

# Monoblock Directional Control Valve

## MCD20 and MCD50 Series



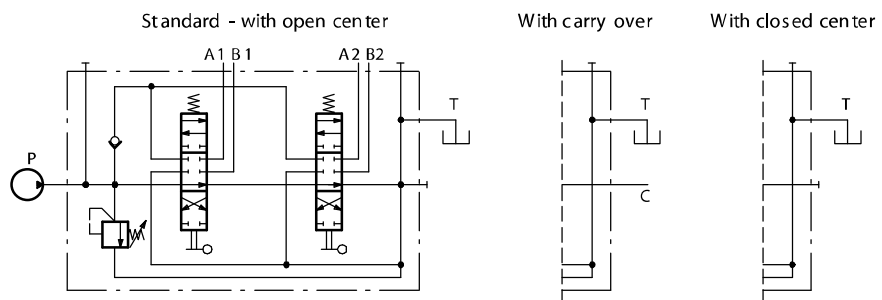
### Features

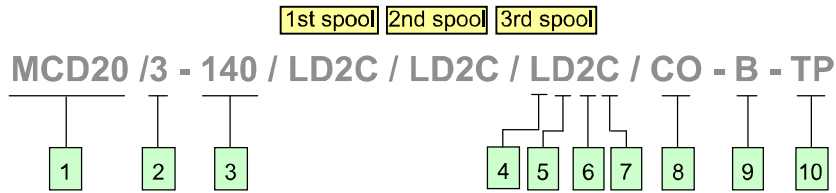
- MCD20 and MCD50 Series are monoblock directional control valves with parallel circuits. The standard valve comes with an adjustable main relief valve, check valve, and 4 mounting holes for standard and optional mounting. The carry over circuit, spool types, spool controls, and other options are available.
- 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 spools)

