

P120

Hydraulic directional control valves
Max. pressure up to 250 bar
Nominal flow up to 120 l/min.



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Introduction

For starting, controlling and stopping the working fluid between the generator of pressured flow, the consumers and the Tank.

- Specifications

Valve monoblock	Valve monoblock
Mounting	3 bolts M10
Pressure connections	internal thread
Ambient temperature	-40°C~+60°C
Pressure medium	Mineral oil based hydraulic oil
Viscosity	12...800mm ² /s permissible range, 20...100mm ² /s recommended range
Fluid temperature	-15°C...+80°C
Filtration	Oil contamination 10 to NAS1638
Max. operating pressure	P= 250bar T= 50bar A,B = 300bar
Leakage	30cm ³ /min at 120bar
Nominal flow	120 l/min(see "operating" diagram)
Spool stroke	± 10 mm, L12 = ± 10 mm +6 mm
Actuating force	<300N in spool axis direction



Ordering code

	THM	02	P120	1	A	1	A	1	G	KZ1	H	E	C2	11
THM make														
Number of spools (Table 3)														
Directional control valve type P120														
Way of distribution/parallel (Table 4)														
Spool type distribution (Table 5)														
Spool control (Table 6)														
Second spool distribution (Table 5)														
Second Spool control (Table 6)														
Ports threads (Table 9)														
Lever options (Table 10)														
Operation feature (Table 8)														
Electric microswitch (Table 7)														
Carry over center (Table 11)														
Connection ports in use (Table 12)														



Element size model selection (ordering code)

