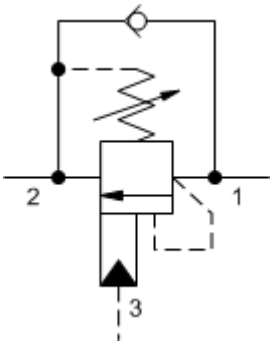
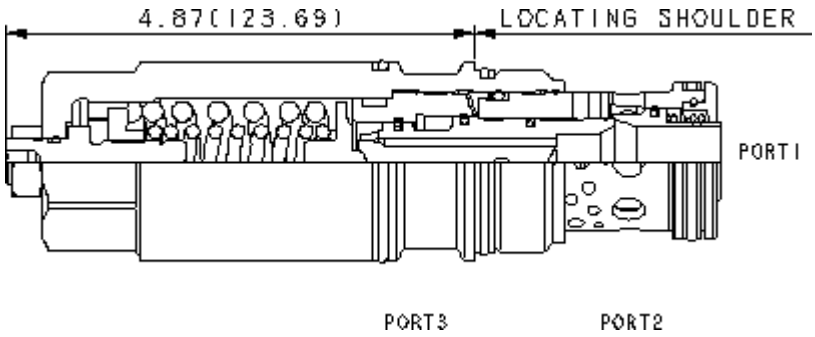


3-Port Non-vented



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-19A
Series	4
Capacity	120 gpm
Maximum Operating Pressure	5000 psi
Pilot Ratio	1.5:1
Maximum Recommended Load Pressure	See Technical Features
Adjustment - No. of CCW Turns from Min. to Max. Setting	7
Check Cracking Pressure	25 psi
Factory Pressure Settings Established at	2 in^3/min.
Maximum Valve Leakage at Reseat	5 drops/min.
Reseat	≥77% of setting
Valve Hex Size	1 5/8 in.
Valve Installation Torque	350 - 375 lbf ft
Adjustment Screw Internal Hex Size	7/32 in.
Locknut Hex Size	3/4 in.
Locknut Torque	80 - 90 lbf in.
Seal kit - Cartridge	Buna: 990-019-007
Seal kit - Cartridge	Polyurethane: 990-019-002
Seal kit - Cartridge	Viton: 990-019-006

OPTION SELECTION EXAMPLE: MBIBLHN

CONTROL	(L)
L	Standard Screw Adjustment

FUNCTIONAL SETTING RANGE	(H)
H	1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting
J	2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

SEAL MATERIAL	(N)
N	Buna-N
V	Viton

MATERIAL/COATING	
	Standard Material/Coating
/AP	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).
- The maximum recommended load pressure for the H range is 3080 psi (212 bar).
- The maximum recommended load pressure for the J range is 3850 psi (265 bar).
- Turn adjustment clockwise to decrease setting and release load.
- Full clockwise setting is 1000 psi (70 bar) for the H range and 2000 psi (140 bar) for the J range.
- 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 valve types.
- 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.
- 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.
- 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).
- 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