**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

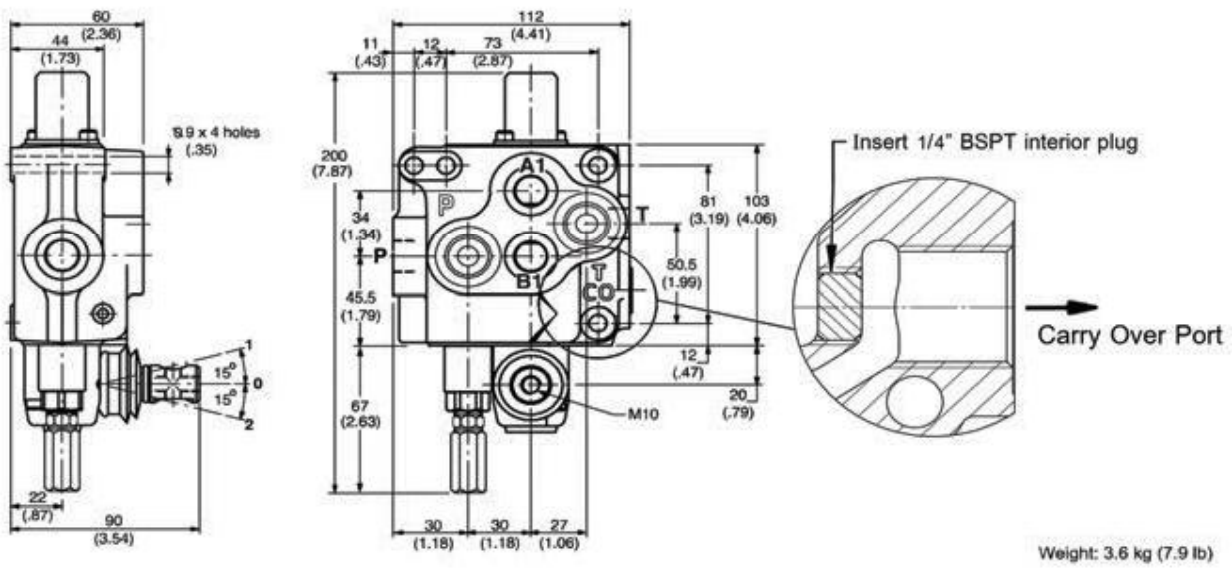
MCD100/3

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

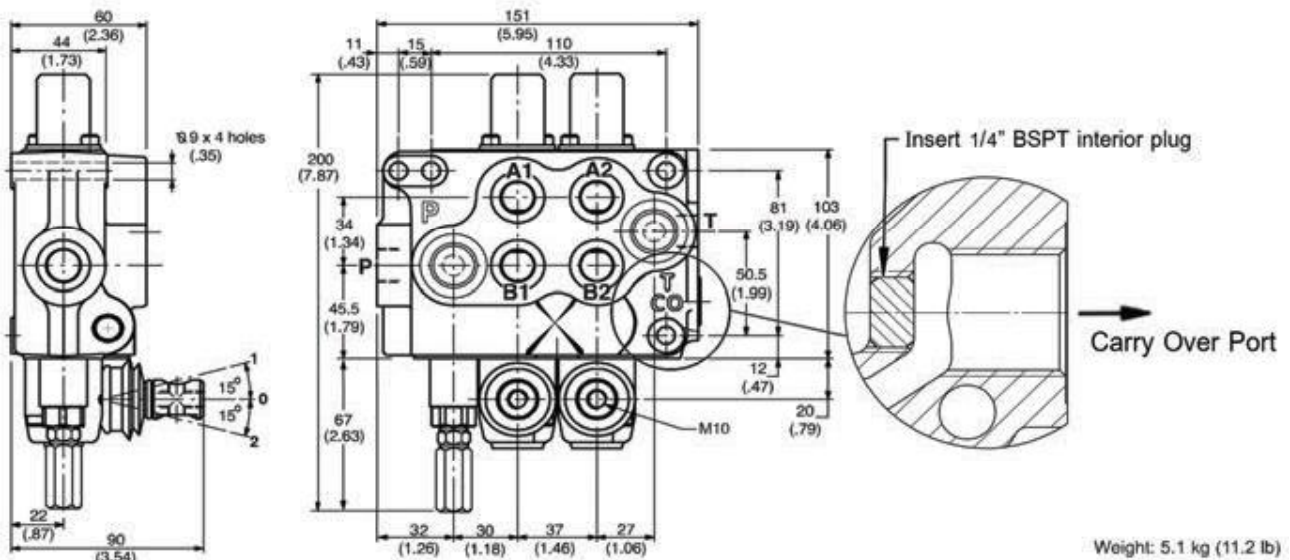
