



in (mm)

Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - No. of CCW Turns from Min. to Max. Setting	6.5
Reseat	>85% of setting
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.20 kg.

CONFIGURATION OPTIONS

Model Code Example: **MBDALHN**

CONTROL	(L) FUNCTIONAL SETTING RANGE	(H) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting	V Viton	IAP Stainless Steel, Passivated

TECHNICAL FEATURES

- Set at least 1.3 times the maximum load induced pressure (1.5 times when the setting is less than 2000 psi or 140 bar).
- Turn adjustment clockwise to decrease setting and release load.
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- This valve is functionally a 3 port counterbalance valve. It seats as a poppet valve and modulates as a spool valve offering the best of both worlds.
- These valves are capable of modulating over a broader range of flows than the pure poppet designs. The longer stroke allows us to incorporate a uni-directional damping device that smooths the opening and lets the valve close quickly.
- All 3-port counterbalance, load control, and pilot-to-open check cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size).
- Full clockwise adjustment is less than 200 psi (14 bar).
- Sun load control and counterbalance cartridges can be installed directly into a cavity machined in an actuator housing for added protection and improved stiffness in the circuit.
- This valve has positive seals between all ports.
- This valve has full relief capacity.
- 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

