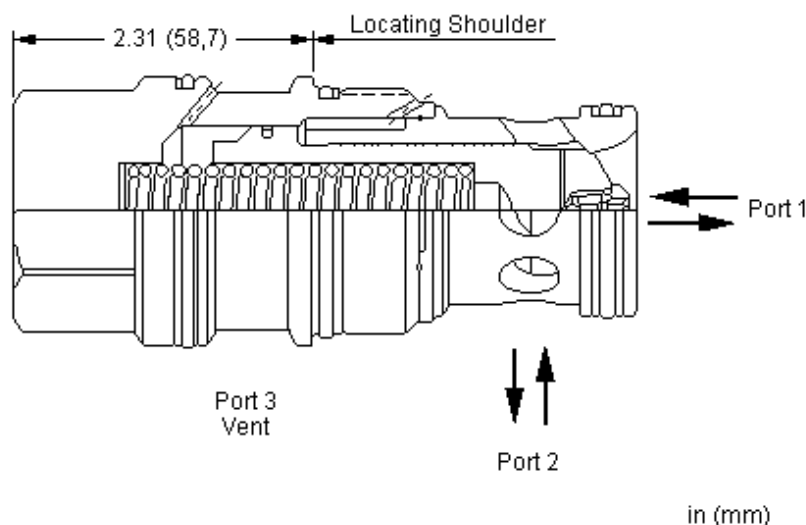
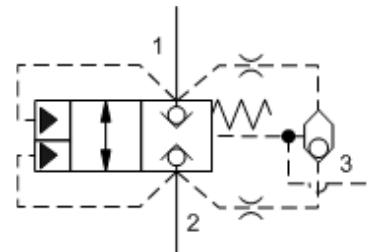
Functional Group:

Products : Cartridges : Logic Element : Unbalanced Poppet : Vent-to-open, Spring Biased Closed, with Pilot Source from Port 1 or 2

Model:
LOKD

Product Description

These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and incorporate an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With port 3 blocked, the valve is held in the closed position by the spring force. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.



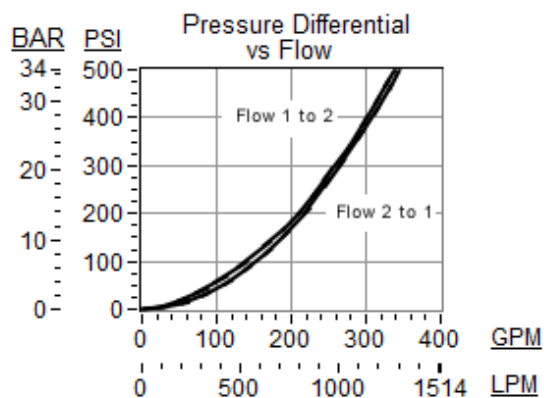
Technical Features

- These valves will work in Sun's standard T-19A cavity at lower capacity. To realize the full stated capacity, the T-19AU cavity should be used.
- These valves have positive seals between port 2 and the pilot area.
- These valves open quickly when vented. Time to close is difficult to predict as it is dependant on the rate of flow and the pressure drop created as it closes.
- Controlling 2 or more of these valves with 1 pilot control is not advised. The shuttle valve creates a flow path between the multiple elements. Using a blocking check on the pilot of each logic valve will prevent this.
- Because these valves are unbalanced, operation is pressure dependent. Opening and closing of the poppet are functions of the force balances on three areas: Port 1 = 100%, Port 2 = 80%, and the Pilot Area = 180%.
- These valves are pressure responsive at all ports, therefore it is essential to consider all aspects of system operation through a complete cycle. Pressure changes at any one port may cause a valve to switch from a closed to an open position, or vice versa. All possible pressure changes in the complete circuit must be considered to assure a safe, functional system design.
- All ports will accept 5000 psi (350 bar).
- 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.

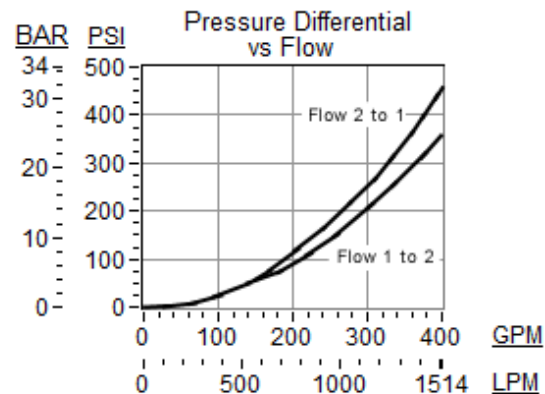
Technical Data

	U.S. Units	Metric Units
Cavity	T-19AU	
Capacity	300 gpm	1100 L/min.
Area Ratio, A3 to A1	1.8:1	
Area Ratio, A3 to A2	2.25:1	
Control Orifice Diameter	.035 in.	0,9 mm
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.	0,7 cc/min.
Pilot Volume Displacement	.47 in ³	7,7 cc
Series (from Cavity)	Series 4	
Valve Hex Size	1 5/8 in.	41,3 mm
Valve Installation Torque	350 - 375 lbf ft	475 - 500 Nm
Seal Kits - Cartridge	Buna: 990-019-007	
Seal Kits - Cartridge	Viton: 990-019-006	
Model Weight	2.56 lb.	1.16 kg.

Model LOKD installed in T-19A Cavity



Model LOKD installed in T-19AU Cavity

**LOKD-XDN****Control****Standard Options****X** Not Adjustable**Cracking Pressure****Standard Options****D** 50 psi (3,5 bar)**Seal Material****Standard Options**

N Buna-N
V Viton