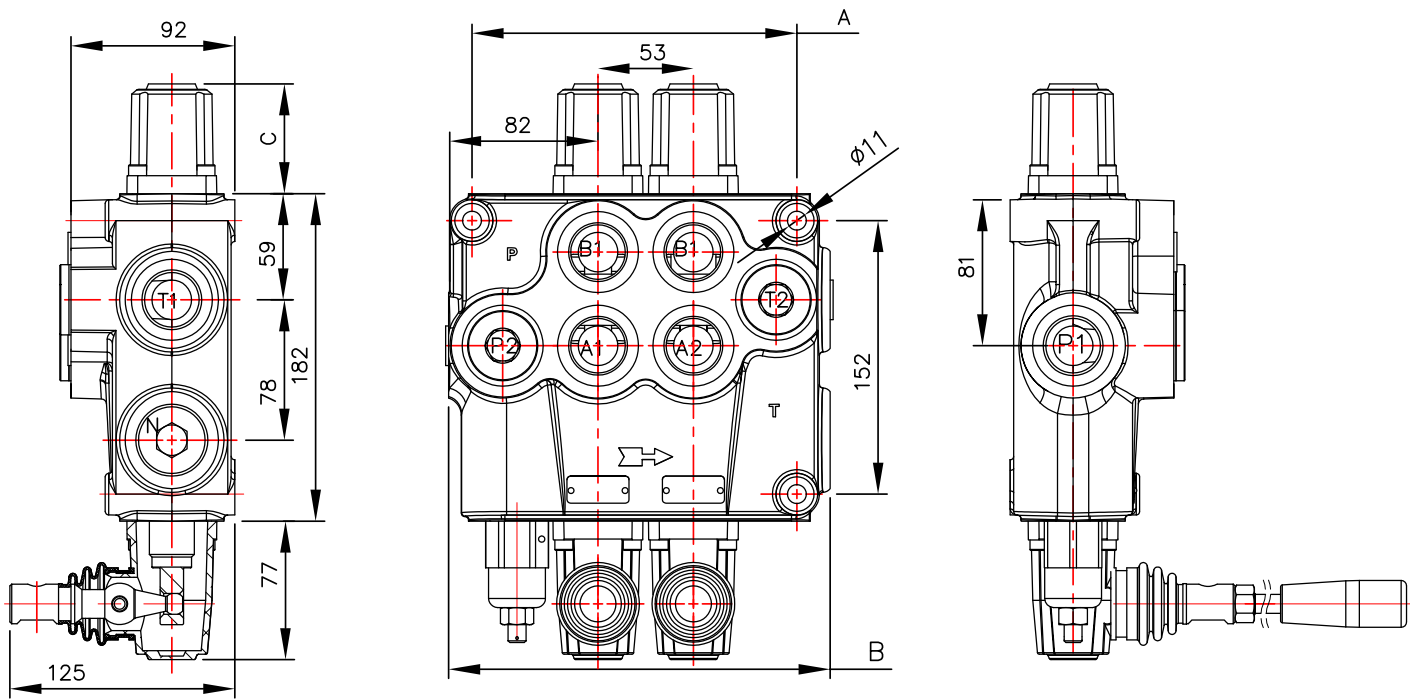


Table 1

	A	B	P1	P2	T1	T2
P120	129	160	+	+	+	+
02P120	182	213	+	+	+	+
03P120	235	266	+	+	+	+
04P120	288	319	+	+	+	+

Table 2

Spool control	C
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	64
12	74

Table 3

Code	Number of spool
P120	1
02P120	2

Table 4

Code	Way of distribution
1	parallel



Element size model selection (ordering code)

Table 5

Code	Spool type
A	
B	
C	
D	
E	
F	
G	
H	
M	
N	
O	
P	
Q	
R	
S	
T	

Table 6

Code	Spool Control
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Table 7

Code	incorporated microswitch	
E		microswitch type Omron-V 165 / C5

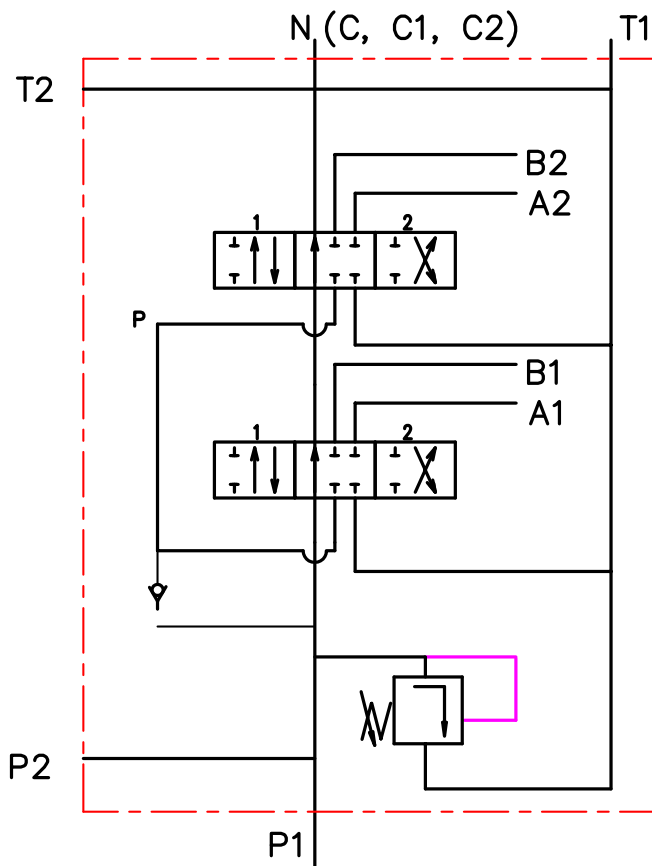
Table 8

Code	Operation feature	
P		on- off pneumatic control; 5-10 bar; ports NPTF 1/8-27
H		on- off hydraulic control; 5-10 bar; ports G1/4

