

SERIES - MV5-5

Basic Characteristics

Operating Pressure (maximum) - 315 bar (4500 psi)

Rated Capacity (maximum) - 120 L/min

Approx. Weights

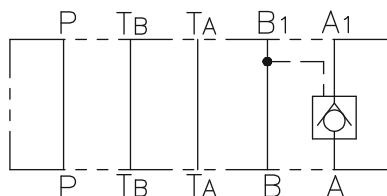
MV5 - 5 = 2.9 kg

General Description

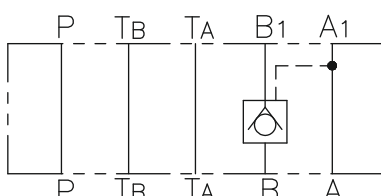
These valves are single or dual check units. Dual check units have identical check element located in the "A" and "B" cylinder port lines. The Check Valve poppets are moved into the open position by a central pilot control spool which moves toward one check or the other depending on which port is pressurized.

Functional Symbols

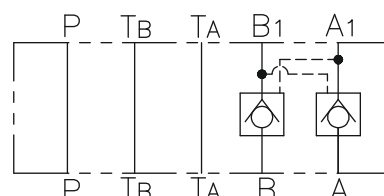
MV5 - 5 - AB



MV5 - 5 - BA



MV5 - 5 - AB - BA



ORDERING INFORMATION

MV **5** - **5** - **(*)** ****** - ***** - **(*)** ****** - ***** - **30**
 1 2 3 4 5 6 7 8 9 10

1. Model Code - MV

2. Model Series - 5

3. Arrangement - CETOP 5

4 & 7. Decompression Feature-

D - Decompression Feature (Omit with standard)

5. Check Control -

AB = Check in line A, piloted from line B
(single or dual check)

BA = Check in line B, piloted from line A (single check)

6 & 9. Cracking Pressure -

R = 15 psi

HY = 36 psi

HU = 72 psi

8. Check Control -

BA = Check in line B, piloted from line A (dual)

10. Design No - 30 (Subject to change)

Typical Model Code :- **MV5 - 5 - AB - R - BA - R - 30 (dual check)**

MV5 - 5 - AB - R - 30 (single check)

PILOT OPERATED CHECK VALVES

MV5-5

The check valve located in the return circuit is opened by the operating pressure in the primary circuit. When the pressure in then pilot line is vented the check valve will remain closed. The pilot spool area to valve seat ratio is 3:1 on standard models and 20:1 on models with the decompression feature. Check valve cracking (opening)

Pressure of (15 psi) (36 psi) and (72 psi) are available Please note that back pressure on the downstream or free-flow side of the pilot check valve may prevent the valve from opening in certain situation. (Back pressure opposes pilot pressure trying to open the valve.) In such cases. pilot pressure required to open the decompression poppet and valve can be calculated as follows. To open valve or poppet in line A:

$$\text{Pressure at B1} = \frac{P_A + P_C - P_{A1}}{\text{Area ration factor}} + P_{A1}$$

To open valve or poppet in line B:

$$\text{Pressure at A1} = \frac{P_B + P_C - P_{B1}}{\text{Area ration factor}} + P_{B1}$$

Where :

P_A= Pressure at A

P_C= Cracking pressure

P_{A1}= Pressure at A1

P_B= Pressure at B

P_{B1}= Pressure at B1

Operating data

Hydraulic fluids, temperature range and filtration recommendations	Filtration -ISO 4406 code 18/15 operating temp.-0° to 82°C (32 to 180°F) Fluid viscosity - 8 - 51 cSt (52-250 SUS) Fluorocarbon seals are standard and are suitable for use with phosphate ester type fluids or their blends. water glycol, water-in-oil emulsion fluids and petroleum oil.
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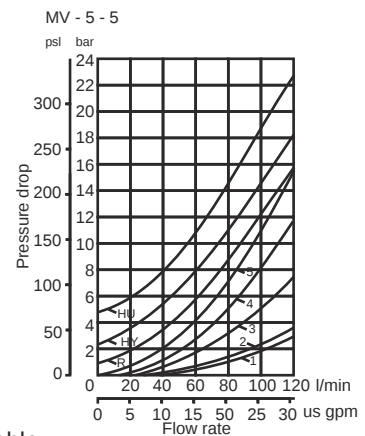
Preferred model selection :

The Preferred products listed represent those models which are in regular volume production and are therefore most readily available at competitive prices.

Pressure Drop

The curves shows pressure drop through each functional flow path in the valve. The total insertion loss for the valve must be calculated by summing the losses through the four applicable flow paths.

Model type	Curve number							
	P	T	↕	↗	↘	↕	↖	↙
MV5-5(D)-AB*	1	2	—	5	▲	● 3 ■ 4	—	—
MV5-5(D)-BA*	1	2	● 3 ■ 4	—	—	—	5	▲
MV5-5(D)AB*-(D)BA*	1	2	—	5	▲	—	5	▲



● Flow toward actuator ■ Flow from actuator ▲ Use R,HY,HU curve as applicable.

ALL DIMENSIONS ARE IN mm.

