

Monoblock Directional Control Valve

MCD20 and MCD50 Series



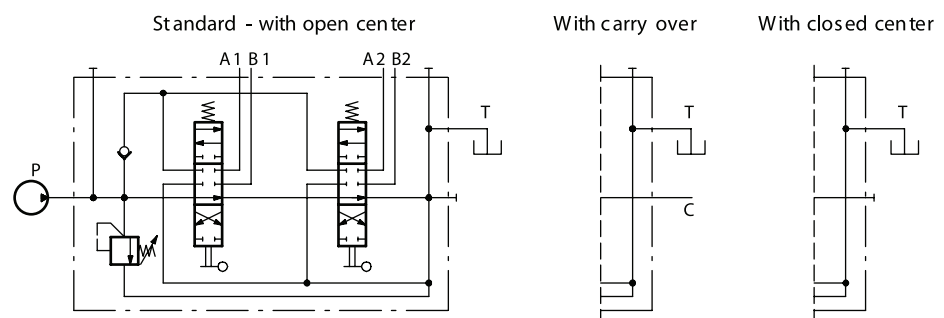
Features

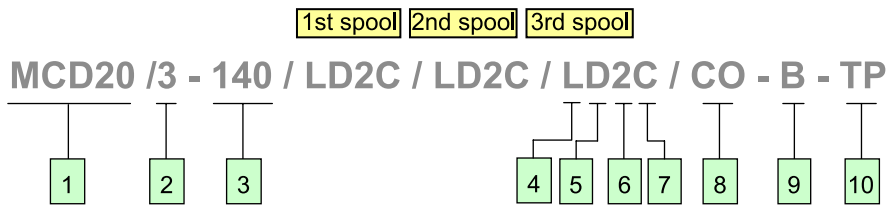
- MCD20 and MCD50 Series are monoblock directional control valves with parallel circuits. The standard valve comes with an adjustable main relief valve, check valve, and 4 mounting holes for standard and optional mounting. The carry over circuit, spool types, spool controls, and other options are available.
- The compact casting is made of high strength cast iron. The spools are made of hardened and tempered steel.



Specification

	Nominal Flow <i>L/min (USgpm)</i>	Max. Pressure <i>bar (psi)</i>
MCD20	45 (12)	210 (3000)
MCD50	70 (18)	210 (3000)
*MCD100/3	100 (26)	350 (5100)





1 Model
MCD20, MCD50, MCD100

2 Number of Spool
1 - 3
(MCD 100 only available with 3 spoils)

3 Relief Valve Setting
210 bar
140 bar

4 Spool Control B Port Side
L - Standard Lever

5 Spool Control A Port Side
S - Spring return to center
D - Detent in three positions
I - Detent in two positions
O - Detent out two positions

6 Spool Type
(Type.1) 1 - Double acting, 3 position with A and B closed in center (Cylinder spool)
(Type.2) 2 - Double acting, 3 position with A and B to tank in center (Motoring spool)
(Type.3) 3 - Single acting on A, 3 position B plugged
(Type.4) 4 - Single acting on B, 3 position A plugged

7 Service Valve (MCD20 only)
N - Without valve
P - Without valve, but with pre-arranged holes
C - With pilot operated check valves on port A and B
*With Service Valve, the main valve body will come without Port P and T on top and Port A and B can be BSPT 3/8" only, but Port A and B on check valve can be any threads as specified in Ordering Code

8 Circuit Option
OC - With open center plug
CO - With carry over plug
CC - With closed center plug

9 Port Connection

MCD20

Code	Thread	Port A-B	Port P	Port T	Port CO
B3	BSP	3/8"	3/8"	3/8"	3/8"
B4	BSP	1/2"	1/2"	1/2"	1/2"
S	SAE	SAE 8	SAE 10	SAE 10	SAE 10