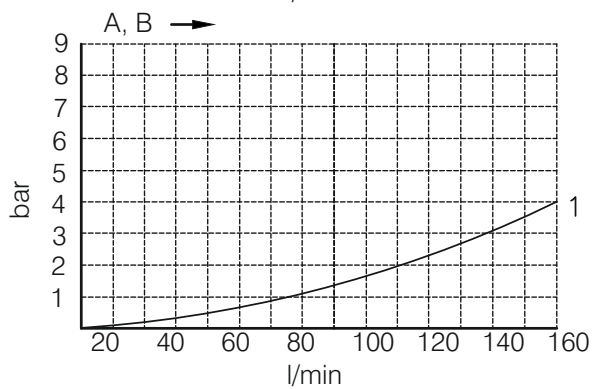
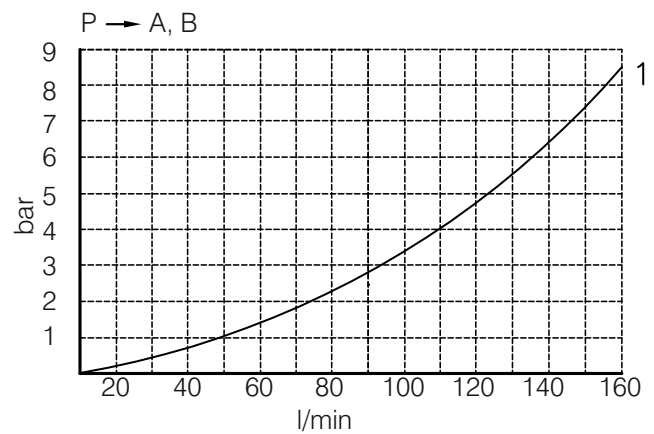
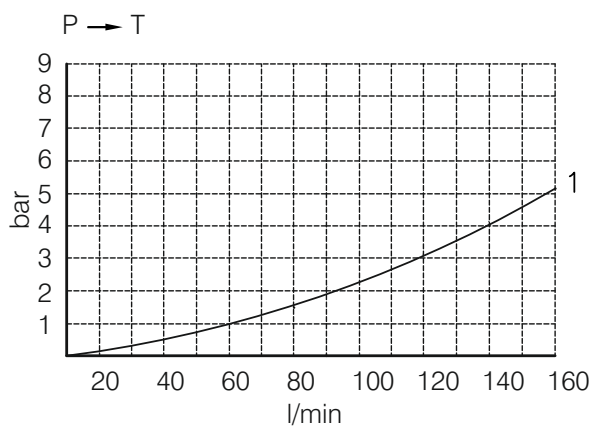


Hydraulic Circuit

02P120 1A1A1



Pressure Curves





Element size model selection (ordering code)

Table 9 Threads for connection

outlets/ports/	metric	BSP	SAE
P, A, B, T	M33x2	G 1"	SAE 16
N	M36x1.5	-	-

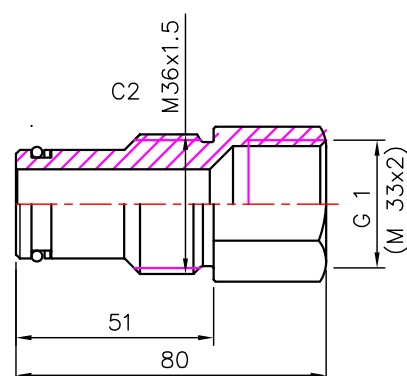
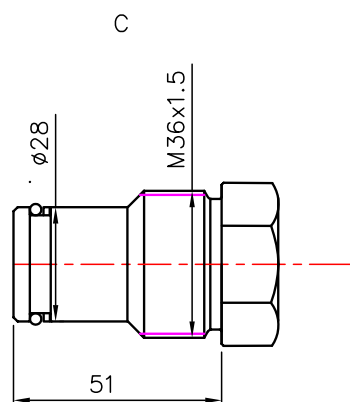
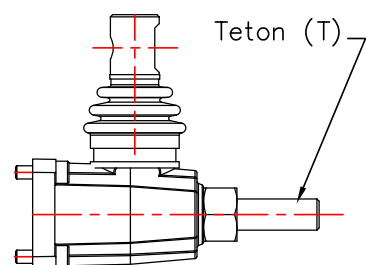


Table 10

code	with thread M12	code	with zange Ø12	code	with zange Ø12
KZ		KY		KI	
KZ1		KY1			
KZ0		KY0		KI0	
KZ01		KY01			

Table 11

Code	metric
X	without port N
-	with port N, closed
C	with port N and plug C- closed center
C1	port – carry over for EO
C2	port – carry over, internal thread

Table 12

Code	Ports for connection in use
11	P1; T1
12	P1; T2
21	P2; T1
21	P2; T1

