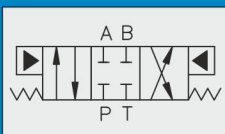
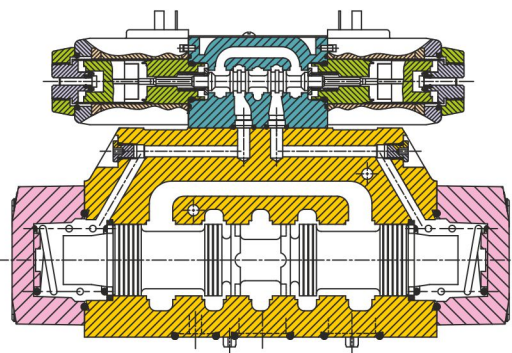


SOLENOID PILOT OPERATED DIRECTIONAL VALVES



SERIES - DCV 5-8



Basic Characteristics

Operating Pressure (maximum) – 350 bar (5000 psi)

Rated Capacity (maximum) -

DCV 5-8 = 700 lpm

Approx. Weights

DCV 5-8 = 13 kg.

General Description

DG5V-8 models are two-stage directional control valves having an integrally mounted (DCV1-3) wet armature solenoid pilot valve. These valves are generally used to control the movement of a work cylinder or the rotation of a fluid motor.

Spring Offset Models

Designated by "A" under spring/spool arrangement in the model code.

Spring offset model has an internal spring which returns the spool to offset position when the pilot connection "X" is open to tank. Pilot connection "Y" becomes a drain connection and must be piped directly to tank at atmospheric pressure through a surge-free tank line. Back pressure at this connection would cause the valve to malfunction.

Spring Centered Models

Designated by "C" under spring/spool arrangement in the model code.

A spring and washer arrangement is used on both ends of the spool. If control pressure is removed, the valve will go to center position due to spring force.

ORDERING INFORMATION

DCV 5 - * - 8 - * - * - * - * - * - * - 10
1 2 3 4 5 6 7 8 9 10

1. Model Code - DCV

2. Model Series - 5

3. P- Pilot operated, V – High Performance

4. Valve Arrangement – CETOP 8

5. Spool Type –

- 0- Open Center (all ports)
- 2- Close Center (all ports)
- 6- Closed Center (P blocked)
- Open only A & B to T

For Solenoid Control Valve Refer DCV1-3 - Model Code
For Pilot Operated Valve Refer MV - Model code

Typical Model Code :- **DCV5-V-8-6C-C0-A230-10**

6. Spring location –

- A – Spring offset to 'A' port
- AL – Same as 'A' but left hand build -single solenoid
- B – Spring centered, with solenoid 'A' removed
- BL – Same as 'B' but left hand build-single solenoid
- C – Spring centered

7. Connector

- C0 – Without plugin connector
- C1 – with plug in connector
- C2 – with plug in connector & light indicator

8. Voltage – A110 / A115 – AC Coil

A220 / A230 – AC Coil

D24 – DC Coil

9. DCV1-3 / MV code (Omit if not required)

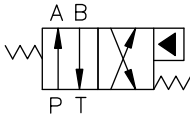
10. Design No – 10 (Subject to change)

Performance Characteristic

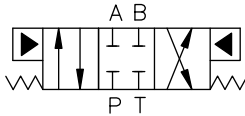
Spring centered and spring offset models require continuous pilot pressure to maintain shifted position. Spring centered models return valve spool to center position by centering springs when pilot pressure fails or falls below minimum requirement.

Functional Symbols

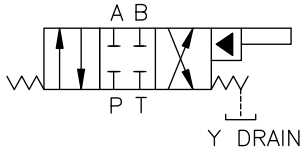
SPRING OFFSET 'A'



SPRING CENTERED 'C'



SPRING CENTERED SINGLE SOLENOID 'B'



FLOW RATING	
Maximum flow without malfunction	See malfunction flow curves
Maximum fatigue pressure (P,A,B & T ports)*	350 bar(5000 psi)
Maximum operating pressure (P,A,B & X port)	350 bar(5000 psi)
Maximum operating pressure (T & Y port)§	350 bar(5000 psi)

* The method for verifying the rated fatigue pressure of the complete unit conforms to NFPA/T2.6.1 R1-1991