MCD50

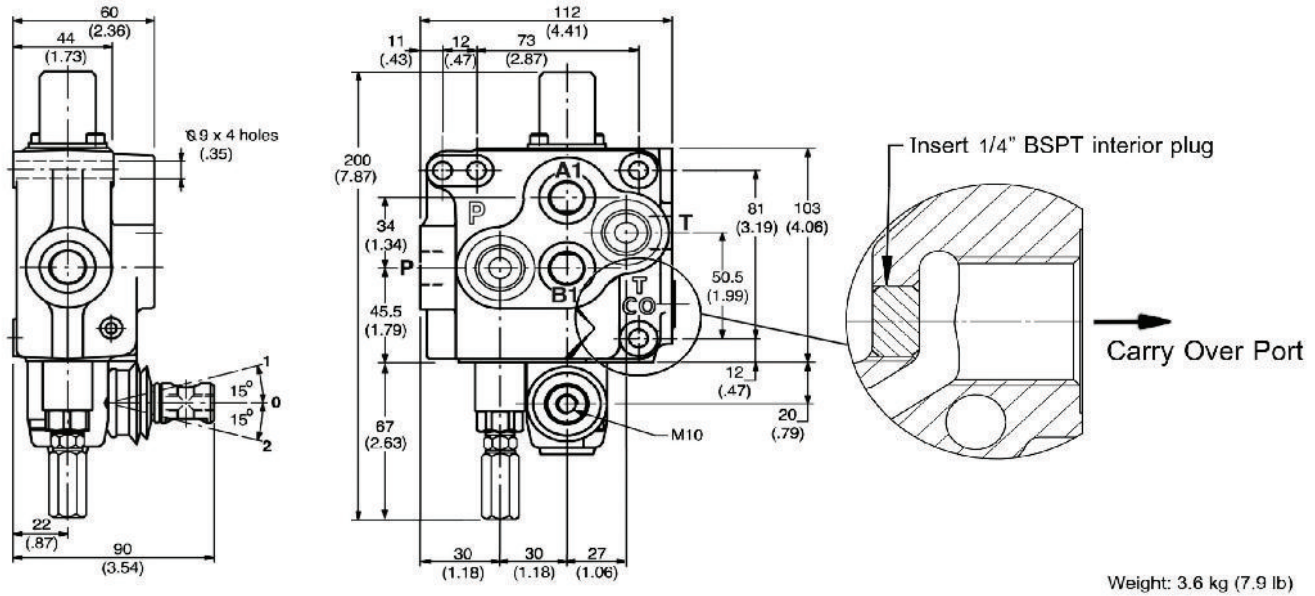
Code	Thread	Port A-B	Port P	Port T	Port CO
B4	BSP	1/2"	1/2"	3/4"	1/2"
B6	BSP	3/4"	3/4"	3/4"	3/4"
S	SAE	SAE 10	SAE 12	SAE 12	SAE 12

