

DCV Series

Sectional Directional Control Valve
Flow 20 to 200 l/min
Pressure up to 350 bar



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Introduction

- DCV directional control valve is designed for high pressure hydraulic system such as drilling machine, sanitation etc.
- Auxiliary valve: over-load valve, anti-cavitation valve, combined valve etc. (not for DCV40-45).
- Control type: manual, joystick, cable, pneumatic, solenoid, electro-pneumatic, electro-hydraulic etc.
- Structure: monoblock, sectional.
- Carry-over port as hydraulic source for other parts.

Ordering code

DCV													
Flow: 20, 40, 45, 60, 100, 140, 200													
Number of Spools: 1-12													
Inlet section type: see table (1)													
Relief valve set pressure: 100-315 bar													
Inlet port size: see table (2)													
Spool type: see table (3)													
Handle side arrangement: see table(4)													
Spool cap side arrangement: see table(5)													
Working section arrangement: see table(6)													
Work port size: see table(2)													
Outlet section type: see table (7)													
Outlet port size: see table (2)													



Ordering code

Table 1

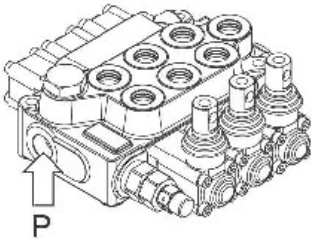
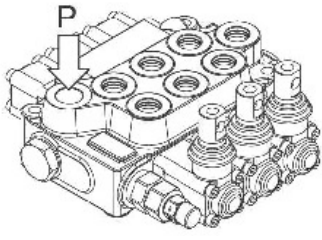
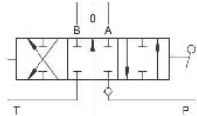
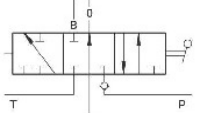
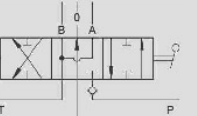
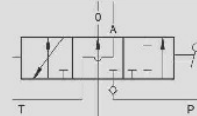
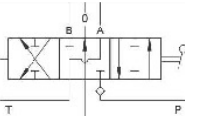
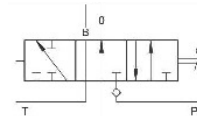
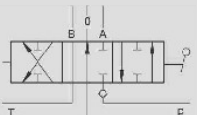
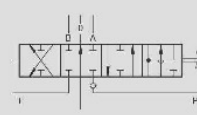
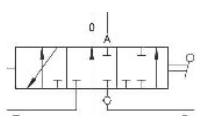
Code	Type	Description	Code	Type	Description
A1		Side Inlet with relief valve	A2		Top inlet, with relief valve
A3		Inlet port on top of Inlet section, Outlet on outlet section (only for DCV60-100, see table 7, F5-F6)	A4		Inlet and outlet port on top of inlet section (only for DCV60-100), match F7 in table 7

Table 2

BSP thread		Metric thread		US standard UNF thread		US standard NPT thread	
Code	Thread size	Code	Thread size	Code	Thread size	Code	Thread size
G04	G1/4	M16	M16x1.5	U08	1/2-20UNF	N04	NPT 1/4
G06	G3/8	M18	M18x1.5	U10	5/8-18UNF	N06	NPT3/8
G08	G1/2	M20	M20x1.5	U12	3/4-16 UNF	N08	NPT1/2
G12	G3/4	M22	M22x1.5	U16	1-12UNF	N12	NPT3/4
G16	G1	M27	M27x2	U22	1 1/8-12UNF	N16	NPT1
		M33	M33x2				

Table 3

Code	Spool type	Description	Code	Spool type	Description
ST1		3 positions, double acting	ST6		3 positions, single acting in B
ST2		3 positions, double acting, A & B open	ST7		3 positions, single acting in A, A open
ST3		3 positions, double acting, A open, B blocked	ST8		3 positions, single acting in B, B open
ST4		3 positions, double acting, A blocked, B open	ST9		4 positions, Double acting with 4th floating positions
ST5		3 positions, single acting in A			



Ordering code

Table 4

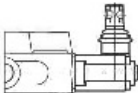
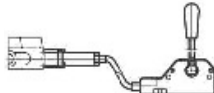
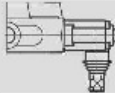
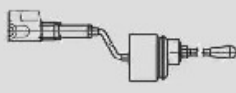
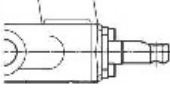
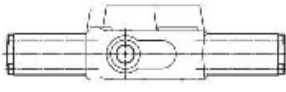
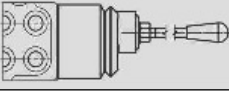
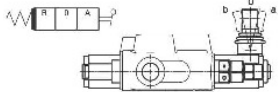
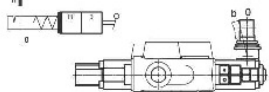
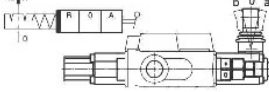
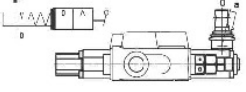
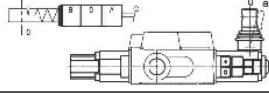
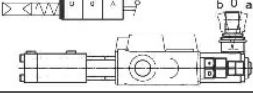
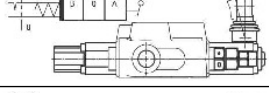
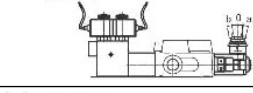
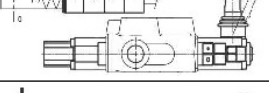
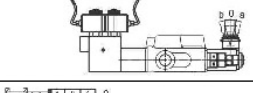
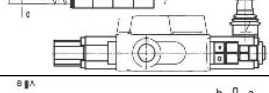
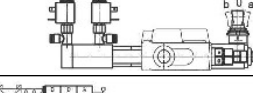
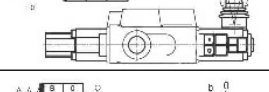
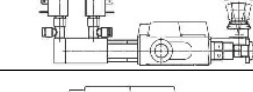
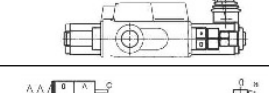
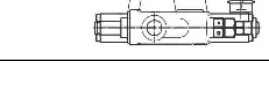
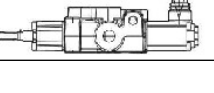
Code	Type	Description	Code	Type	Description
C1		Standard handle	C5		Flexible cable (standard length 1.5m, customizable)
C2		Handle at 180°	C6		Joystick with cable (standard length 1.5m, customizable)
C3		Non-handle at 180°	C7		Hydraulic control Pilot pressure: 5-10 bar
C4		joystick			