**10** Optional Port Connection

- 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

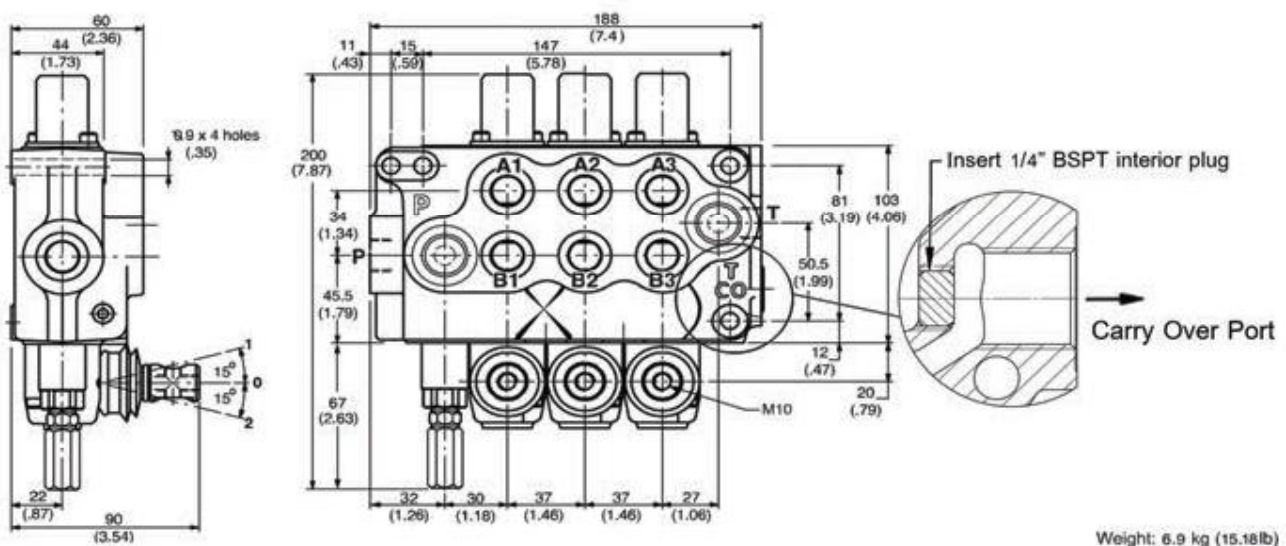
MCD20/1



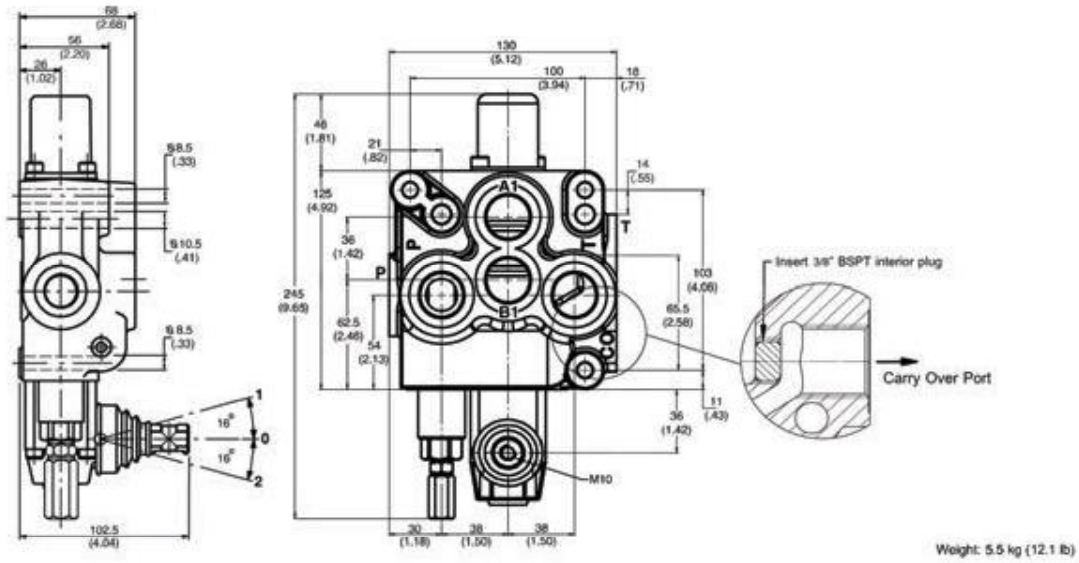