MCD100/3

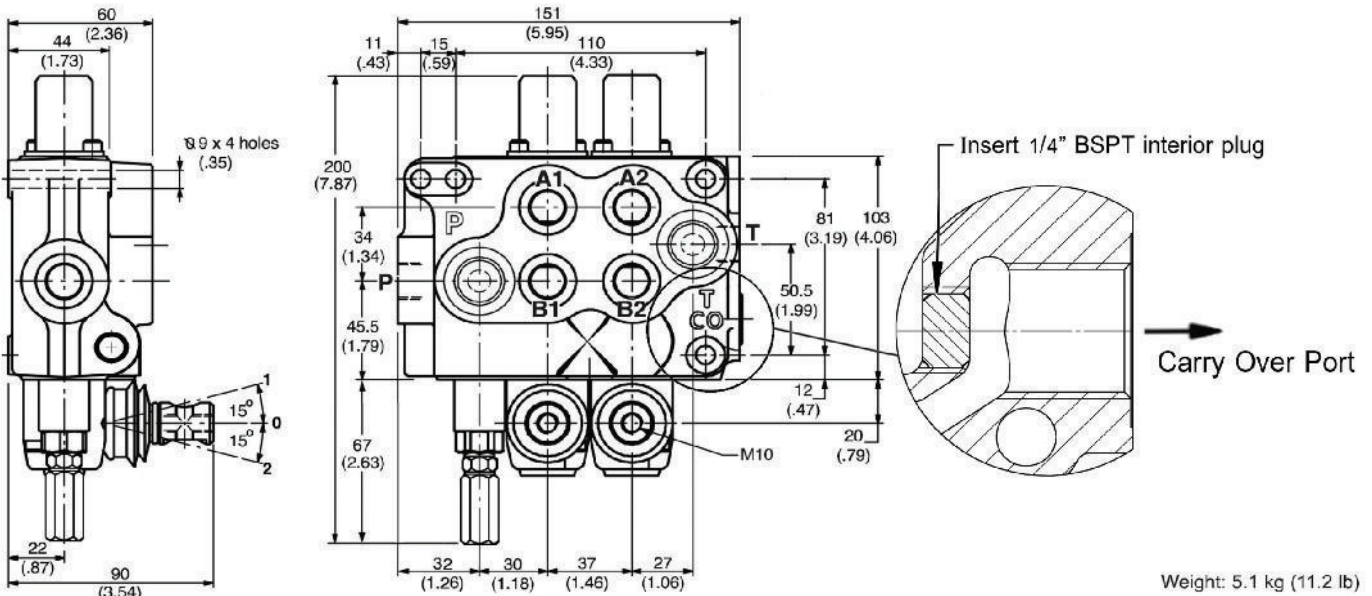
B	BSP	3/4"	3/4"	3/4"	3/4"
S	SAE	SAE 12	SAE 12	SAE 12	SAE 12

10 Optional Port Connection
SP - Use port P and T at side plugged P and T on top
TP - Use port P and T on top plugged P and T at side

