

SERIES - DCV1-3

Basic Characteristics

Operating Pressure (maximum) - 350 bar (5075 psi)

Rated Capacity (maximum) - upto 80 L/min.

Approx. Weights

DCV1-3 With AC Coil
Single Solenoid Model = 1.5 kg
Double Solenoid Model = 1.8 kg

DCV1-3 With DC Coil
Single Solenoid Model = 1.6 kg
Double Solenoid Model = 2.2 kg

General Description

Basically, these solenoid operated directional control valves are for directing and stopping flow at any point in a hydraulic system.

Important benefits to users.

- Efficient control of greater hydraulic powers without increasing solenoid power consumption.
- Installed cost and space savings from higher power/weight-and-size ratios.
- Reduced internal leakage reduces power losses, increases system efficiency: the result of improved manufacture of spools and bores.
- Installation flexibility resulting from choice of numerous combinations of solenoid connectors and locations.
- Multi-fluid capability without need to change seals.
- Higher sustained machine productivity and higher uptime because of proven fatigue life and endurance, tested over 20 million cycles.
- Solenoid coils can be changed quickly and easily without leakage from hydraulic system.
- Compact, cost effective system design when used with Microtact modular valves.

ORDERING INFORMATION

DCV 1 - 3 - * * - * - * - 60

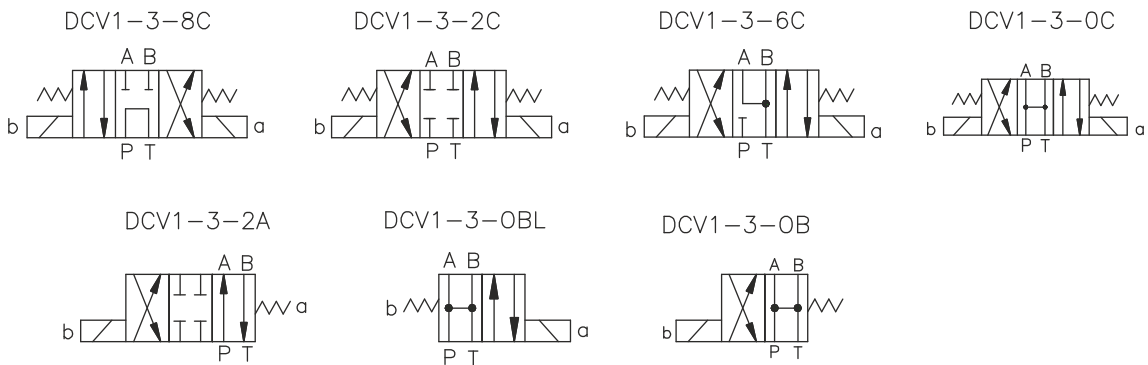
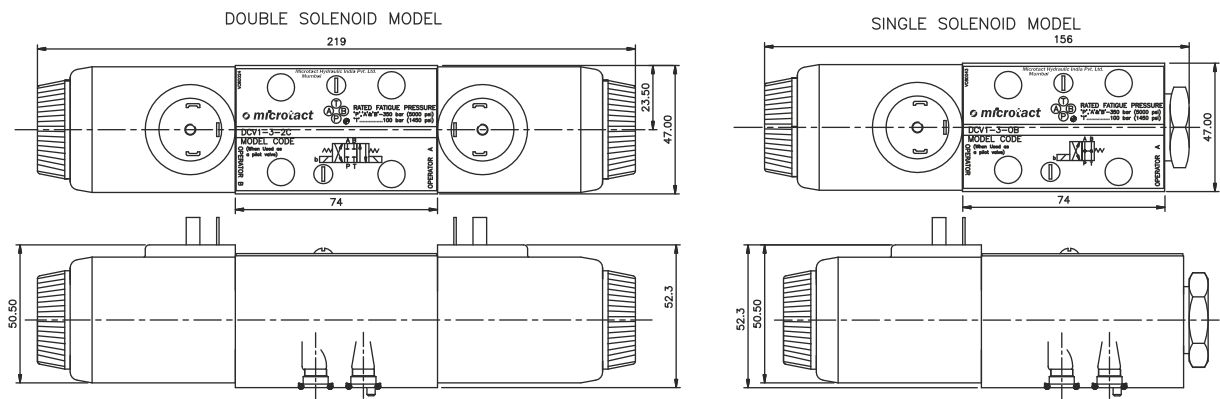
1 2 3 4 5 6 7 8

1. Model Code - DCV
2. Model Series - 1
3. Arrangement - CETOP 3
4. Spool Type -
• 0
• 2
• 6
• 8

5. Spring Location -
A - Spring offset, Single Solenoid
AL - Same as 'A' but left hand build
B - Spring centered, Single Solenoid
BL - Same as 'B' but left hand build
C - Spring Centered
6. Connector -
C0 - Without Plugin Connector
C1 - With Plugin Connector
C2 - With Plugin Connector & Light Indicator
7. Voltage -
A110 / A115 - AC Coil
A220 / A230 - AC Coil
D24 - DC Coil
8. Design No - 60 (Subject to change)