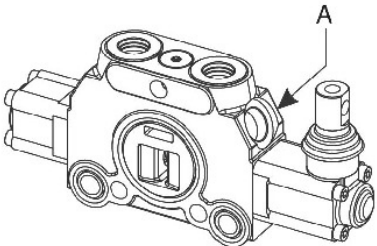
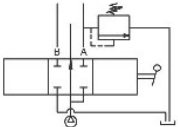
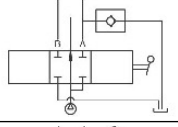
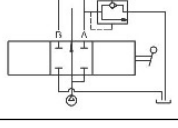
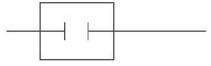
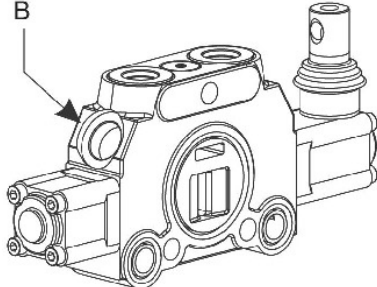
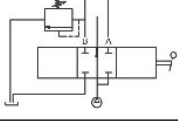
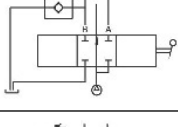
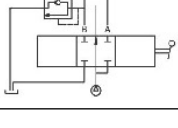
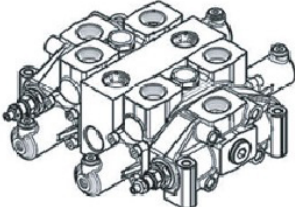
Table 5

Code	Type	Description	Code	Type	Description
D1		3 positions, spring return	D10		2 positions (0, b), spring return, detent in b
D2		3 positions, spring return, detent in a and b	D11		2 positions (0, a), spring return in a
D3		3 positions, spring return, detent in a	D12		pneumatic control ON OFF, pilot pressure 5-10 bar
D4		3 positions, spring return, detent in b	D13		electro-hydraulic control ON-OFF, 12 Vdc with pressure reduce valve, pilot pressure 20-25 bar
D5		4 positions, spring return, detent in 4 th position	D14		electro-hydraulic control ON-OFF, 24 Vdc with pressure reduce valve, pilot pressure 20-25 bar
D6		4 positions spring return detent in all 4 positions	D15		electro-pneumatic control ON-OFF, 12Vdc, pilot pressure 5-10 bar
D7		3 positions, spring return detent in 0, a & b	D16		electro-pneumatic control ON-OFF, 24Vdc, pilot pressure 5-10 bar
D8		2 positions (0, b), spring return	D17		Hydraulic control Pilot pressure 20-25 bar
D9		2 positions (0, a), spring return	D18		Dual control with spring return, M8 thread



Ordering code

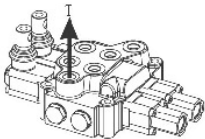
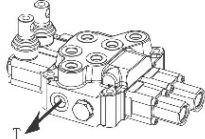
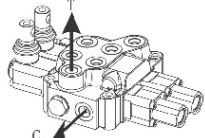
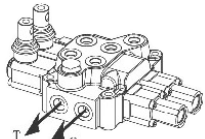
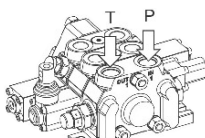
• Table 6

Code	Work Section Arrangement	Type	Description
E1			Overload valve in position A
E2			Anti-cavitation valve in position A
E3			Anti-cavitation relief valve in position A
E4			Prearrangement cavity (plugged)
E5			Overload valve in position B
E6			Anti-cavitation valve in position B
E7			Anti-cavitation relief valve in position B
E8			Prearrangement cavity (plugged)
E9		Intermediate outlet section	intermediate section for sectional valves
E10		Intermediate connection section	



Ordering code

• Table 7

Code	Type	Description
F1		Top outlet (for DCV60-100 no carry-over for this arrangement)
F2		Side outlet (for DCV60-100 no carry-over for this arrangement)
F3		Top outlet with carry over
F4		Side outlet with carry over
F5		Inlet & outlet both on inlet section, carry-over available (only for DCV60-100)

