

SERIES - MV5-3

Basic Characteristics

Operating Pressure (maximum) - 315 bar (4500 psi)
Rated Capacity (maximum) - 60 L/min

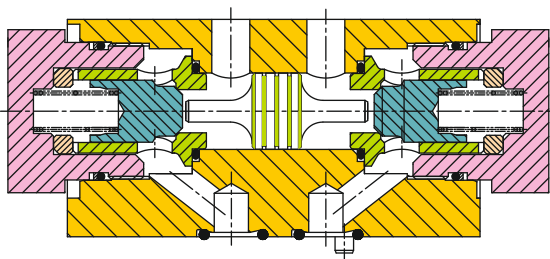
Approx. Weights

MV5-3 = 0.8 kg

General Description

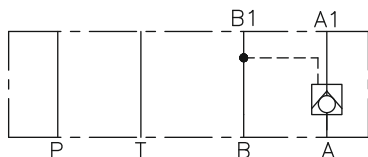
These valves provide Pilot Operated Check functions in one or both service lines (A or B), the operating pilot supply coming from the opposite service line. Thus with pressure in one service line the check valve in the other service line will be open (subject to system / actuator pressure being correct for the valve area ratios)

A 3:1 area ratio of pilot piston to check seat is supplemented by an optional 10:1 decompression feature.

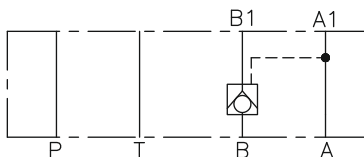


Functional Symbols

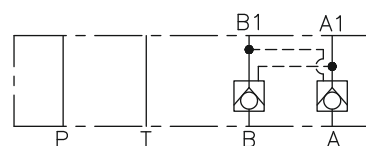
MV5 - 3 - AB



MV5 - 3 - BA



MV5 - 3 - AB - BA -



ORDERING INFORMATION

MV 5 - 3 - (D) ** - * - (D) ** - * - 40

1 2 3 4 5 6 7 8 9 10

1. Model Code - MV

2. Model Series - 5

3. Arrangement - CETOP 3

4 & 7. Decompression Option -
D = Decompression Poppet
Omit - STD. Pilot operated check

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

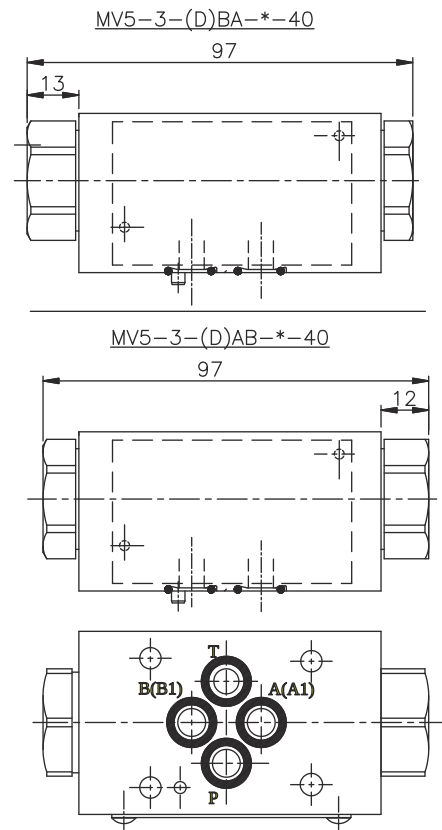
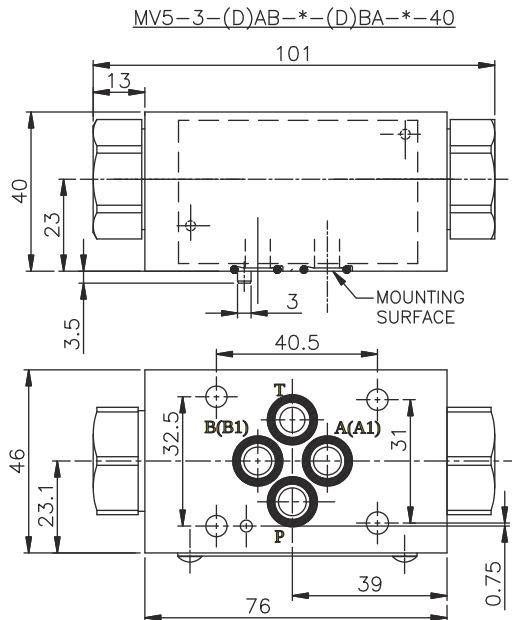
8. Check Control -

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

10. Design No - 40 (Subject to change)

Typical Model Code :- **MV5 - 3 - (D)AB - R - (D)BA - R - 40**

ALL DIMENSIONS ARE IN mm.

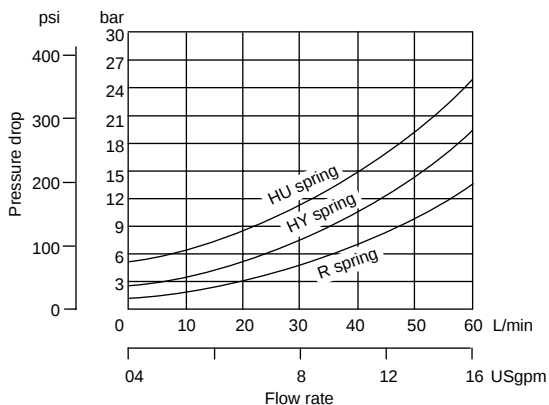


Performance Characteristics

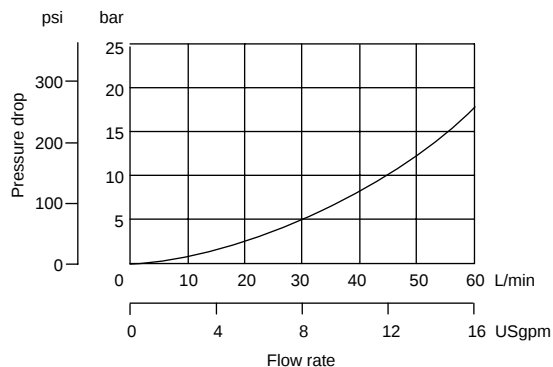
Pressure Drop Data

Typical performance with mineral oil at 21 cSt (102 SUS) and at 50°C (122°F) u

Pressure drop: flow path A1 to A or B1 to B (no pilot-pressure operation)



Pressure drop: flow path A to A1 or B to B1 with check valve pilot-operated fully open



Pilot Pressures

Pilot area ratios:

Main check valve 3:1

Decompression poppet 10:1

Use applicable ratio and opening/cracking pressure to calculate pilot pressure to open valve element, applied to the following formulae:

To open valve or decompression poppet in line A:

$$\text{Pressure at B1} = \frac{p_A + p_C - p_{A1}}{\text{Area ratio factor}} + p_{A1}$$

To open valve or decompression poppet in line B:

$$\text{Pressure at A1} = \frac{p_B + p_C - p_{B1}}{\text{Area ratio factor}} + p_{B1}$$

Where:

p_A = Pressure at A

p_C = Cracking/opening pressure

p_{A1} = Pressure at A1

p_B = Pressure at B

p_{B1} = Pressure at B1

A =

B =

A1 =

B1 =

Service line location;
see functional symbols

Leakage

Less than 0,25 ml/min (0.015 in³/min) at 250 bar (3625 psi).