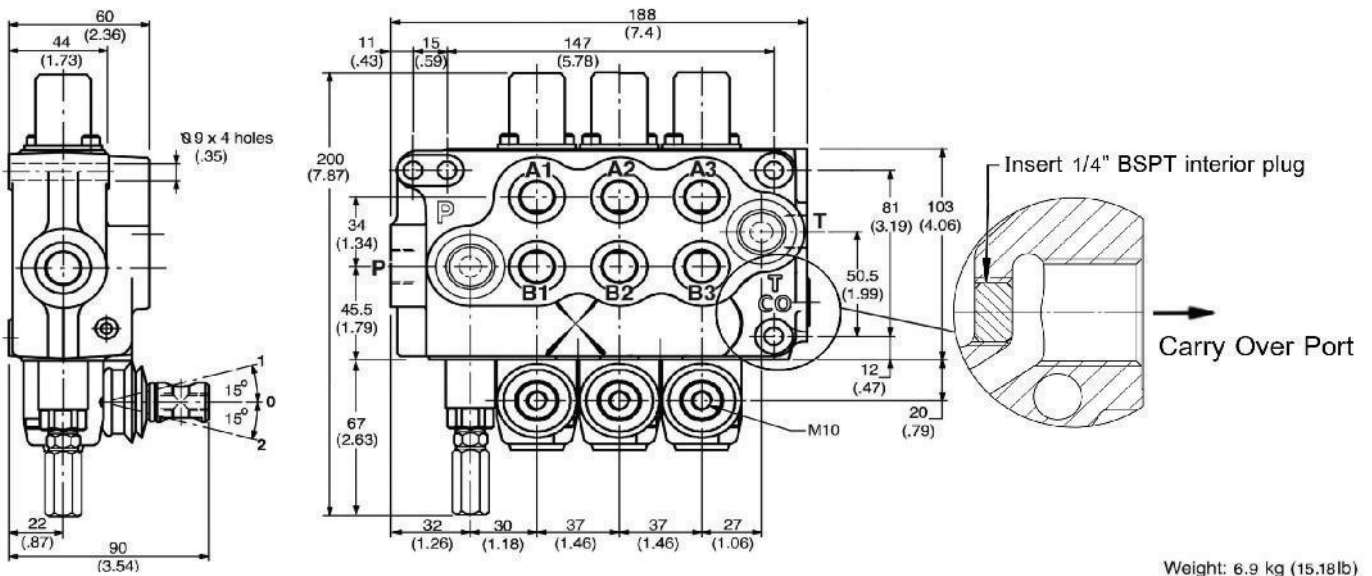
MCD20/1



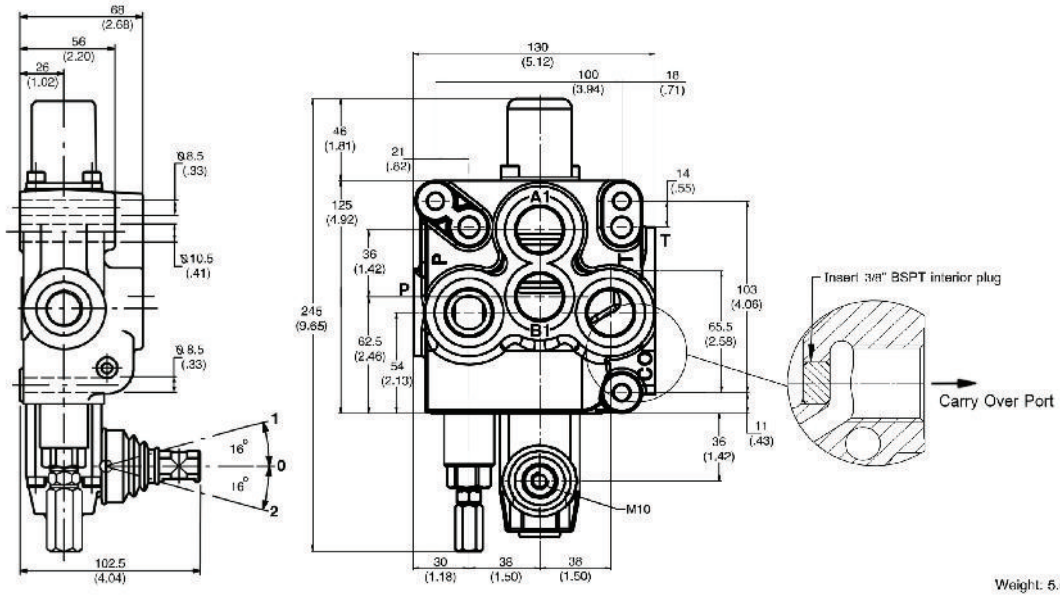
MCD20/2



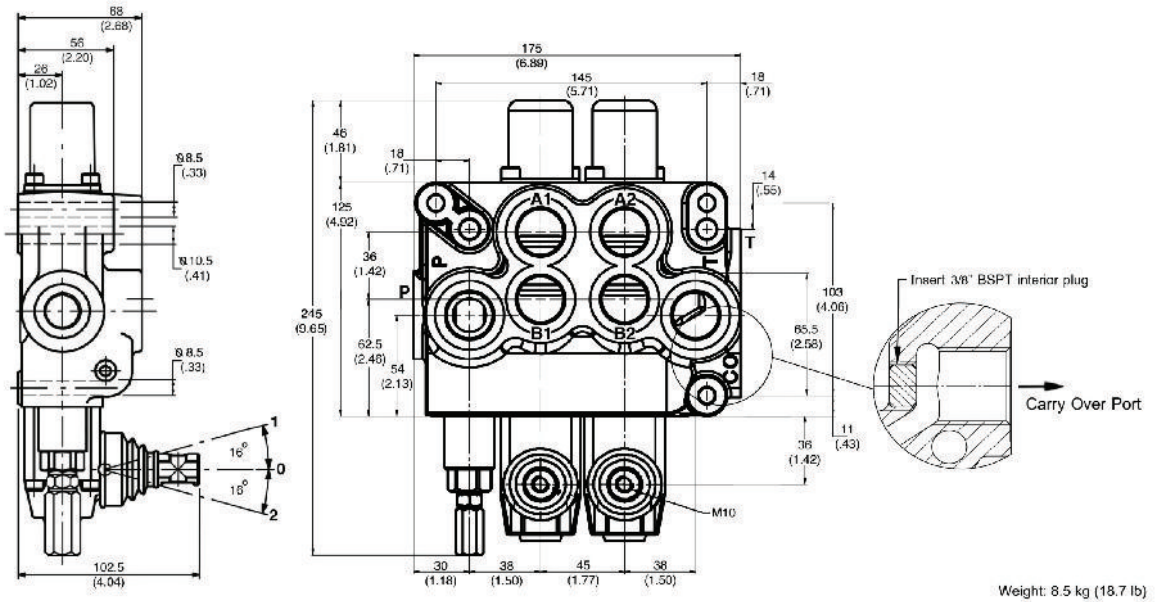