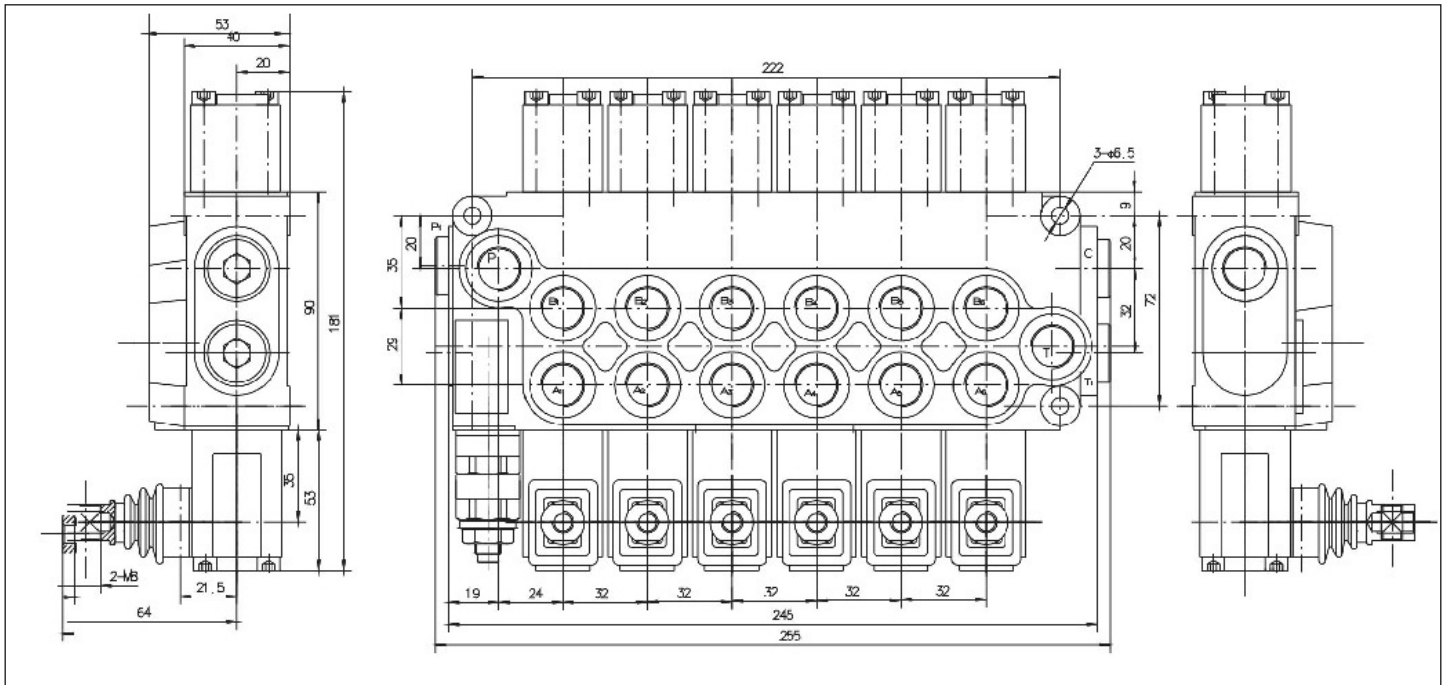
Specifications

Model	DCV20	DCV40	DCV45	DCV60	DCV100	DCV140	DCV200
Nominal flow rate (l/min)	20	40	45	60	100	140	200
Max. pressure (bar)	350	350	350	350	350	350	350
Operating range (mm ² /s)	15~75	15~75	15~75	15~75	15~75	15~75	15~75
Viscosity (mm ² /s) Minimum	12	12	12	12	12	12	12
Maximum	400	400	400	400	400	400	400
Ambient temperature range (°C)	-40~80	-40~80	-40~80	-40~80	-40~80	-40~80	-40~80
Structure - Monoblock	6 sections	1~8 sections	1~8 sections	1~12 sections	1~12 sections	1~12 sections	1~12 sections

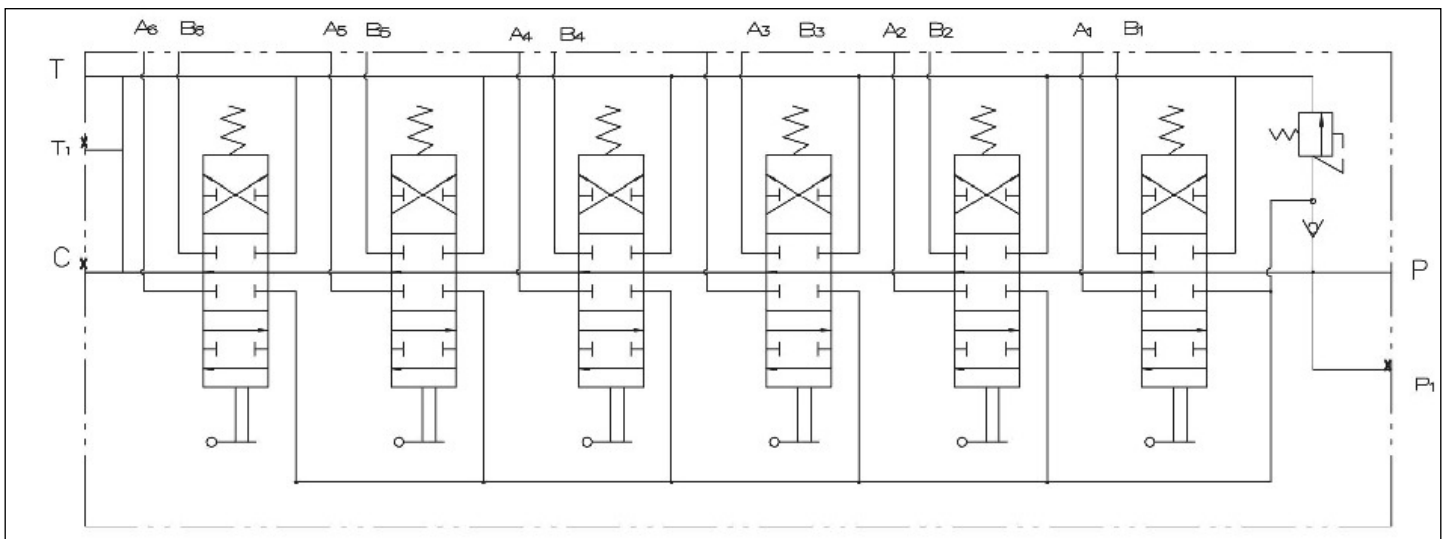


Unit Dimensions - DCV20

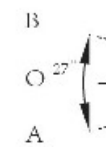
(Dimensions in mm)



Hydraulic Circuit



(Dimensions in mm)



