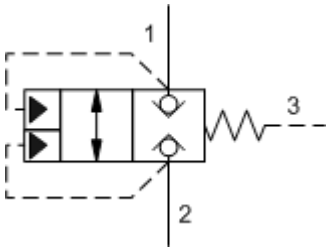
MODEL
**LOFC**

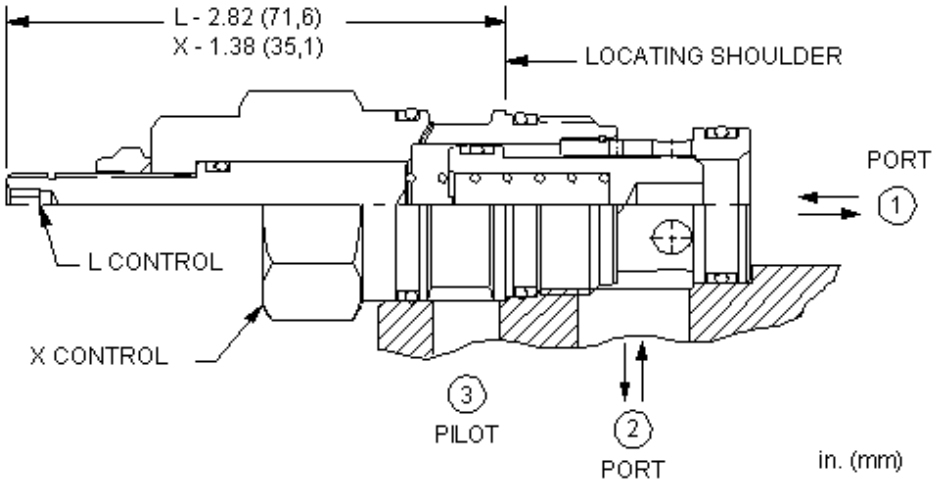
Pilot-to-close, spring-biased closed, unbalanced poppet logic element
**CAPACITY: 50 gpm / CAVITY: T-2A**

sunhydraulics.com/model/LOFC




## CONFIGURATION

| | | |
|---|---|---|
| X | Control | Standard Pilot |
| | Cracking Pressure | |
| | Seal Material | |
| | 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 |
| Area Ratio, A3 to A1 | 1.8:1 |
| Area Ratio, A3 to A2 | 2.25:1 |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 10 drops/min. |
| Pilot Passage into Valve | .035 in. |
| Pilot Volume Displacement | .07 $in^3$ |
| Valve Hex Size | 1 1/8 in. |
| Valve Installation Torque | 45 - 50 lbf ft |
| Seal kit - Cartridge | Buna: 990-202-007 |
| Seal kit - Cartridge | Polyurethane: 990-002-002 |
| Seal kit - Cartridge | Viton: 990-202-006 |

## OPTION SELECTION EXAMPLE: LOFCXN

| CONTROL | (X) |
|---|---|
| **X** | Standard Pilot |

| CRACKING PRESSURE | (D) |
|---|---|
| **D** | 50 psi (3,5 bar) |

| SEAL MATERIAL | (N) |
|---|---|
| **N** | Buna-N |
| **E** | EPDM |
| **V** | Viton |

| MATERIAL/COATING | (/LH) |
|---|---|
| **/LH** | Mild Steel, Zinc-Nickel |
| **/AP** | Stainless Steel, Passivated |
| | Standard Material/Coating |

## 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