



## Vented, balanced, load control valve

Capacity:  
**120 gpm (480 L/min.)**

Functional Group:

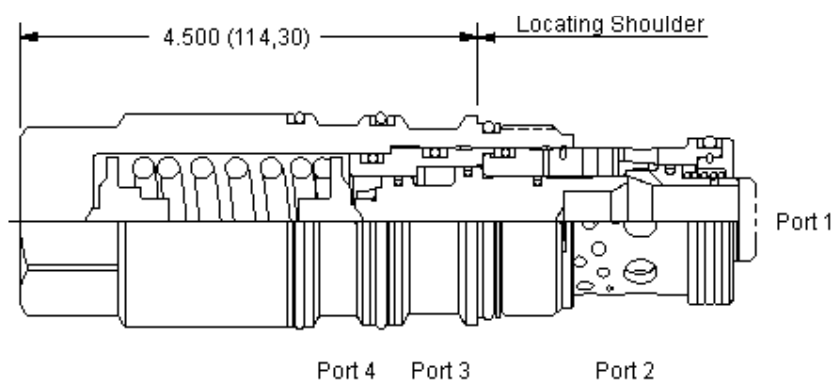
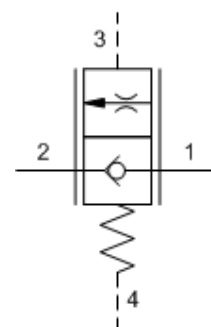
**Products : Cartridges : Load Control, Balanced : 4 Port : Vented**

Model:

**MWIM**

### Product Description

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).

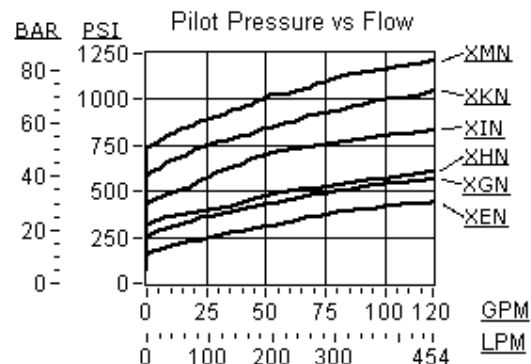
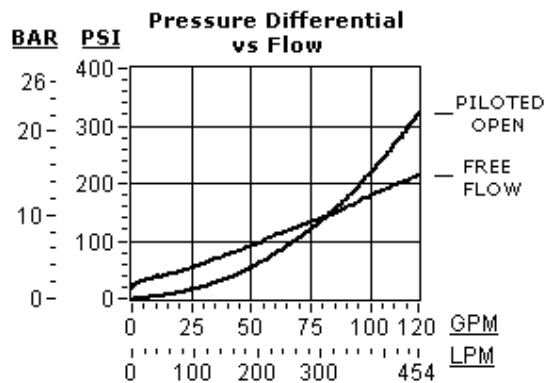


### Technical Features

- This valve has no relief function. Not even thermal expansion relief.
- Maximum valve leakage at reseal for I, K, M ranges is 5 drops/min. (0,3 cc/min.) at 200 psi (14 bar) below cracking pressure; E, G, H ranges is 3 cubic in./min. (50 cc/min.) at 50 psi (3,5 bar) below cracking pressure.
- 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.
- This valve has positive seals between all ports.
- 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 cartridges can be installed directly into a cavity machined in an actuator housing for added protection and improved stiffness in the circuit.
- 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.

**Technical Data**

|                                 | U.S. Units             | Metric Units |
|---------------------------------|------------------------|--------------|
| Cavity                          | T-24A                  |              |
| Capacity                        | 120 gpm                | 480 L/min.   |
| Check Cracking Pressure         | 25 psi                 | 1,7 bar      |
| Maximum Operating Pressure      | 5000 psi               | 350 bar      |
| Maximum Valve Leakage at Reseat | See Technical Features |              |
| Series (from Cavity)            | Series 4               |              |
| Valve Hex Size                  | 1 5/8 in.              | 41,3 mm      |
| Valve Installation Torque       | 350 - 375 lbf ft       | 475 - 500 Nm |
| Seal Kits - Cartridge           | Buna: 990-024-007      |              |
| Seal Kits - Cartridge           | Viton: 990-024-006     |              |
| Model Weight                    | 4.11 lb.               | 1.86 kg.     |

**MWIM-XIN****Control****Standard Options****X** Not Adjustable**Minimum Control Pressure****Standard Options**

**E** 75 psi (5 bar)  
**G** 150 psi (10,5 bar)  
**H** 200 psi (14 bar)  
**I** 300 psi (20 bar)  
**K** 450 psi (33 bar)  
**M** 525 psi (36,7 bar)

**Seal Material****Standard Options**

**N** Buna-N  
**V** Viton