MCD20/2



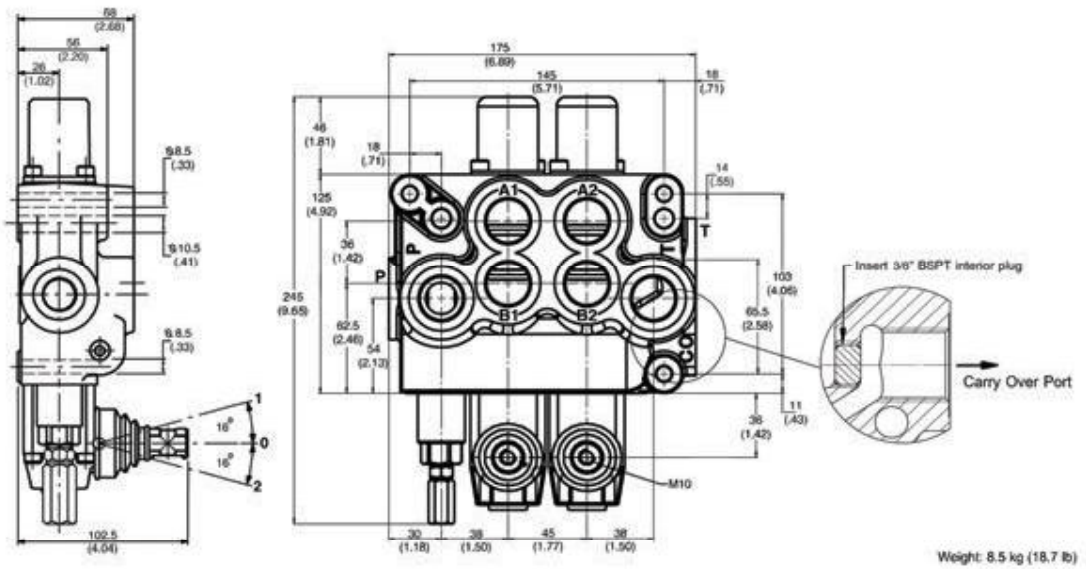
MCD20/3



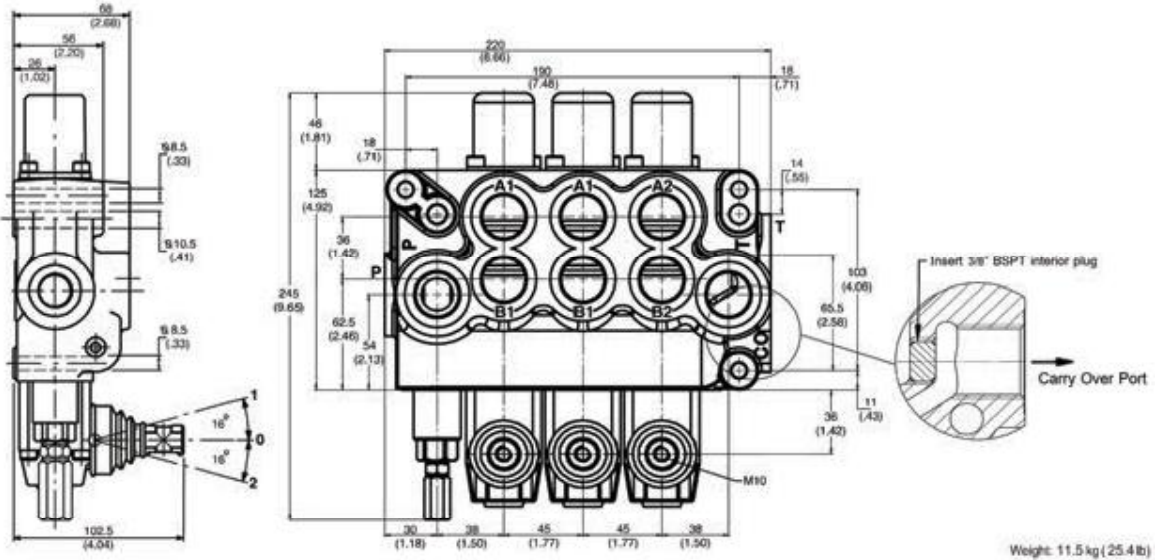
MCD50/1



MCD50/2

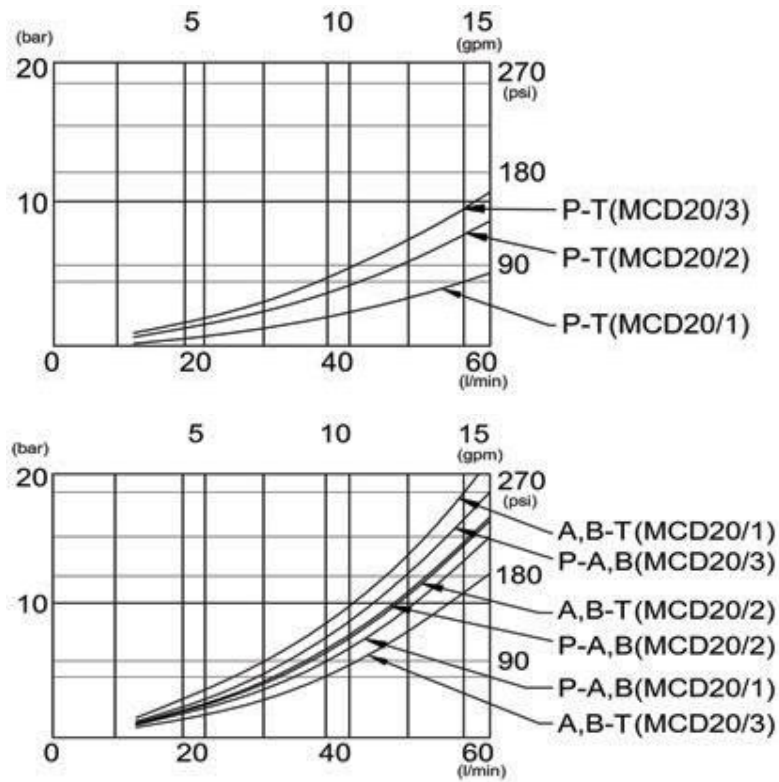


MCD50/3



