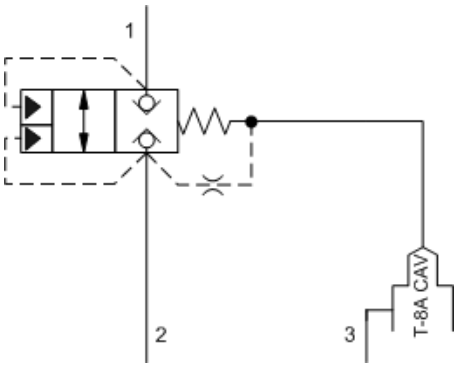
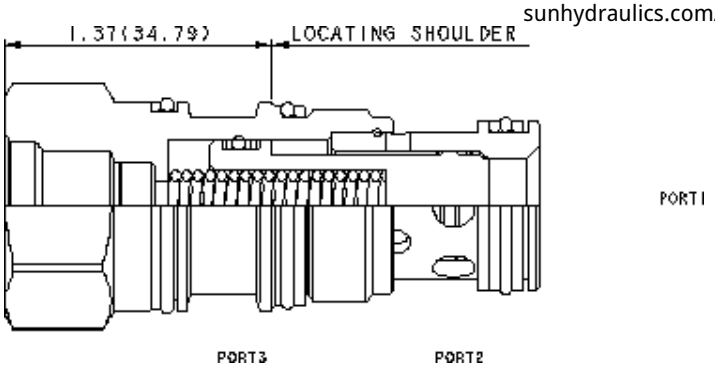
MODEL
LOFB8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 2 and integral T-8A control cavity

SERIES 2 / CAPACITY: 50 gpm / CAVITY: T-2A

sunhydraulics.com/model/LOFB8





This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 2 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures 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.

CONFIGURATION

D	Cracking Pressure	50 psi (3,5 bar)
N	Seal Material	Buna-N

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-2A
Series	2
Capacity	50 gpm
Maximum Operating Pressure	5000 psi
Pilot Volume Displacement	.07 in³
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	.021 in.
Valve Hex Size	1 1/8 in.
Valve Installation Torque	45 - 50 lbf ft
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.44 lb.

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOFB8DN

CRACKING PRESSURE	(D)
D 50 psi (3,5 bar)	

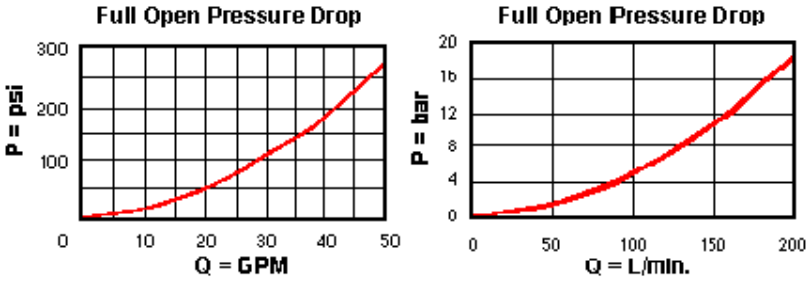
SEAL MATERIAL	(N)
N Buna-N	
V Viton	

© 2025 Sun Hydraulics

TECHNICAL FEATURES

- These valves have positive seals between port 2 and the pilot area.
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the logic cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges.
- These valves open quickly when vented. Time to close is difficult to predict as it is dependent on the rate of flow and the pressure drop created as it closes.
- 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.

PERFORMANCE CURVES



RELATED MODELS

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

© 2025 Sun Hydraulics