Balanced load control valve

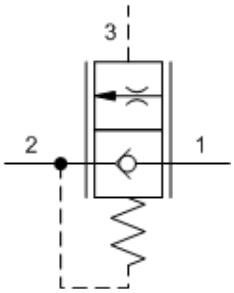
Capacity:
30 gpm (120 L/min.)

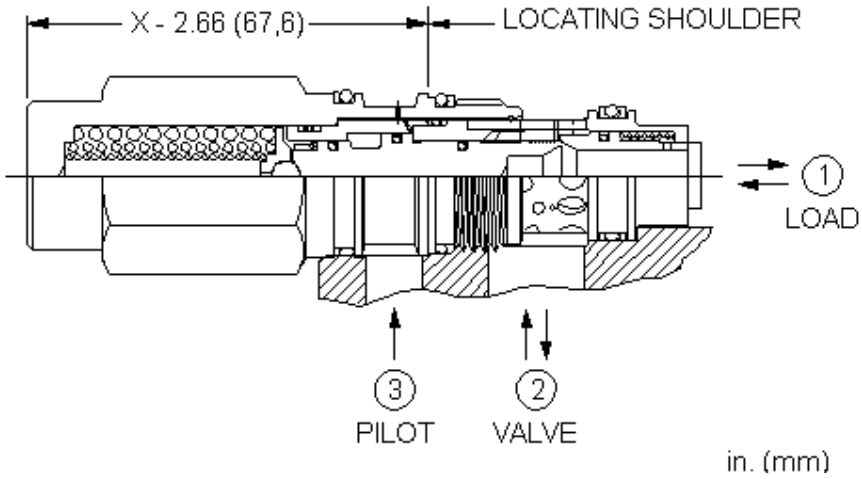
Functional Group:
Products : Cartridges : Load Control, Balanced : 3 Port : Non-Vented

Model:
MBEM

Product Description

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.



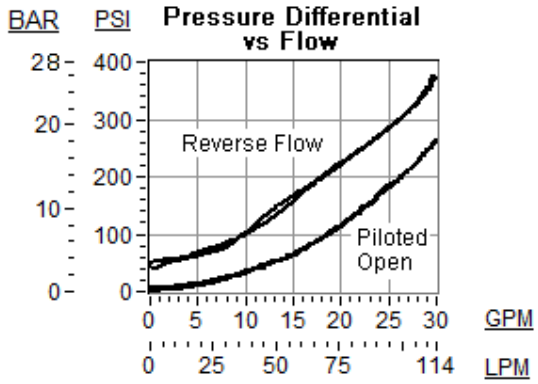


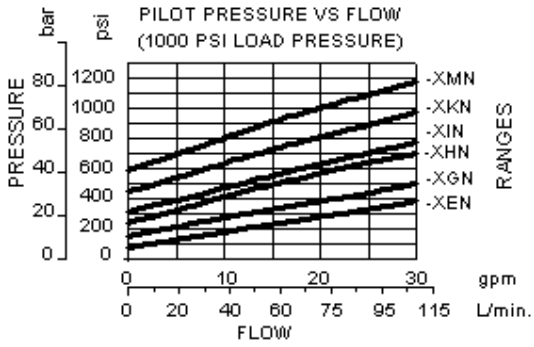
Technical Features

- 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, G, H ranges is 3 cubic in/min. (50 cc/min.) at 50 psi (3,5 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 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).
- This valve has positive seals between all ports.
- Backpressure at port 2 directly opposes pilot pressure at port 3.
- 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-2A	
Capacity	30 gpm	120 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 2	
Valve Hex Size	1 1/8 in.	28,6 mm
Valve Installation Torque	45 - 50 lbf ft	60 - 70 Nm
Seal Kits - Cartridge	Buna: 990-202-007	
Seal Kits - Cartridge	Viton: 990-202-006	
Model Weight	0.78 lb.	0.35 kg.





MBEM-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