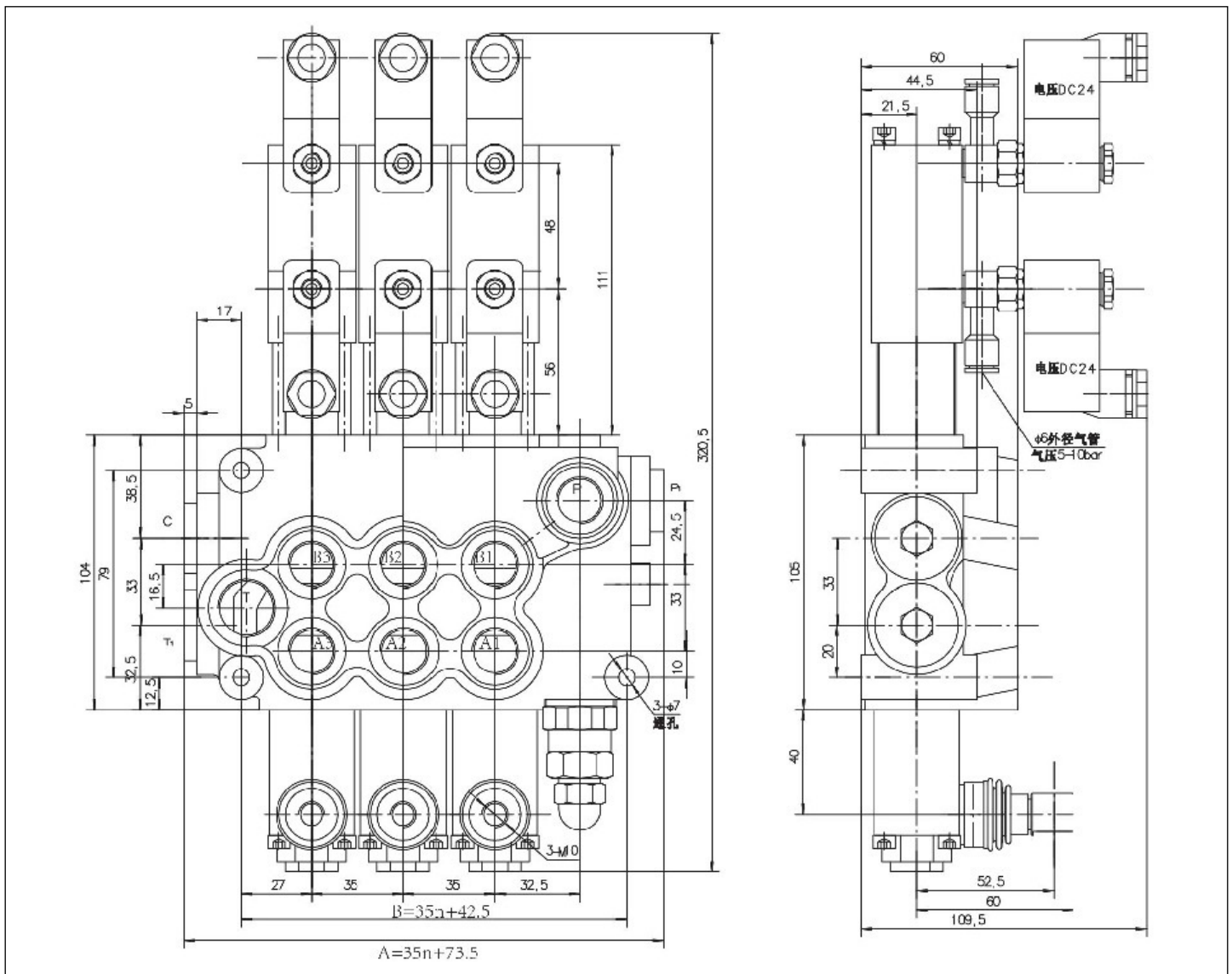
Hydraulic Circuit



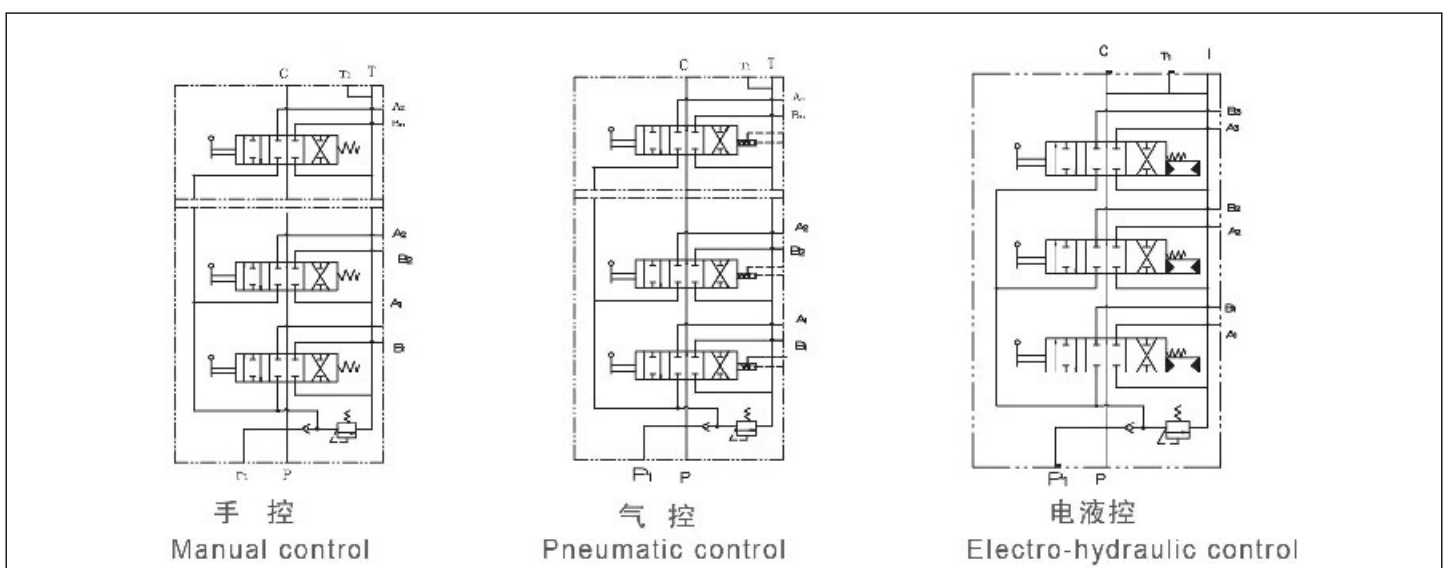


Unit Dimensions - DCV45

(Dimensions in mm)



