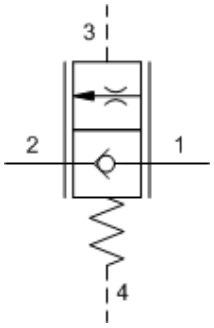
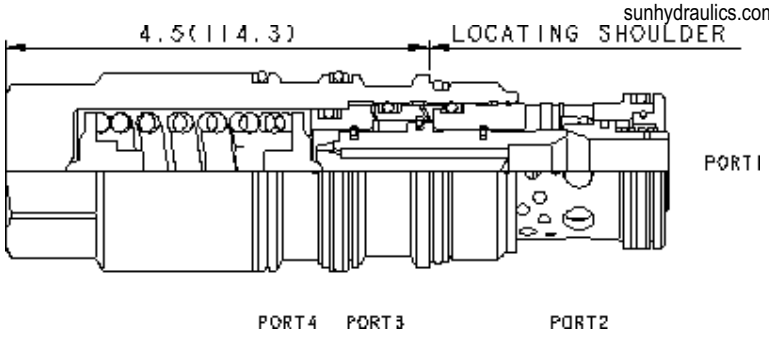
MODEL
MWIM

Vented, balanced, load control valve
SERIES 4 / CAPACITY: 120 gpm / CAVITY: T-24A

sunhydraulics.com/model/MWIM





Vented, balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting. Backpressure at port 2 does not affect the flow setting because the spring chamber references the vent (port 4).

CONFIGURATION

X	Control	Not Adjustable
I	Minimum Control Pressure	300 psi (20 bar)
N	Seal Material	Buna-N
(none)	Material/Coating	

TECHNICAL DATA

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

Cavity	T-24A
Series	4
Capacity	120 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at Reseat	See Technical Features
Check Cracking Pressure	25 psi
Valve Hex Size	1 5/8 in.
Valve Installation Torque	350 - 375 lbf ft
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006
Model Weight	4.11 lb.

CONFIGURATION OPTIONS

Model Code Example: MWIMXIN

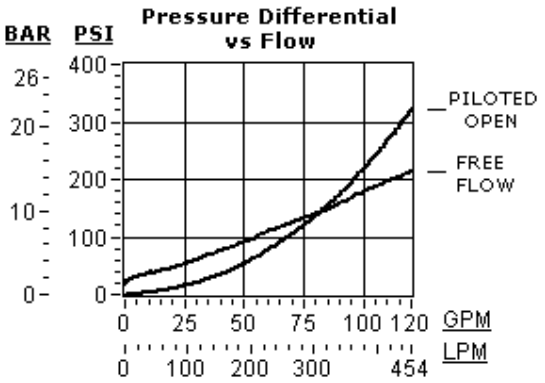
CONTROL (X)	MINIMUM CONTROL PRESSURE (I)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**I** 300 psi (20 bar)	**N** Buna-N	Standard Material/Coating
	E 75 psi (5 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	G 150 psi (10,5 bar)	**V** Viton	
	H 200 psi (14 bar)		
	K 450 psi (33 bar)		
	M 525 psi (36,7 bar)		

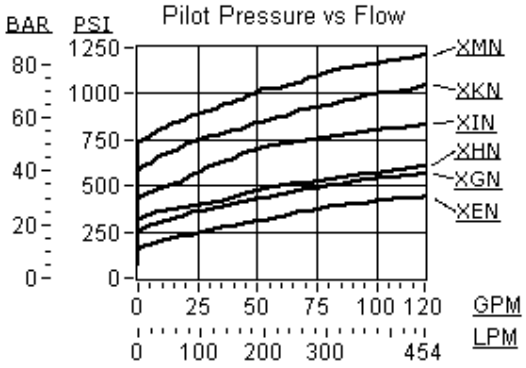
© 2025 Sun Hydraulics

TECHNICAL FEATURES

- This valve has no relief function. Not even thermal expansion relief.
- Maximum valve leakage at reseat for I, K, M ranges is 5 drops/min. (0,3 cc/min.) at 200 psi (14 bar) below cracking pressure; E and G ranges is 3 cubic in/min. (50 cc/min.) at 50 psi (3,5 bar) below cracking pressure; H range is 3 cubic in/min. (50 cc/min.) at 75 psi (5 bar) below cracking pressure.
- E, G, H ranges are not meant for zero leak type applications.
- This valve is balanced against load pressures and therefore exhibits self-compensation. Flow is controlled by the pilot pressure. Because of dynamic seals, performance is best in the meter out mode with port 1 being the load and port 2 being tank.
- All 4-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).
- This valve is a physical replacement for a counterbalance valve but probably won't work well in a cross-piloted cylinder application. A low pilot ratio is needed for machine stability and a balanced load control has an infinitely high pilot ratio.
- Applications that use a separate pressure source to the pilot have been successful in providing smooth and stable load control.
- 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.
- 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





© 2025 Sun Hydraulics