Typical Model Code :-
DCV1-3 - 8C - C2 - A230 - 60

ALL DIMENSIONS ARE IN mm.
DCV1-3



Operating Considerations

1. Dependent on the application and the system filtration, any sliding spool valve if held shifted under pressure for long periods of time, may stick and not move readily due to fluid residue formation. It may therefore need to be cycled periodically to prevent this from happening.
2. Surges of fluid in a common tank line serving two or more valves can be of sufficient magnitude to cause inadvertent shifting of these valves. This is particularly critical in no-spring detented models. Separate drain lines are necessary.

Hydraulic Fluids

Materials and seals used in these valves are compatible with anti-wear hydraulic oils, water-in-oil emulsions, water glycols and non-alkyl-based phosphate esters. The extreme operating viscosity range is from 500 to 13 cSt (2270 to 70 SUS) but the recommended running range is 54 to 13 cSt (245 to 70 SUS).

Filtration Requirements

Up to 200 bar (3000 psi): ISO 4406 20/16
Above 200 bar (3000 psi): ISO 4406 18/14

Temperature Limits

Minimum ambient -20°C (-4°F)

Fluid Temperature

	Mineral oil	Water-containing
Min.	- 20°C (- 4°F)	+ 10°C (+ 50°F)
Max.*	+ 70°C (+ 158°F)	+ 54°C (+ 129°F)

* To obtain optimum service life from both fluid and hydraulic system, 65°C (150°F) normally is the maximum temperature except for water-containing fluids.

For synthetic fluids consult manufacturer Microtact representative where limits are outside those for mineral oil.

Whatever the actual temperature range, ensure that viscosities stay within the limits specified in the "Hydraulic fluids" section.

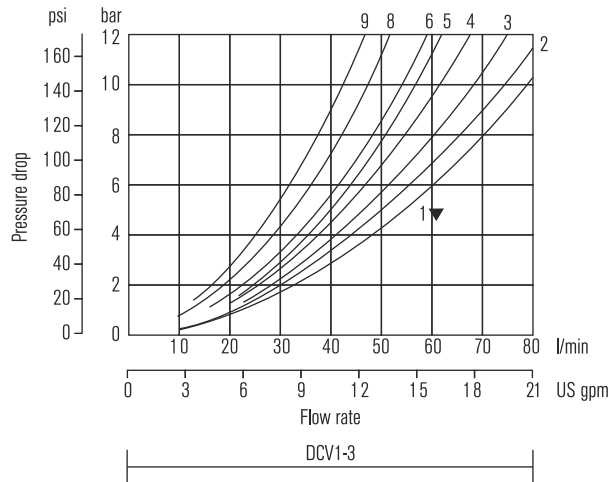
Performance Data

Typical with mineral oil at 36 cSt (168.6 SUS) and a specific gravity of 0.87.

Maximum Flow Rates

Performance based on full power solenoid coils (see model code □), warm and operating at 90% rated voltage.

PRESSURE DROPS



▼ Curve for spool type 6: not recommended for flow in excess of 60 l/min (15.8 USgpm)

Pressure Drops in Offset Positions except where otherwise indicated

Spool/spring code	Spool positions covered	P to A	P to B	A to T	B to T	P to T	B to A or A to B
OB(L) & OC	De-energized	-	-	-	-	4△▲	-
	Energized	4	4	2	2	-	-
2A(L)	Both	6	6	5	5	-	-
2B(L) & 2C	Energized	5	5	2	2	-	-
6B(L) & 6C	De-energized	-	-	3▲	3△	-	-
	Energized	6	6	1	1	-	-
8B(L) & 8C	All	9	9	5	5	3	-

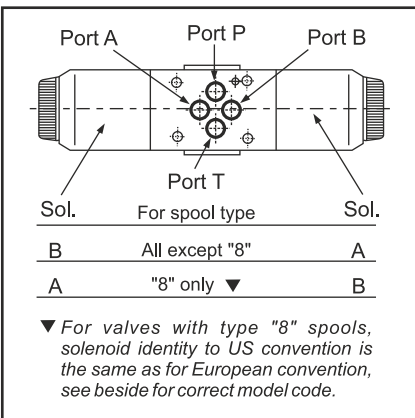
▲ "B" Plugged

△ "A" Plugged

SOLENOIDS IDENTIFICATION

Solenoids Identified to US Convention

Functional Symbols related to solenoid identity "A" and/or "B" according to NFPA/ANSI standards, i.e. energizing sol. "A" gives flow P to A, sol "B" gives flow P to B (as applicable)



Solenoids Identified to European Convention

Functional Symbols related to solenoid identity "A" and/or "B" according to European convention, i.e. sol. "A" adjacent to "A" port, sol "B" adjacent to "B" port of valve.

