

Series 180

Manual Directional Control Valve

The Directional Control Valve of the rotary spool type consists of a rotor which is rotated with respect to the valve body. When the rotor is placed in selected positions inlet and outlet ports are connected in various combinations permitting the start, stop or directional change of fluid under pressure. The functions specific to a valve depends primarily on rotor type selected.

Specifications

Maximum Working Pressure:

700 bar

Spring centred models will not spring return to centre when operated over 207 bar.

Maximum Flow:

38 lpm

See table 3, ordering codes for available flow sizes.

Porting:

See Table 2, ordering codes

Material:

Steel components in aluminium body

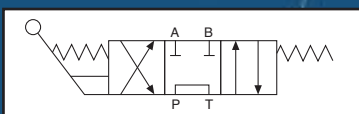
Weight:

1.13 kg

Mounting:

Pipe or manifold in any position

Symbol



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Features

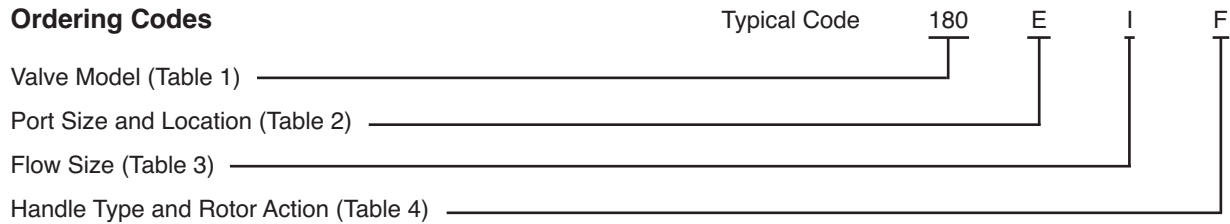
- Pressure loaded seats working against optically flat rotors automatically compensated for valve wear to assure near zero leakage even after more than 500,000 cycles.
- Customer can select from numerous variations including 7 flow patterns, 3 flow ratings, many porting configurations, ball or offset ball operating handles, spring centring and detents.
- Valves may be in-line, panel or manifold mounted.
- High pressure cap available (max pressure 250 bar) enables valve to be used in series without drain.



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(Issue 2)

Manufacturers of hydraulic components and test equipment
for the Mobile, Industrial and Agricultural industries

Ordering Codes



Note: Models 185 and 187 available in 1 and 2 flow sizes only

Table 1: Valve Model

Code	Symbol
180	
181	
182	
183	
184	
185	
187	

Table 2: Port Size and Location

Code	C1	C2	C3	C4	P1	P2	T1	T2
A	3/8 ●	1/4	1/4	3/8 ●	3/8 ●	1/4	3/8 ●	1/4
C *	3/8 ●	.0	0	3/8 ●	3/8 ●	0	3/8 ●	0
E	3/8	1/4 ●	1/4 ●	3/8	3/8	1/4 ●	3/8	1/4 ●

Note:

1/4 = 1/4 NPTF

3/8 = 3/8 BSPF

0 = C'Bore for 014 'O' Ring (4 'O' Rings included)

● = Ports shipped plugged

* Manifold mounted models utilise 5/16 - 18 UNC through bolts provided for mounting to manifold ('C' porting only)

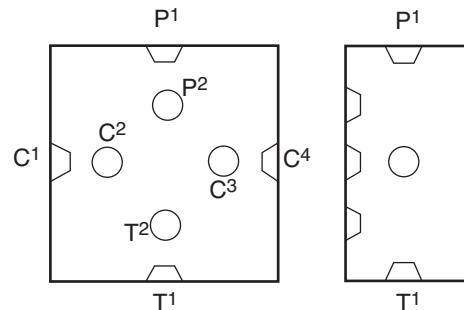


Table 3: Flow Size

Code	Description	Curve
		MAX Pressure
0	15 lpm Non - interflow*	A 10,000 psi
1	26.5 lpm Low Interflow*	B 5,000 psi
2	38 lpm Medium Interflow*	C 3,000 psi

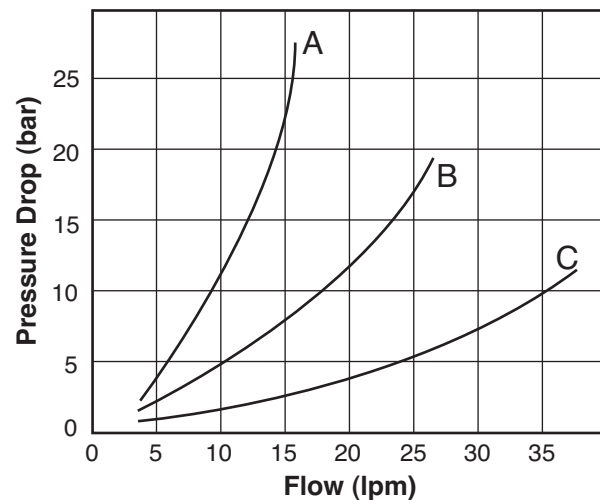
*Interflow = flow through valve in intermediate position