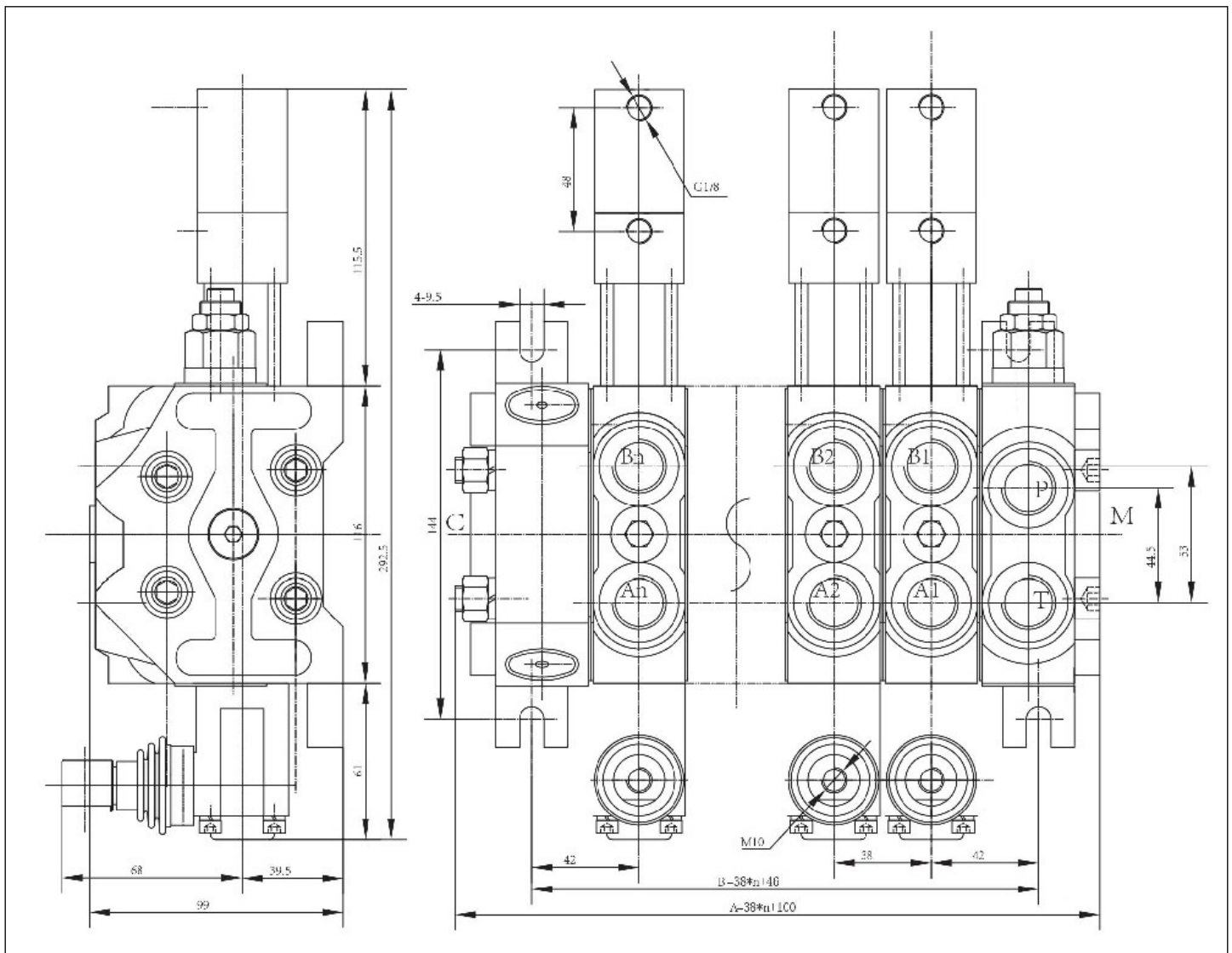
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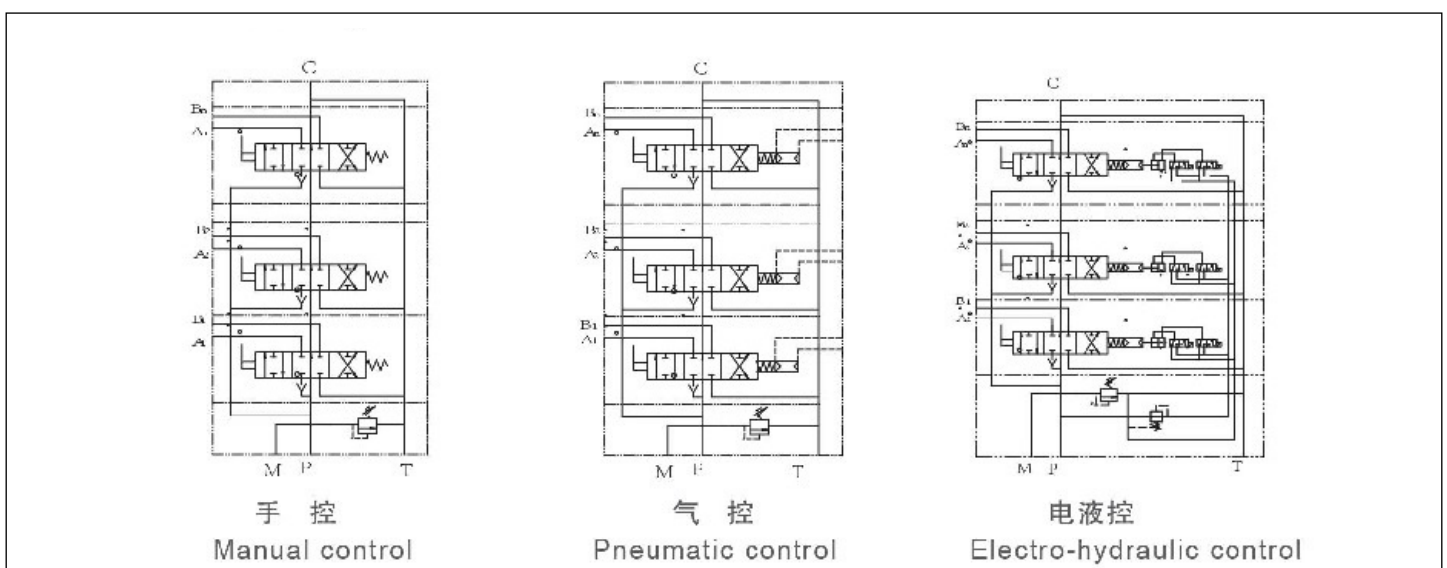