MCD20/3



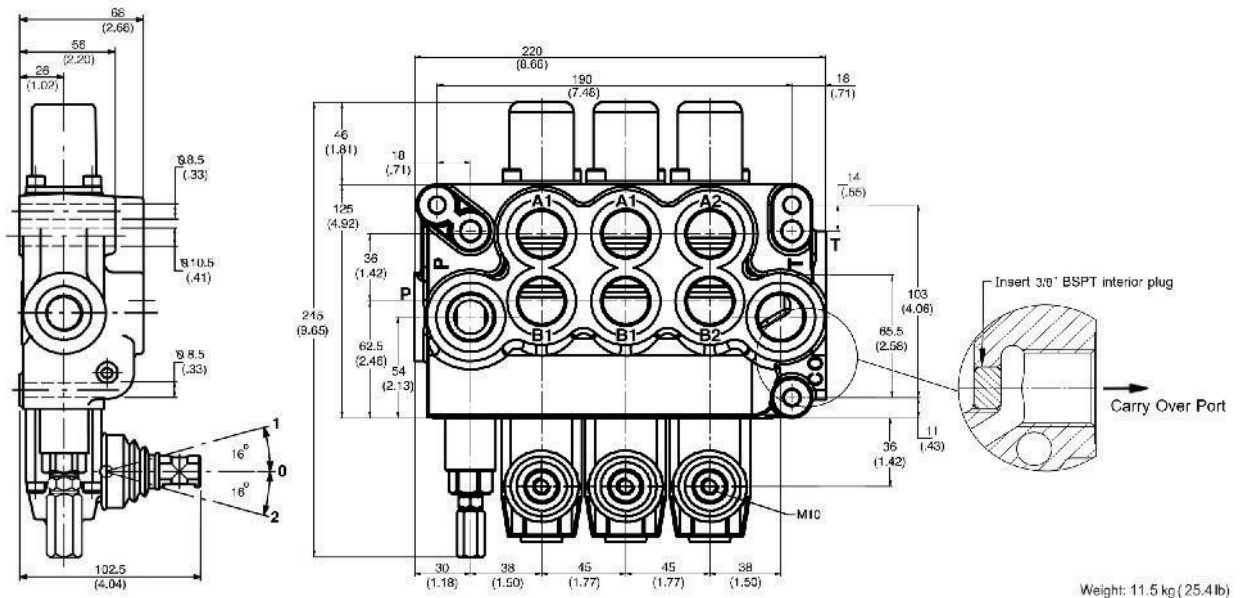
MCD50/1



MCD50/2

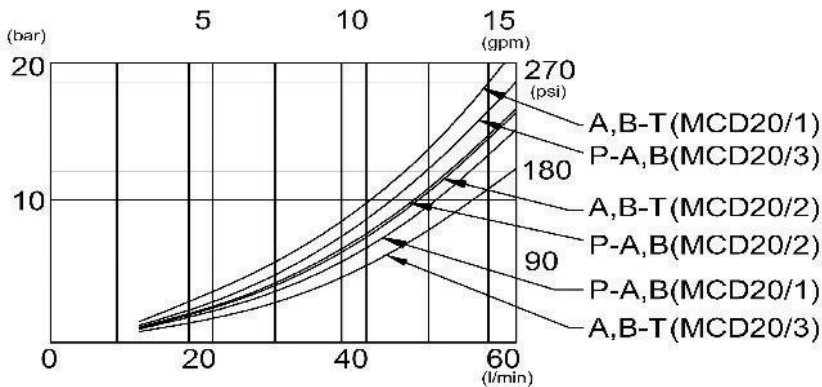
