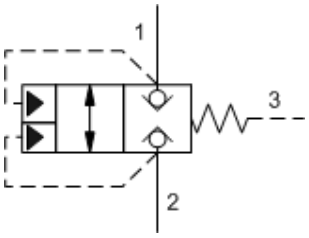
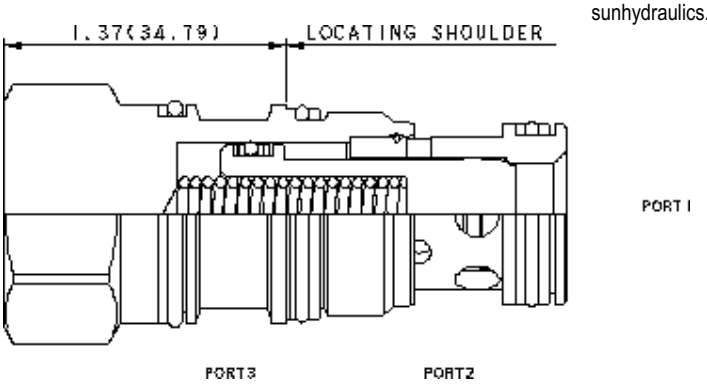
MODEL
**LOFC**

Pilot-to-close, spring-biased closed, unbalanced poppet logic element
**SERIES 2 / CAPACITY: 50 gpm / CAVITY: T-2A**

sunhydraulics.com/model/LOFC




## CONFIGURATION

| | | |
|---|---|---|
| **X** | Control | Standard Pilot |
| **D** | Cracking Pressure | 50 psi (3,5 bar) |
| **N** | Seal Material | Buna-N |
| **(none)** | Material/Coating | |

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. 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 DATA

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

| | |
|---|---|
| Cavity | T-2A |
| Series | 2 |
| Capacity | 50 gpm |
| Maximum Operating Pressure | 5000 psi |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 10 drops/min. |
| Pilot Volume Displacement | .07 in³ |
| Pilot Passage into Valve | .035 in. |
| Area Ratio, A3 to A1 | 1.8:1 |
| Area Ratio, A3 to A2 | 2.25:1 |
| 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 | 0.49 lb. |

## CONFIGURATION OPTIONS

**Model Code Example: LOFCXDN**

| CONTROL (X) | CRACKING PRESSURE (D) | SEAL MATERIAL (N) | MATERIAL/COATING |
|---|---|---|---|
| **X** Standard Pilot | **D** 50 psi (3,5 bar) | **N** Buna-N | Standard Material/Coating |
| | | **E** EPDM | **/AP** Stainless Steel, Passivated |
| | | **V** Viton | **/LH** Mild Steel, Zinc-Nickel |

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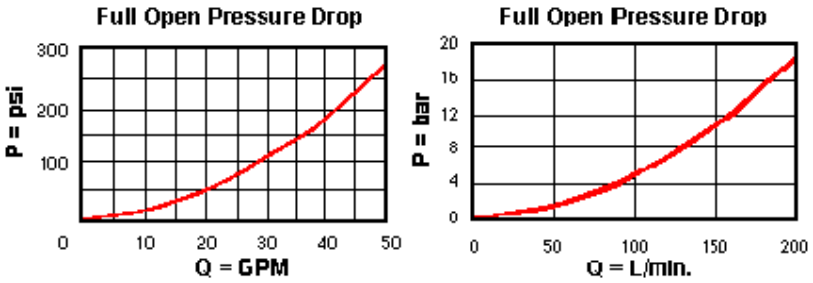
## TECHNICAL FEATURES

- These valves have positive seals between port 2 and the pilot area.
- 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.
- Pilot port 3 requires a controlled pressure. A blocked port 3 may result in pressure intensification due to the floating design of the sleeve.
- All ports will accept 5000 psi (350 bar).
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- 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

- LOFCZ Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

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