Unit Dimensions - DCV60

(Dimensions in mm)



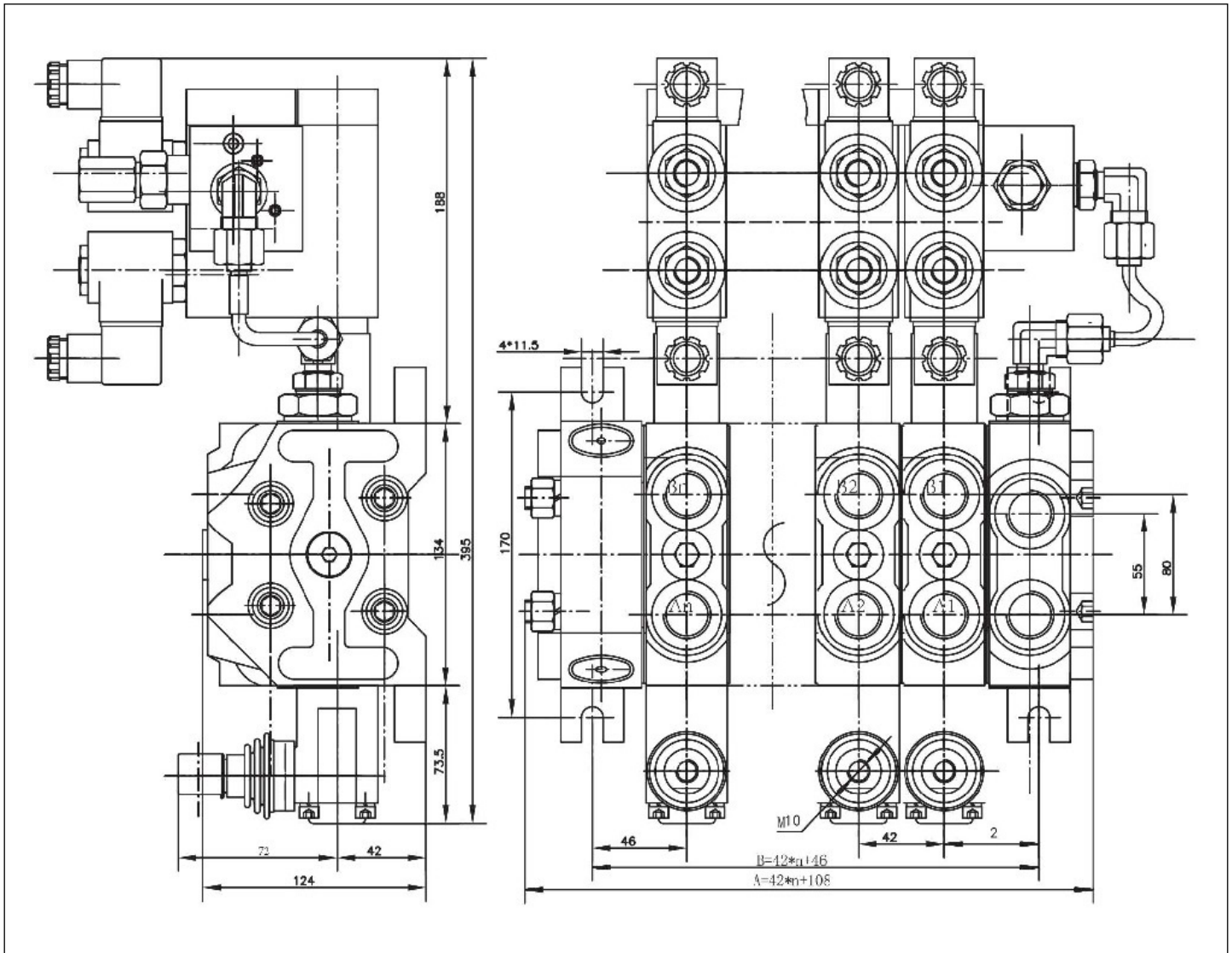
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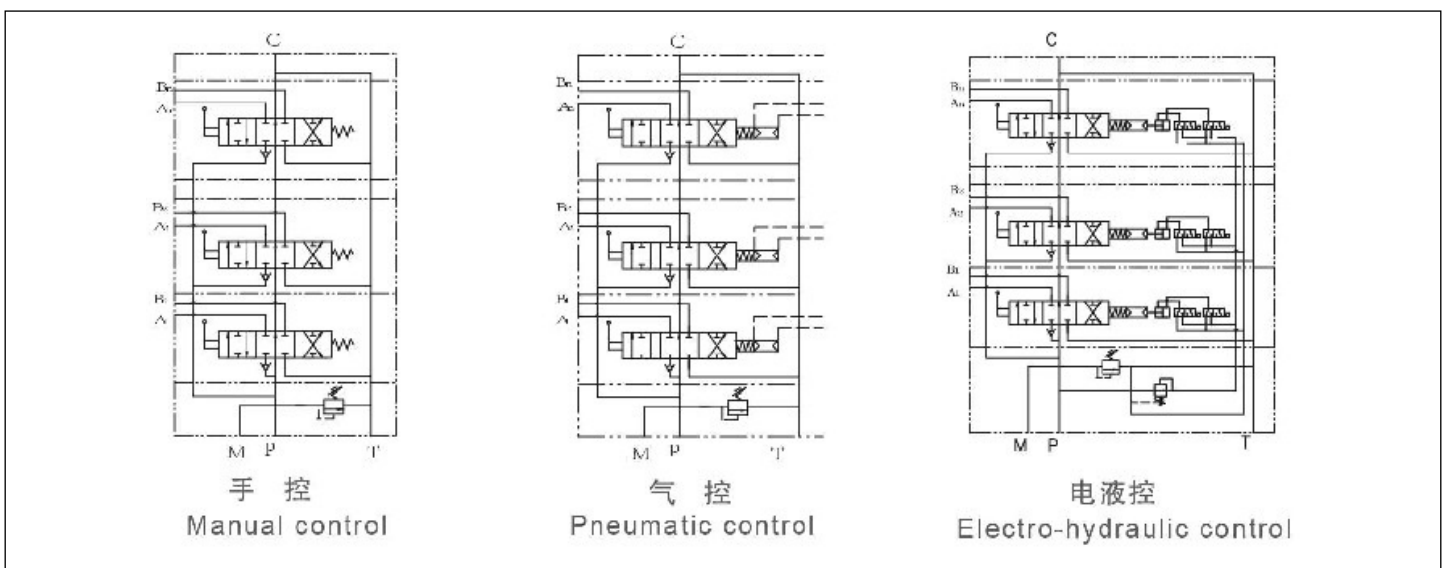