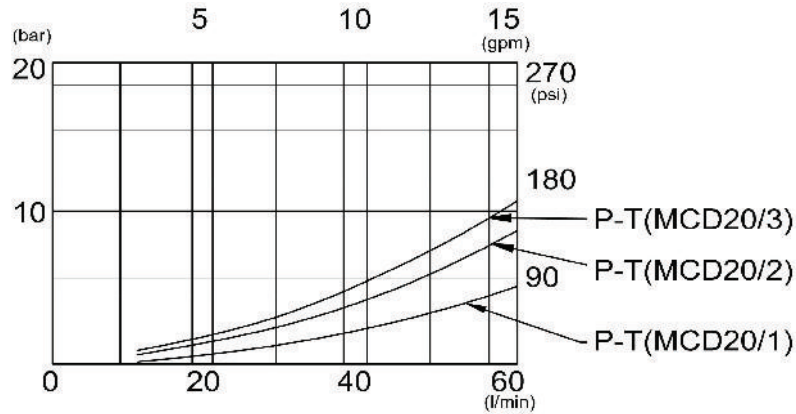


MCD50/3



MCD20

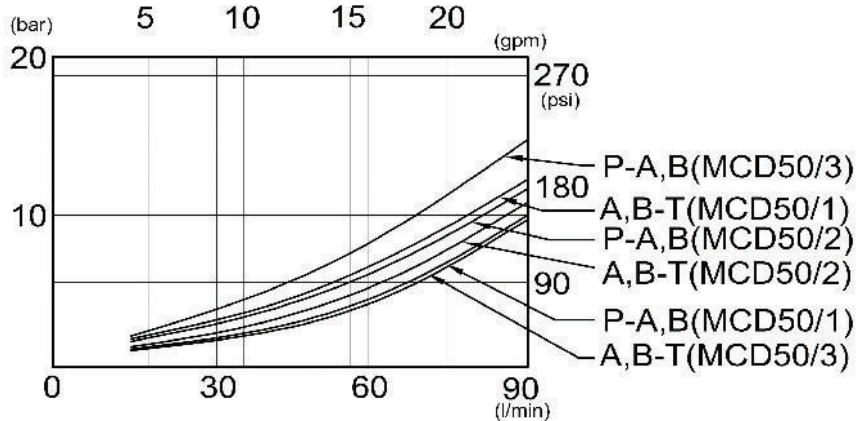
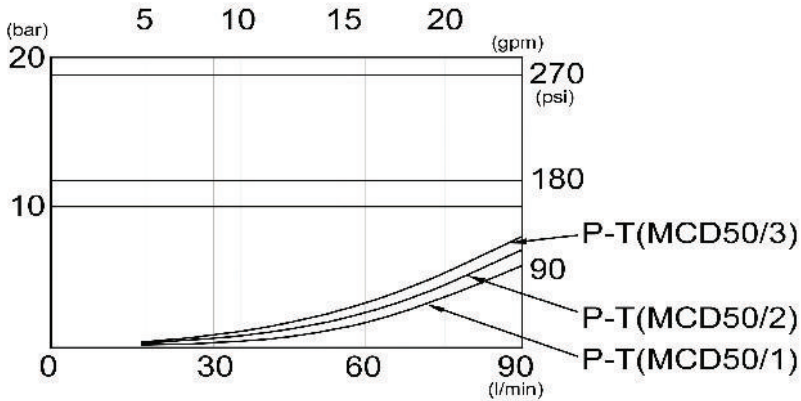
PRESSURE DROP