**MCD20**

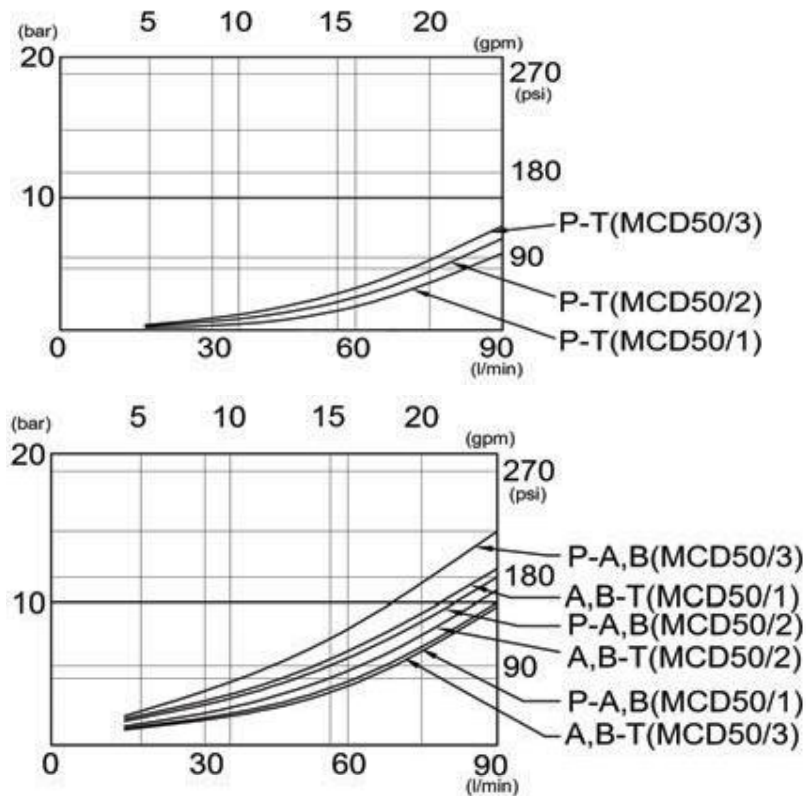
PRESSURE DROP



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

**MCD50**

PRESSURE DROP

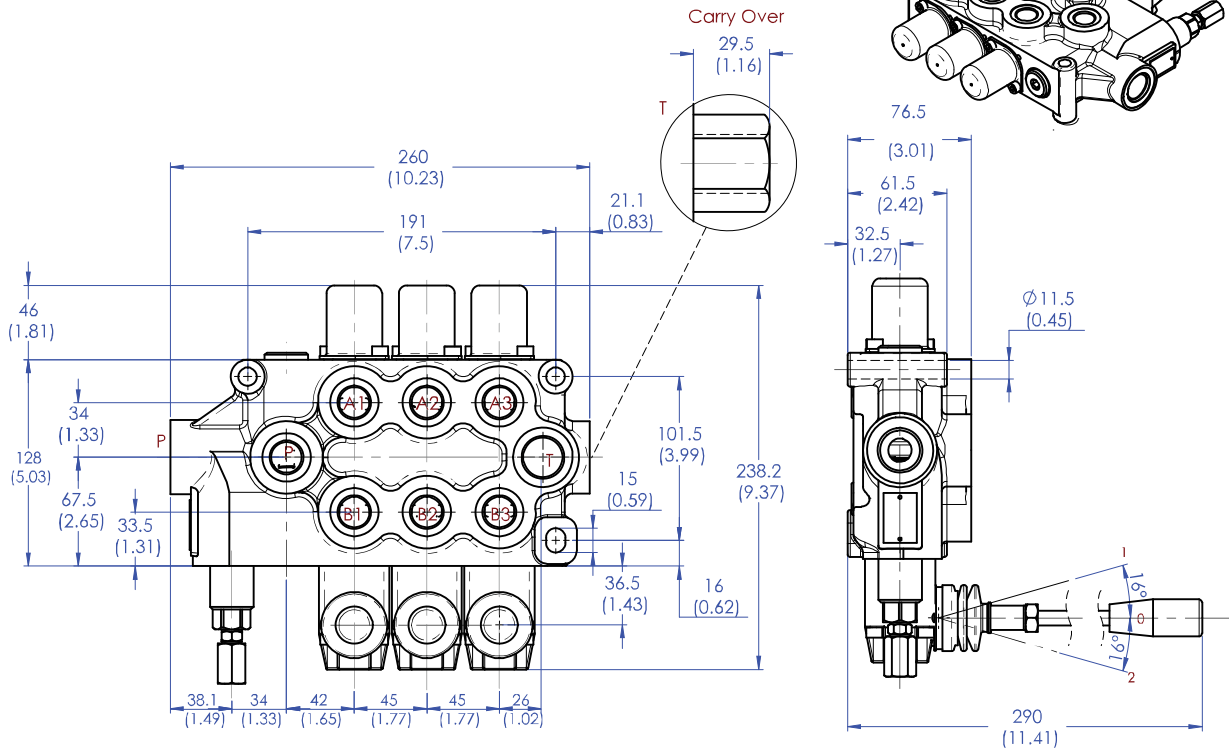