Unit Dimensions - DCV100

(Dimensions in mm)



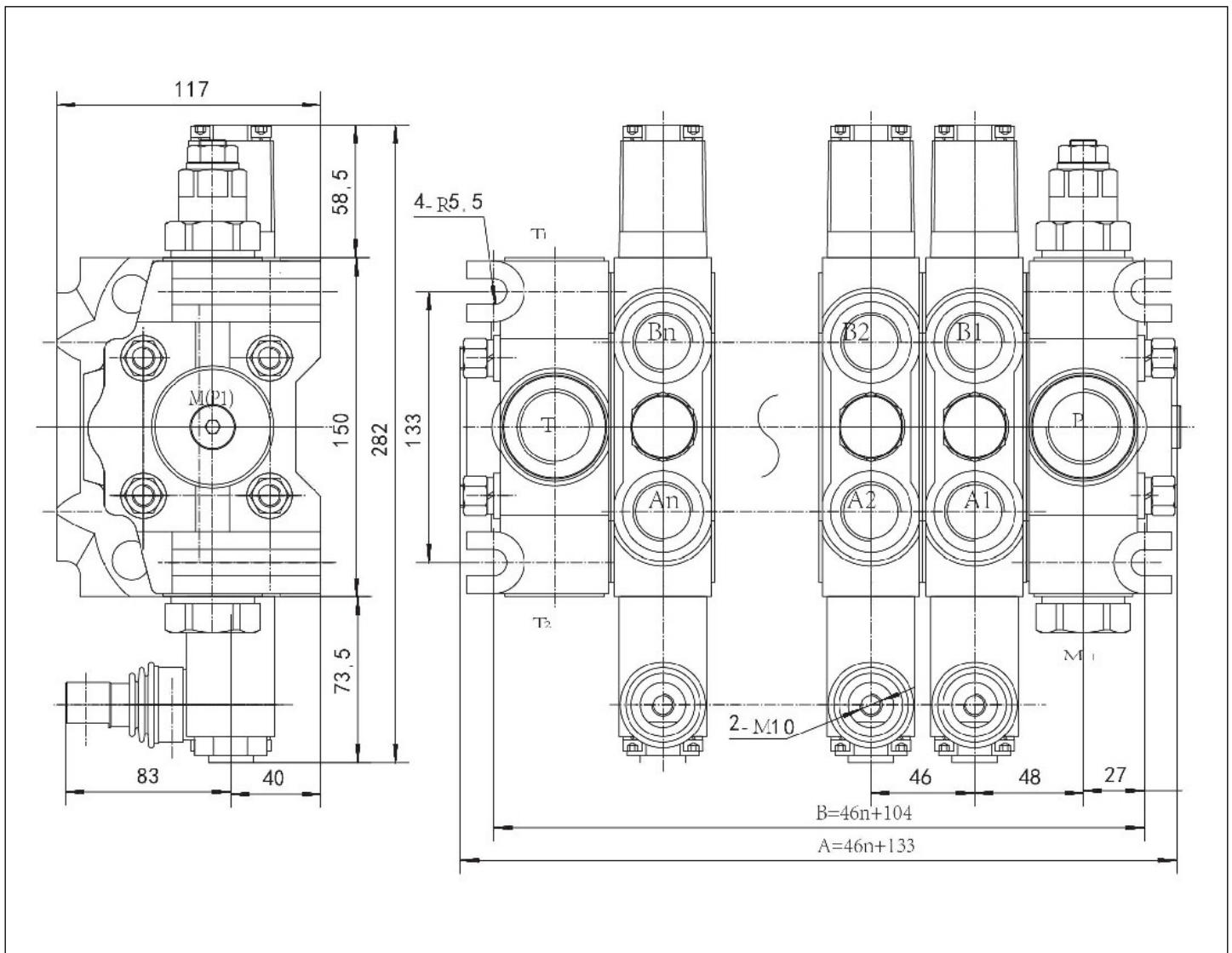
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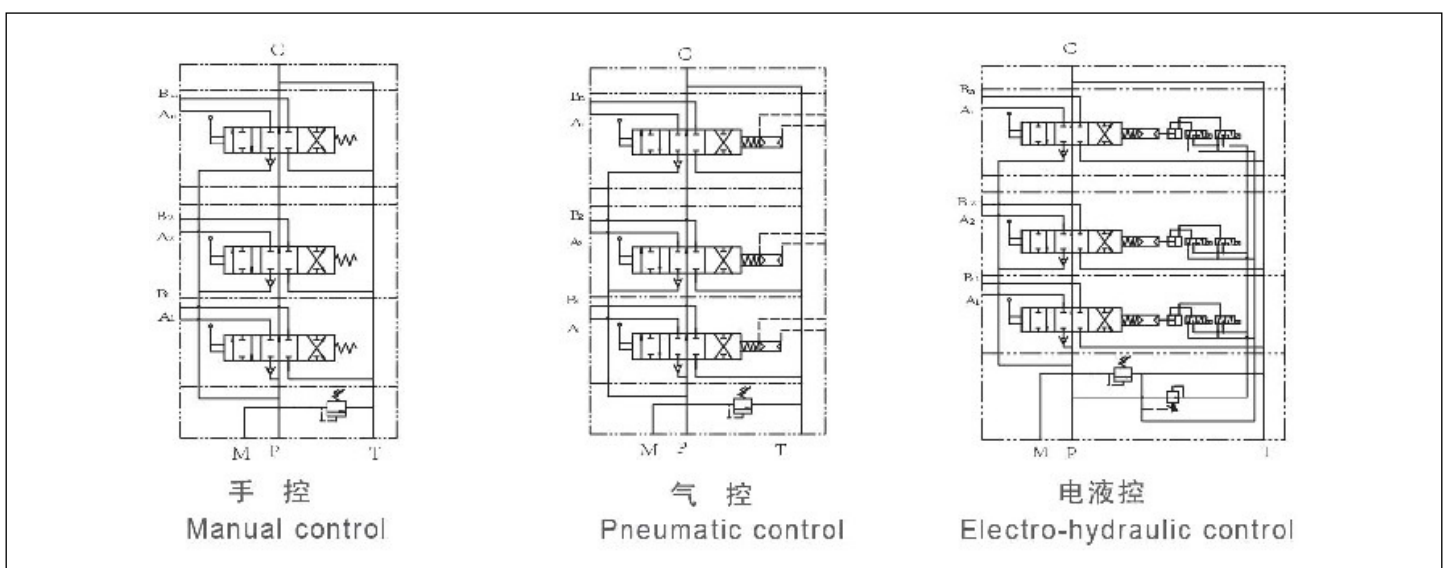


