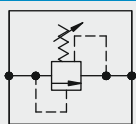
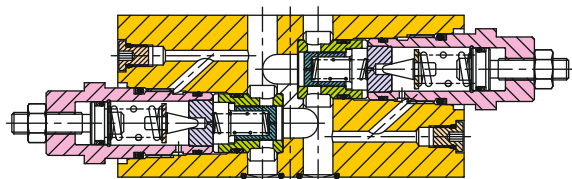


PILOT OPERATED RELIEF VALVES (SINGLE RELIEF FUNCTION & DUAL RELIEF FUNCTION)



SERIES - MV1-5 & MV2-DRF-5



Basic Characteristics

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

Rated Capacity (maximum) - 120 L/min

Approx. Weights

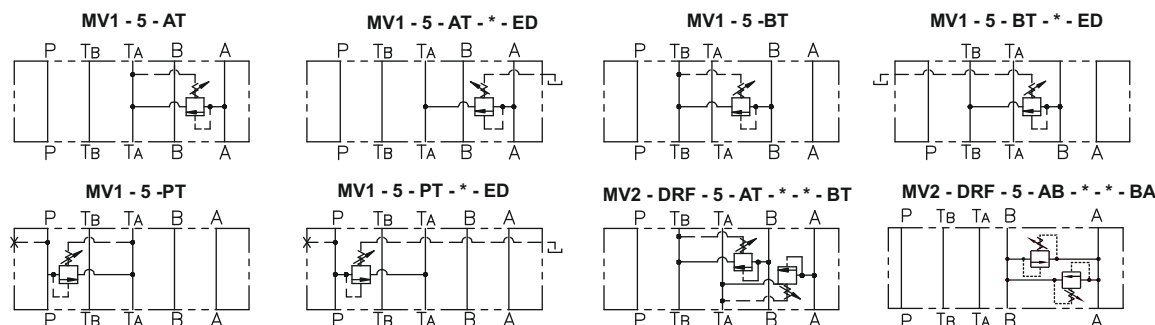
MV1 - 5 = 2.9 kg

MV2 - DRF - 5 = 3.6 kg

General Description

These two-stage valves limit system pressure by directing flow to tank or the opposite cylinder port (A-B/B-A crossport types) when system pressure reaches the valve setting. Pressure control may be obtained in "A", "B", "A" and "B" or "P" port, and pilot flow may be internally or externally drained, depending on model type. The valve pressure setting is adjustable by means of either an adjusting screw and locknut. External remote control/vent connections are available on all models except crossport relief.

Functional Symbols



ORDERING INFORMATION

MV *or* - 5 - ** - * - W - ED - (B * - * - W -) - * - 30

1 2 3 4 5 6 7 8 9 10 11 12

1. Model Code - MV

2. Model Series - 1 (Single Relief)
2 - DRF (Dual Relief)

3. Arrangement - CETOP 5

4. Control Line -
AT = Cylinder Port A & Tank port T
(single, dual with BT or cross port)
BT = Cylinder Port B & Tank port T (single)
PT = Cylinder Port P & Tank port T (single)
AB = Cylinder Port A & Cylinder Port B
(dual with BA-cross port type)

5 & 9. Pressure Range - HL = 60 - 725 psi
HI = 60 - 1450 psi HC = 60 - 2900 psi
YU = 60 - 2000 psi YO = 60 - 4500 psi

6 & 10. Adjustment type -

W = Screw & Locknut (standard)

7. Drain -

ED - External drain - (omit if not required)

8. Control Line -

BA = Cylinder Port B & Cylinder Port B (cross port type)

BT = Cylinder Port B & Tank Port T (dual)

11. Gauge Port Thread Type -

B = 1/8" BSPF

S = 7/16"-20 UNF-2B } Omit if no gauge port

12. Design No - 30 (Subject to change)

Typical Model Code :- **MV1 - 5 - AT - HI - W - ED - B - 30 (single relief)**

MV2 - DRF - 5 - AB - HI - W - BA - HI - W - 30 (dual relief)

Operating data

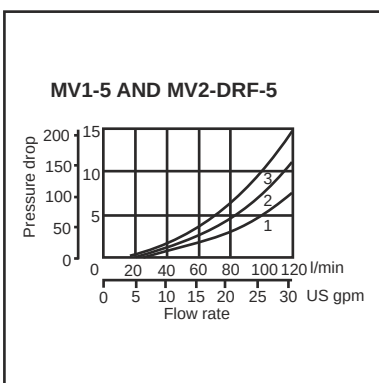
Maximum pilot flow rate at 49°C (120°F) and (4500 psi)	700 ml/min		
Response time	For condition of 5 liters (300 in ³) of oil under compression and a flow rate of 120 l/min typical response time is:		
	Initial Pressure bar (psi) 35 (500)	Final Pressure bar psi 315 (4500)	Response time (ms) 150
Pressure overshoot	(450 psi) or less at any valve setting		
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.		

Insertion Loss

Total increase in pressure drop from 'P' through 'T' caused by the addition of this modular valve to a hydraulic circuit.

Insertion Loss curve reference.

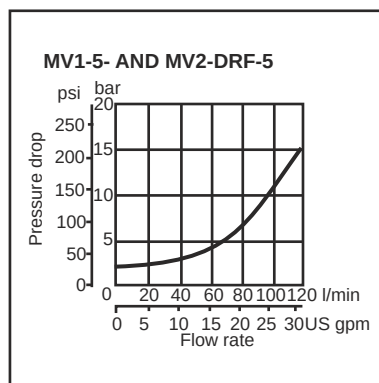
- 1) MV2 - DRF - 5 - AT - * - W - ED - BT - * - W - ED - * - 30
MV1 - 5 - AT - * - W - ED - * - 30
MV1 - 5 - BT - * - W - ED - * - 30
- 2) MV1 - 5 - PT - * - W - ED - * - 30
- 3) MV2 - DRF - 5 - AB - * - W - BA - * - W - 30



Vented pressure drop (not

applicable to crossport models)

Vented pressure drop (flow from control port to discharge port over relief element.)



Pressure override

The graph below shows typical override of the different adjustment ranges at maximum settings.