Table 4: Handle Type & Rotor Action

Code	Type	Action
D	Ball	Detented Action
E	Ball	Spring Centred Action
F	Offset Ball	Detented Action + Panel Mount
G	Offset Ball	Spring Centred Action + Panel Mount

Typical Performance Drop Curve

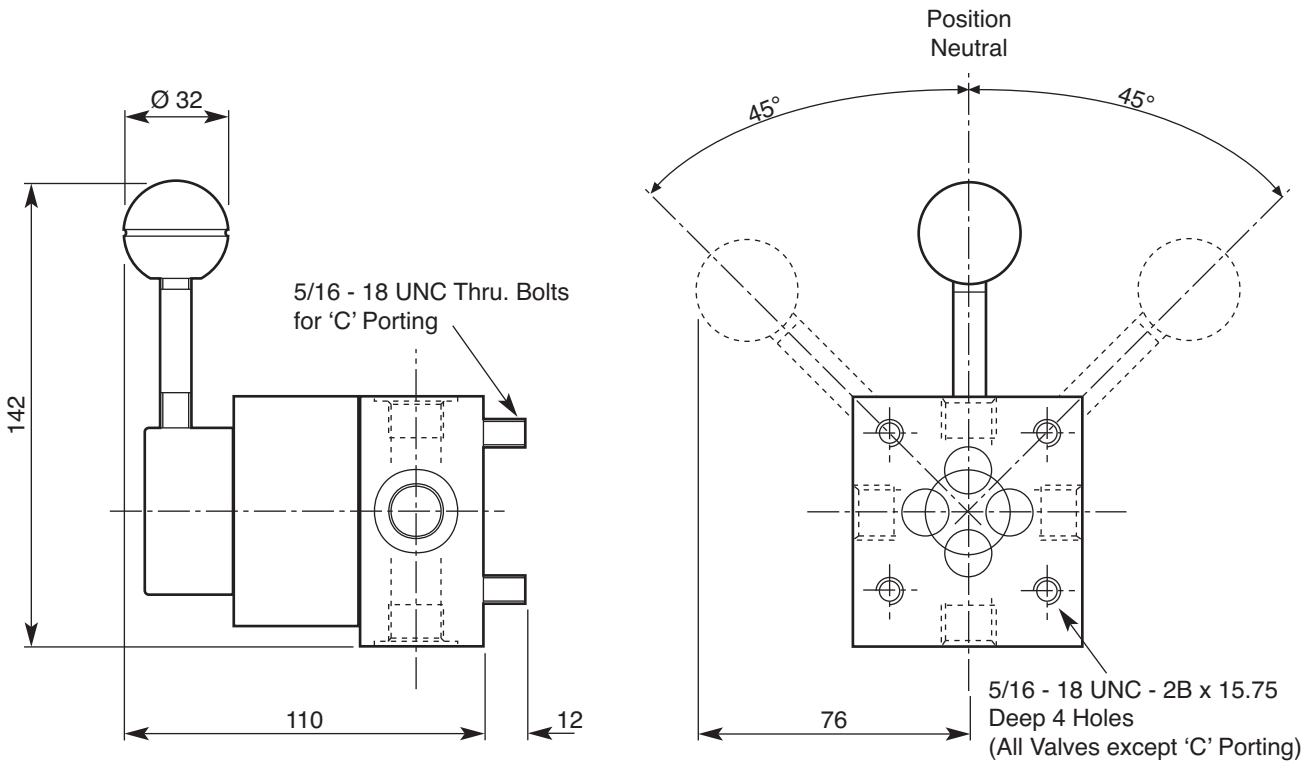
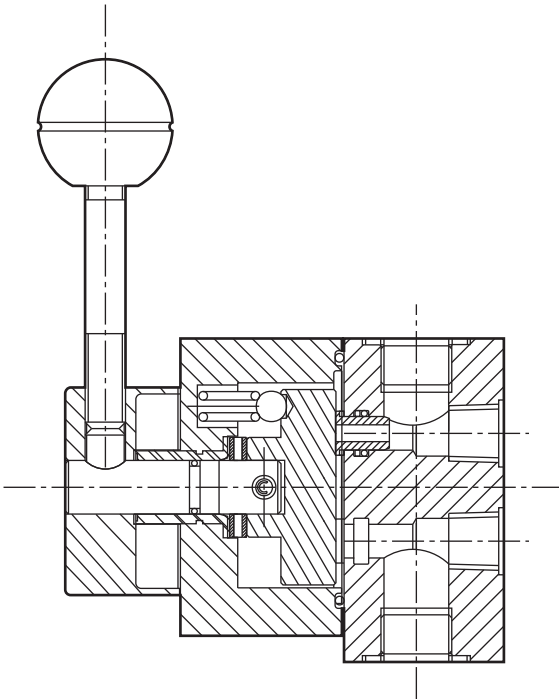
Established using Hydraulic oil with viscosity of 27.4 centisokes at 49°C



Note:

External drains are required when valves are connected in series. Consult Sales Office.