Test Condition Hydraulic oil ISO VG 32 Temperature 50 °C Viscosity 23.6 cSt

MCD50

PRESSURE DROP

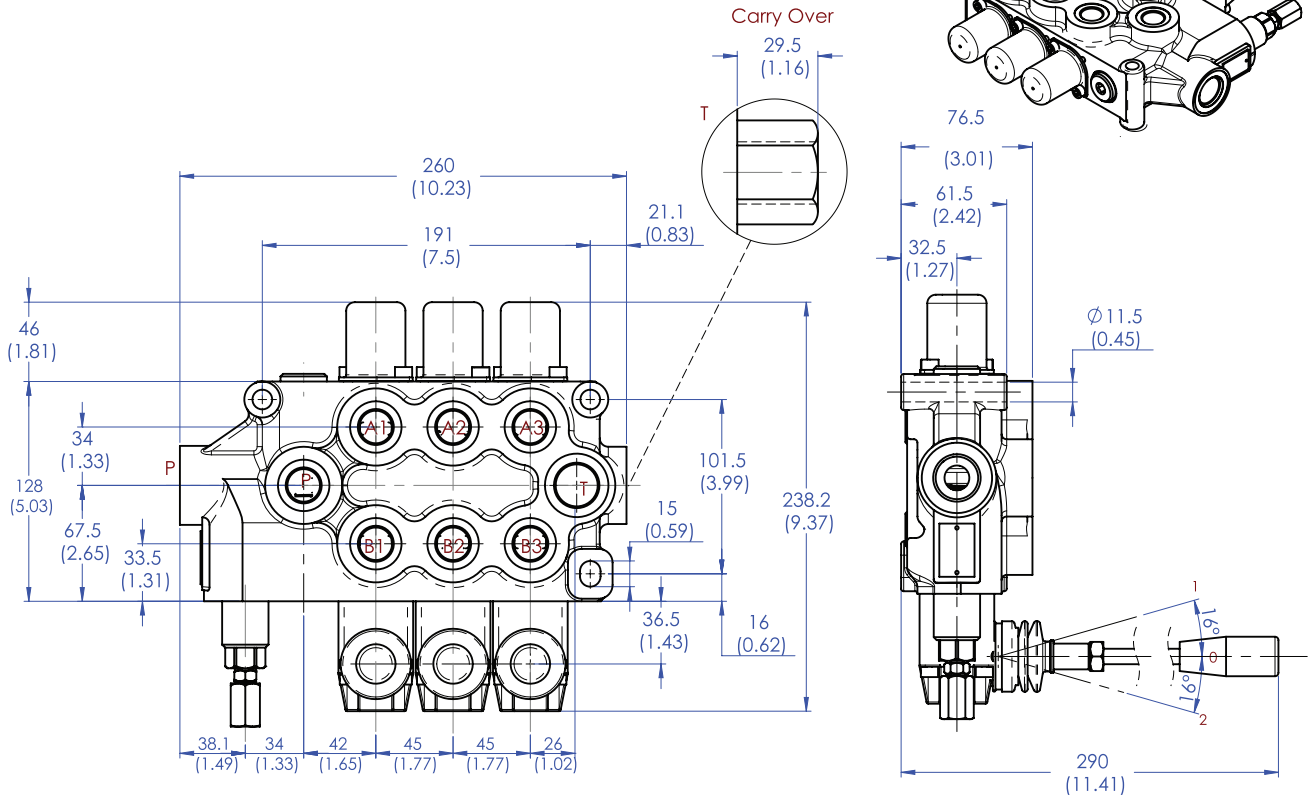
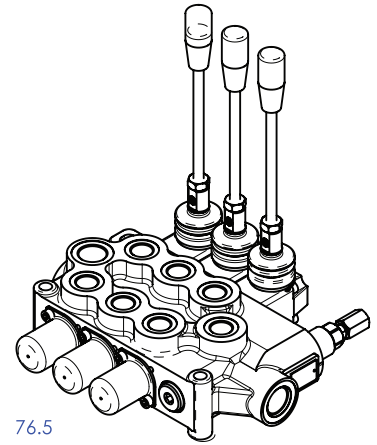


