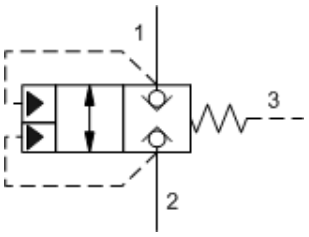
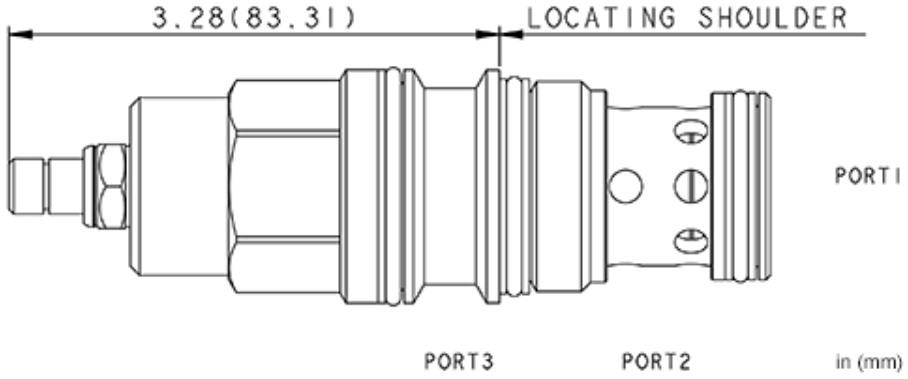
MODEL
# LOHDL

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

**SERIES 3 / CAPACITY: 100 gpm / CAVITY: T-17A**

sunhydraulics.com/model/LOHDL




## CONFIGURATION

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

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-17A |
| Series | 3 |
| Capacity | 100 gpm |
| Maximum Operating Pressure | 5000 psi |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 10 drops/min. |
| Pilot Volume Displacement | .25 in³ |
| Area Ratio, A3 to A1 | 1.8:1 |
| Area Ratio, A3 to A2 | 2.25:1 |
| Control Orifice Diameter | .031 in. |
| Valve Hex Size | 1 1/4 in. |
| Valve Installation Torque | 150 - 160 lbf ft |
| Seal kit - Cartridge | Buna: 990017007 |
| Seal kit - Cartridge | Polyurethane: 990017002 |
| Seal kit - Cartridge | Viton: 990017006 |
| Model Weight | 1.31 lb. |

## CONFIGURATION OPTIONS

**Model Code Example: LOHDLArray**

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

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

© 2026 Sun Hydraulics

## 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.
- 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.

## RELATED MODELS

- LOHD Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2
- LOHD8 Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2 and integral T-8A control cavity

© 2026 Sun Hydraulics