Test Condition Hydraulic oil ISO VG 32 Temperature 50°C Viscosity 23.6 cSt

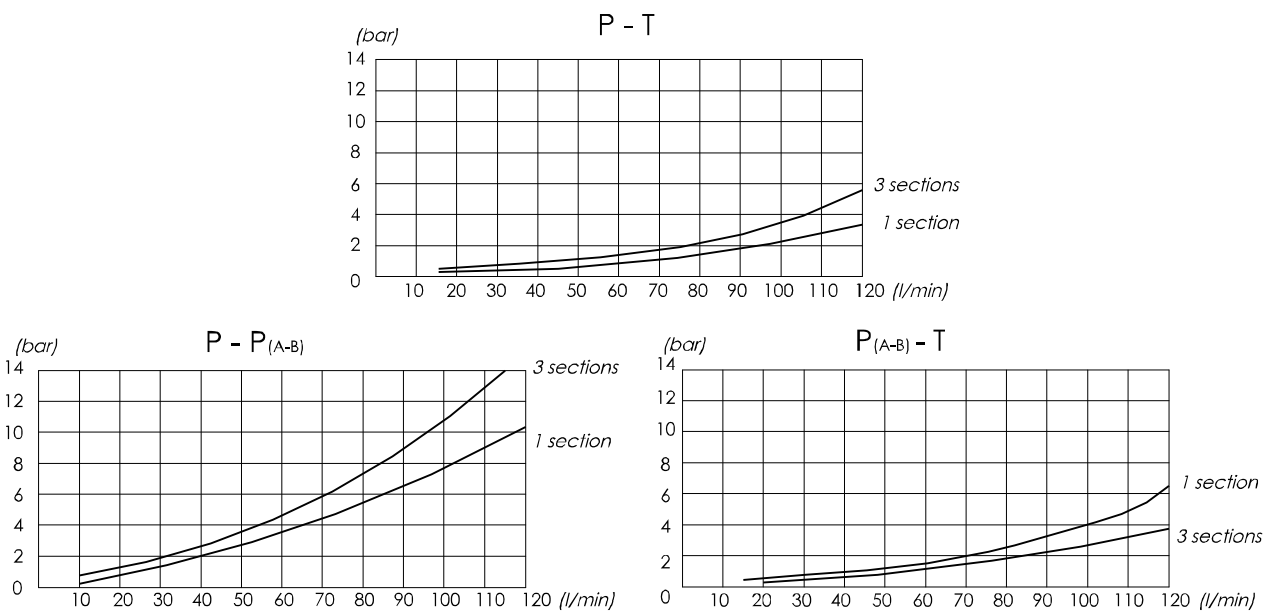
MCD100/3

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



Weight: 11.8 kg (26.0 lb)