Unit Dimensions - DCV140

(Dimensions in mm)



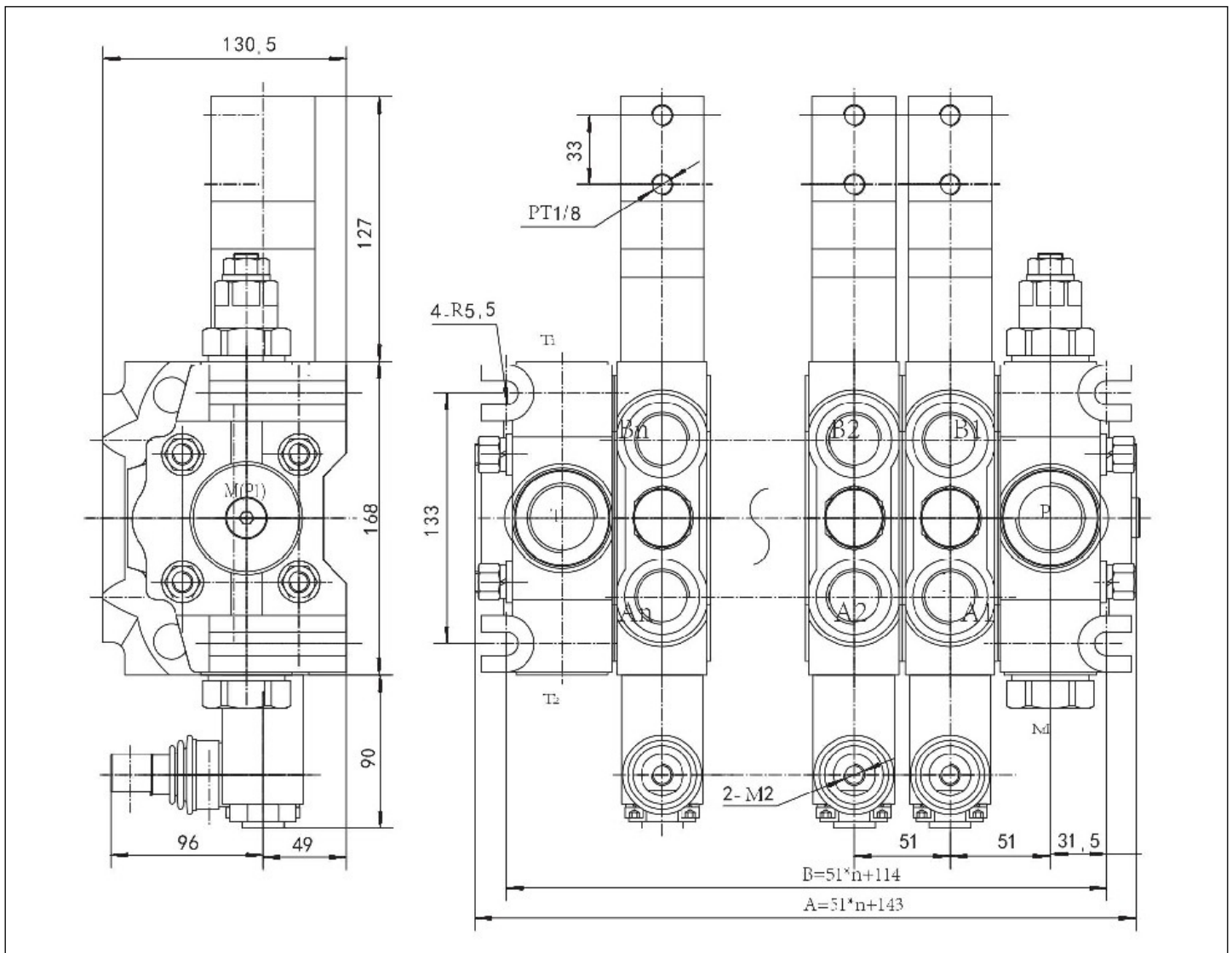
Hydraulic Circuit





Unit Dimensions - DCV200

(Dimensions in mm)



Hydraulic Circuit