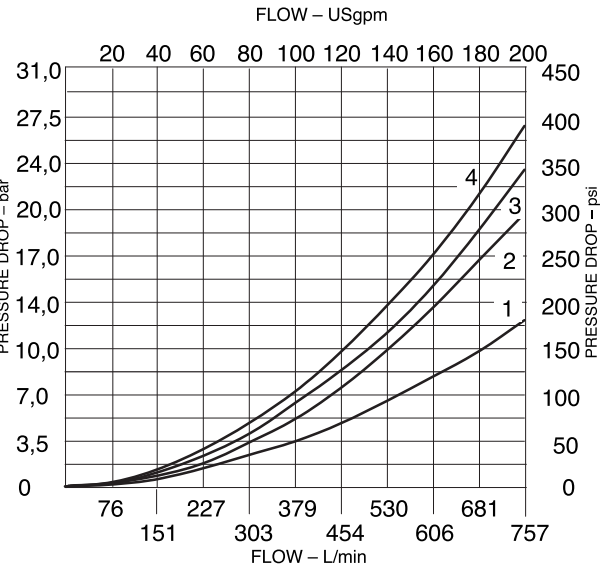
§ Internal drain models drain the pilot valve through the tank port of mainstage. External drain models drain the pilot valve through the "Y" port of the Mainstage. To provide operation without malfunction, the pilot pressure must always exceed tank to drain line pressure with the minimum pilot pressure required per valve and spool. Tank or drain line surges which would reduce this differential are to be avoided as they may cause the Mainstage to shift. Mainstage tank pressure is limited to the tank line rating of the pilot valve on internally drained models. Internal drain may be used with all models. Pressure centered models must be externally drained through "Y". To achieve the maximum tank line rating of 350 bar of the main stage, an external pilot pilot drain must be used and it is recommended that a separate line be provided directly to the tank.

Pressure Drop & Malfunction Flow

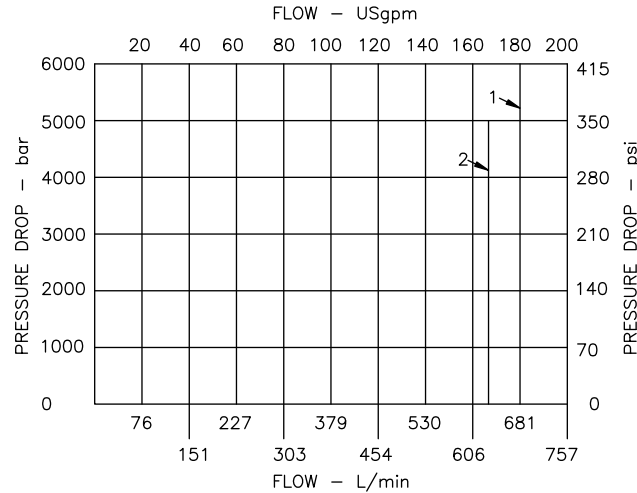
The following table lists the appropriate pressure drop curve and malfunction flow curve between ports for each spool type. Use the following example to determine pressure drop for a selected spool.

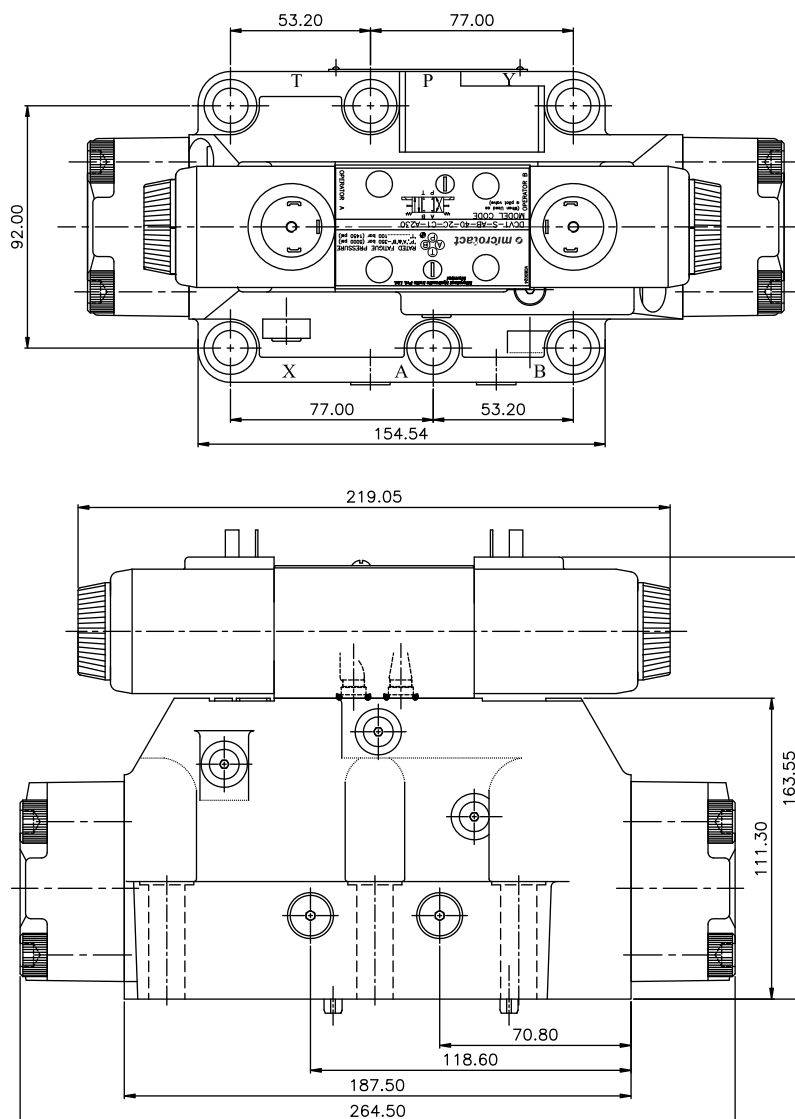
SPOOL TYPE	PRESSURE DROP CURVE NUMBER					MALFUNCTION FLOW CURVE NUMBER
	P-A	B-T	P-B	A-T	P-T in center	
0	2 →	2 →	2 →	2 →	3 →	1
2	1	2	1	1	—	2
6	1	3	1	4	—	1