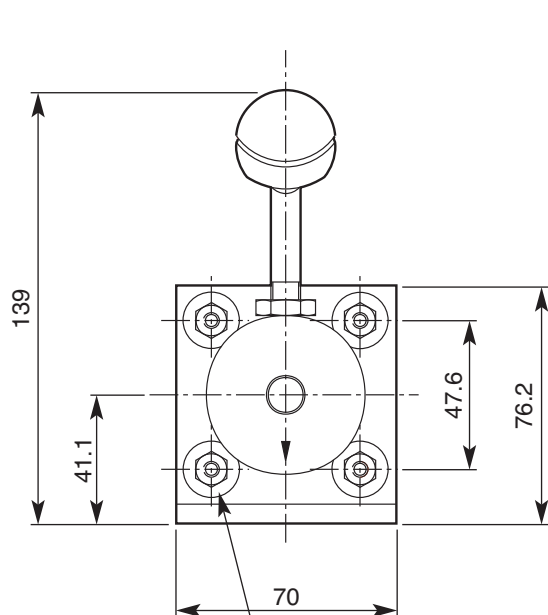
Sectional View



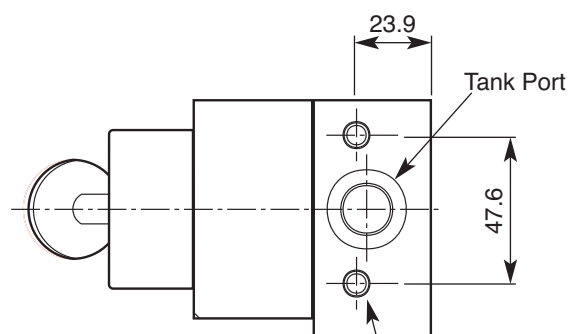
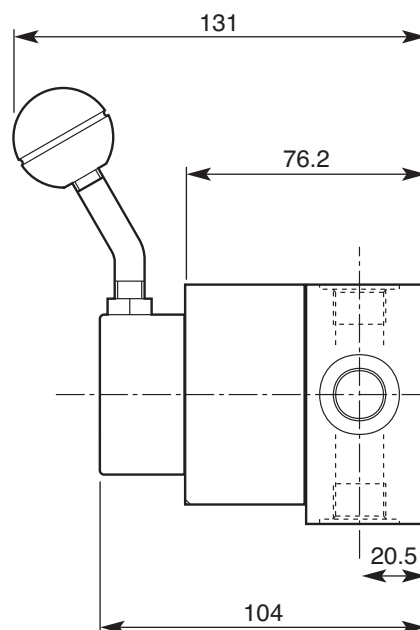
Installation Details

Panel Mounted

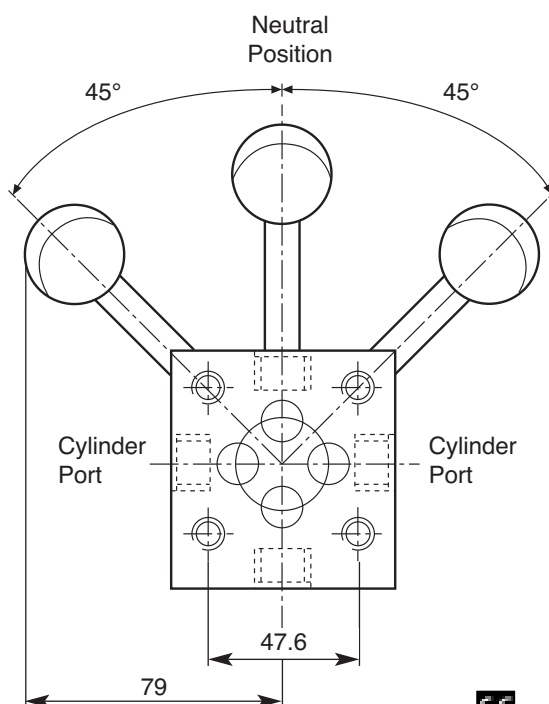
Dimensions in millimetres



5/16 - 18 UNC - 2B x 7.9 mm Deep
4 Mounting Holes
* (For Panel Mounted Valves only)
Not used with 'C' Porting



5/16 - 18 UNC - 2B x 15.7 mm
2 Mounting Holes



APPROVED