

SERIES - MV9-5

Basic Characteristics

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

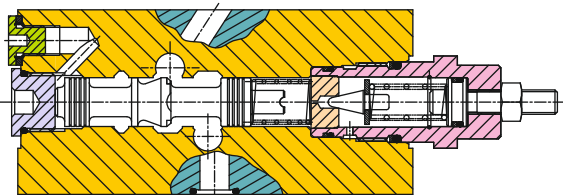
Rated Capacity (maximum) - 120 L/min

Approx. Weights

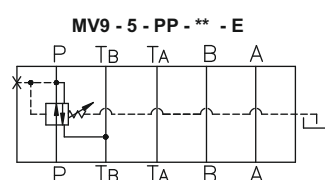
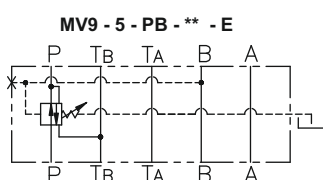
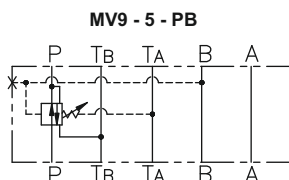
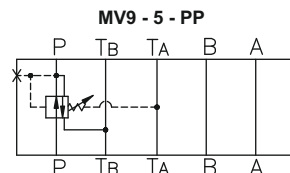
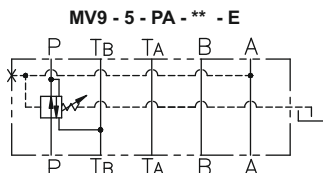
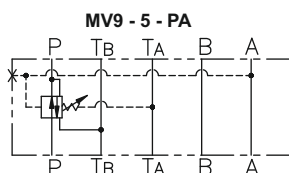
MV9-5 = 3.5 kg

General Description

These two-stage spool valves maintain reduced outlet pressure against variation in inlet pressure above selected valve settings. These valves are able to act as relief valves (at 50% of maximum flow) to prevent excess pressure being developed when an actuator is subject to a reactive load. Relief flow is directed to the "Tb" port. Therefore, for the relief function to operate, all components above this MV-9 module must contain the "Tb" port and the Directional Valve must have the "Tb" bypass feature. Pilot control may be from the "P", "A" or "B" port. Pilot drain flow may be directed internally to tank port "Ta" or externally out of the valve body. The valve pressure setting is adjustable by means of either an adjusting screw containing an internal hex. Different spring ratings cover an overall pressure range from 2 to 315 bar (30-4500 psi)



Functional Symbols



ORDERING INFORMATION

MV 9 - 5 - P * - * - W - * - * - 30

1 2 3 4 5 6 7 8 9 10

1. Model Code - MV

2. Model Series - 9

3. Arrangement - CETOP 5

4. Port Operated Upon -
P = Pressure Port

5. Pilot Control
A = Cylinder Port A
B = Cylinder Port B
P = Pressure Port

6. Pressure Range - C = 30 - 725 psi

YA = 125 - 1450 psi

YU = 125 - 2000 psi

HC = 125 - 2900 psi

YL = 125 - 4500 psi

7. Adjustment type -

W = Screw & Locknut (standard)

8. Drain -

ED = External Drain (Omit if not required)

9. Gauge Port Thread Type -

B - 1/8" BSPF

S - 7/16" - 20 UNF - 2B

7. Design No - 30 (Subject to change)

Typical Model Code :-

MV9 - 5 - PA - C - W - B - 30

MV9 - 5 - PA - YL - W - ED - B - 30

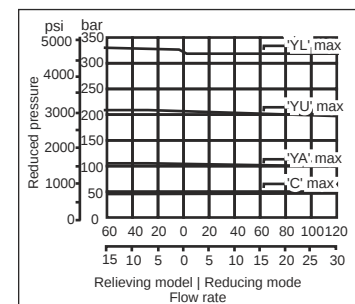
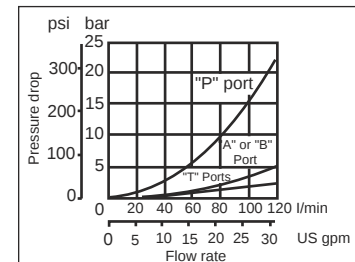
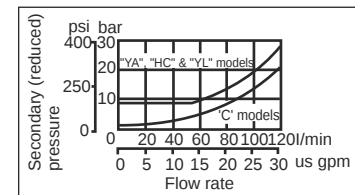
GENERAL DESCRIPTION

The metering spool element in this design is always positioned in the "P" line (see symbols) The connection of the pilot control line determines at which port the reduced pressure is obtained that is pilot for "P" for reduced pressure "P" pilot for "A" for reduced pressure "A" pilot for "B" for reduced pressure "B" The "A" and "B" line models provide for reduced pressure when "P" is connected to "A" or "B" respectively and allow free flow through the service port when it is connected to "T" (all via a four way directional valve).

Operating data

Max. pilot flow rate at 49°C (120°F) and 315 bar (4500 psi)	420 ml/min
Max. leakage flow rate at 49°C (120°F) and 315 bar (4500 psi)	200 ml/min
Maximum operating pressure "C" Model "YA", "HC", "YL", models	(1000 psi inlet pressure) reduced pressure 725 psi 4500 psi
Hydraulic fluids, temperature range and filtration recommendations	Filtration - ISO 4406 code 18/15 Operating temp. - 8 - 50 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.

MV9-5



Minimum reduced pressure

These curves show the minimum reduced pressure settings allowable for a given flow rate. The minimum pressure setting applies regardless of inlet pressure. Operation of the valve below minimum settings may cause erratic valve operation due to insufficient spring force to counter flow forces acting on the spool.

Pressure drop

These curves show the typical pressure drop for each flow path in the System Stak valve. The "P" port pressure drop is the pressure drop for flow across the reducing valve spool in the fully open conditions.

Pressure override

These curves show typical override of the different pressure ranges at maximum settings. Also shown is the typical override of the relieving feature which prevents undesirable pressure rise in the reduced pressure port.

ALL DIMENSIONS ARE IN mm.