Pressure Drop Curves



Malfunction Flow Curves



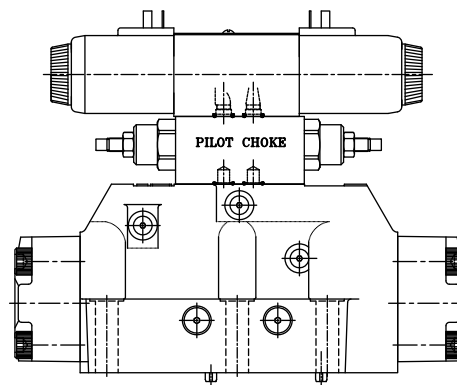


OPTIONAL FEATURES

PILOT CHOKE

MV4-3-Y-A2W-B2W-40

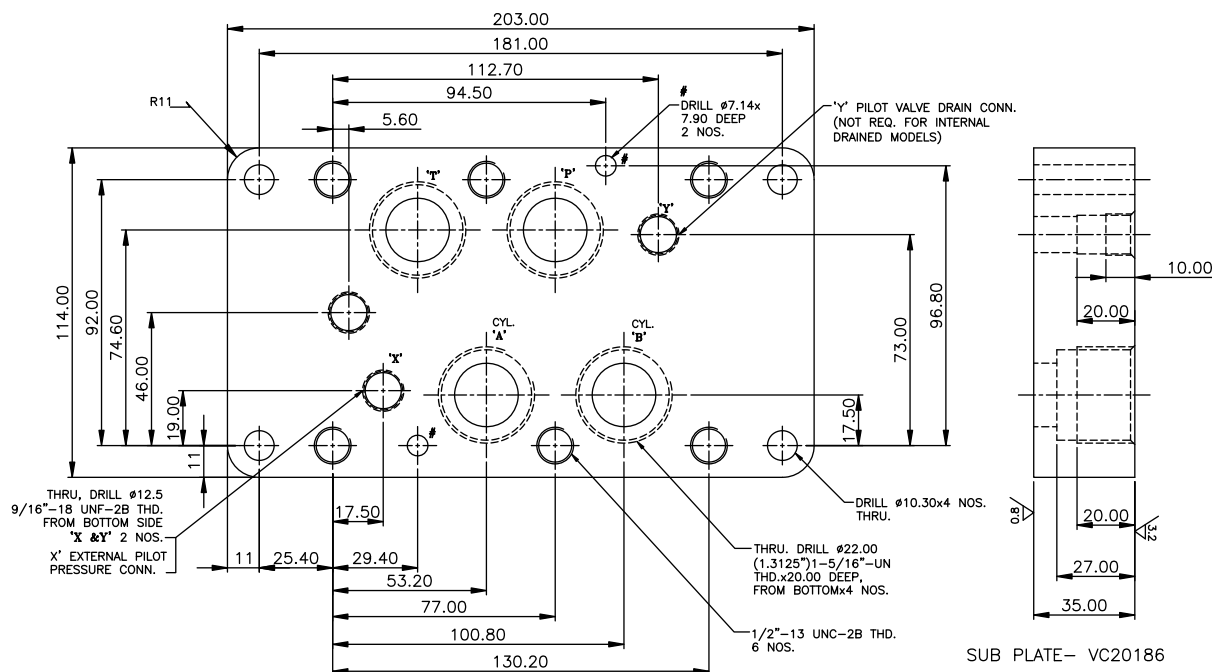
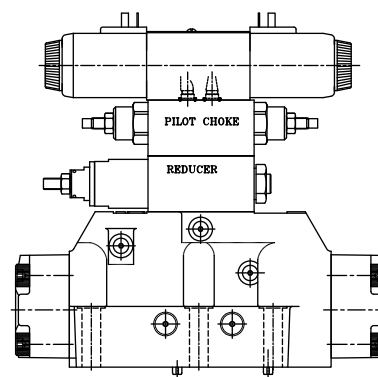
Pilot choke increases the amount of time to shift the mainstage spool, lowering the possibility of large flow transients in the circuit. It is adjusted by backing of locknuts and turning adjusting screw inward to decrease rate of spool travel and outward to increase spool travel rate.



REDUCER MODULE

MV10-3-PP-DR-W-S-40

The reducer module is required for piloted models when pilot pressure exceeds 210 bar(3000 psi). These two stage spool valves maintain a reduced outlet pressure against variations in inlet pressure. These valve are able to act as relief valves (at 50% of the maximum flow) to prevent excess pressure being developed when an actuator is subject to a reactive load.



SUB PLATE- VC20186