Test Condition Hydraulic oil ISO VG 32 Temperature 50 °C Viscosity 23.6 cSt

MCD100/3

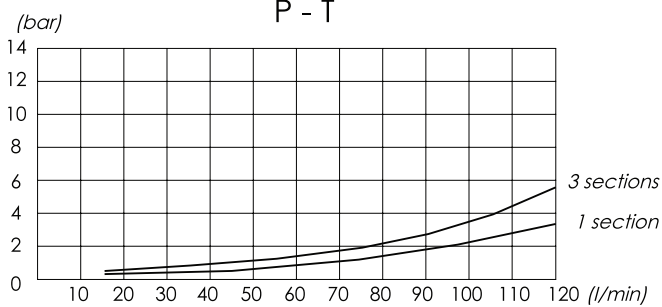
Standard working conditions

Max. recommended flow	100 l/min	(26 GPM)
Max. pressure	350 bar	(510 PSI)
Max. backpressure	80 bar	(1160 PSI)

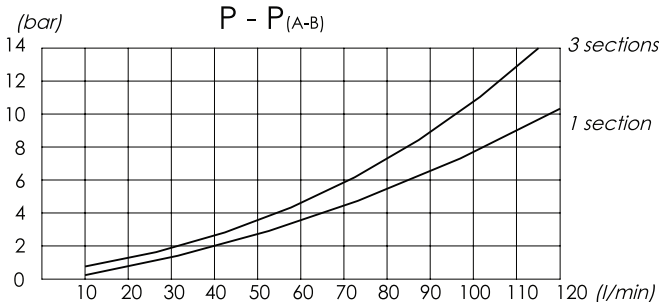


PRESSURE DROP

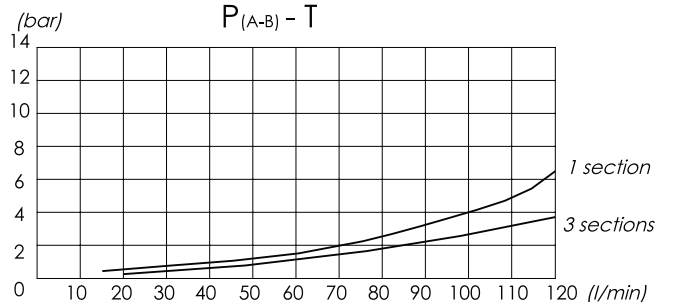
P - T



P - P_(A-B)



P_(A-B) - T



Weight: 11.8 kg (26.0 lb)

Spools for Monoblock and Sectional Valves			
Type	Spools Description	Monoblock	Sectional
1	Double acting, 3 position with A and B closed in center (Cylinder spool)		
2	Double acting, 3 position with A and B to tank in center (Motor spool)		
3	Single acting on A, 3 position B plugged		
4	Single acting on B, 3 position A plugged		

Spool Control B Port side		
Code	Description	Scheme
L	Standard Lever	1 0 2

Spool Control A Port side		
Code	Description	Scheme
S	Spring return to center	1 0 2
D	Detent in three positions	1 0 2
I	Detent in two positions	1 0
O	Detent out two positions	0 2