

**P40**

Hydraulic directional control valves  
Max. operating pressure up to 250 bar  
Nominal flow up to 40 lpm



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## Description

Manually or mechanically controlled hydraulic directional control valve P40 is designed for distribution and control the flow of oil between pump and the cylinder/hydro-motor etc. It is manufactured with 1 to 6 spools, with parallel or series function, with common or individual back valve for each spool, with or without safety valve.

**Construction:** P40 is a mono-block distributor. Its body is made of cast iron EN-GJL300. Spool are made of carburized steel with hard chrome plating.

**Mounting:** The distributor is fixed with two bolts M8.

- Specifications

Valve monoblock	Valve monoblock
Mounting	2 bolts M8
Pressure connections	internal thread
Ambient temperature	-40°C ~ +60°C
Pressure medium	Mineral oil based hydraulic oil
Viscosity	12...800mm <sup>2</sup> /s permissible range, 20...100mm <sup>2</sup> /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	15cm <sup>3</sup> /min at 120bar
Nominal flow	40l/min(see "operating" diagram)
Spool stroke	±6mm
Actuating force	<200N in spool axis direction

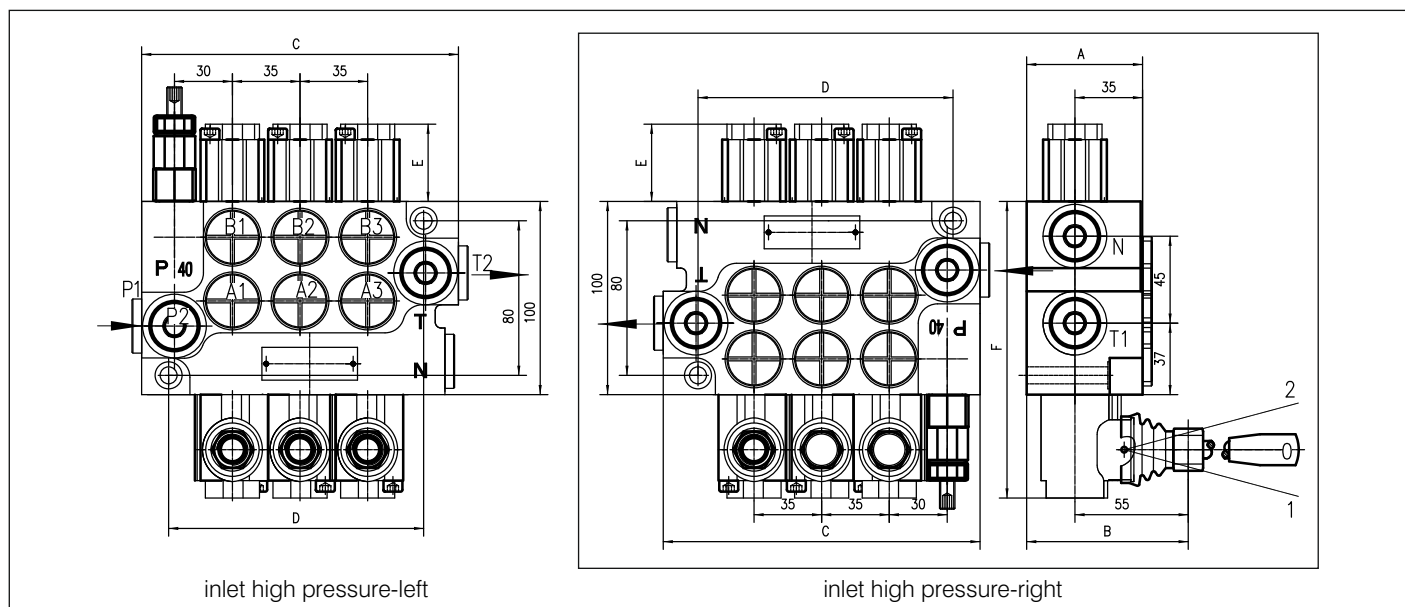


Ordering code

	THM	0	*	P40	R	1	A	1	A	1	G	KZ1	T	H	E	C2	11	1X
THM make																		
Block with common check valve																		
Number of spools (table 3)																		
Directional control valve type																		
Inlet high pressure-right																		
Way of distribution/parallel or ....(table 4)																		
First spool distribution type (table 5)																		
Spool control/detend and ets. (table 6)																		
Second spool distribution type (table 5)																		
Spool control/detend and ets. (table 6)																		
Ports/treads/ (table 9)																		
General operation feature (table 10)																		
With "dedent"																		
Operation feature/pneumatic,....																		
With electric switch																		
High pressure carry over																		
Connection ports in use																		



## Element size model selection (ordering code)



• Table 1

	A	B	C	D	P1	P2	T1	T2
01P40	60	80	85	60	+	-	+	-
02P40	60	80	129	97	+	+	+	+
03P40	60	80	164	132	+	+	+	+
04P40	60	80	199	167	+	+	+	+
05P40	60	80	234	202	+	+	+	+
06P40	60	80	269	237	+	+	+	+

• Table 2

Spool control	E	F
1; 4; 5; 6; 7; 8; 9; 10; 11	40	193
2; 3	72	225
16	+	+

• Table 3

Code	Number of spools
	1
02, 2	2
03, 3	3

• Table 4

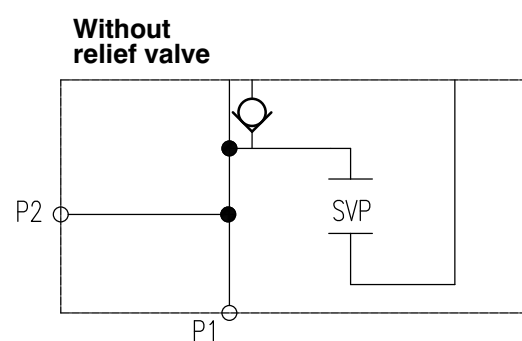
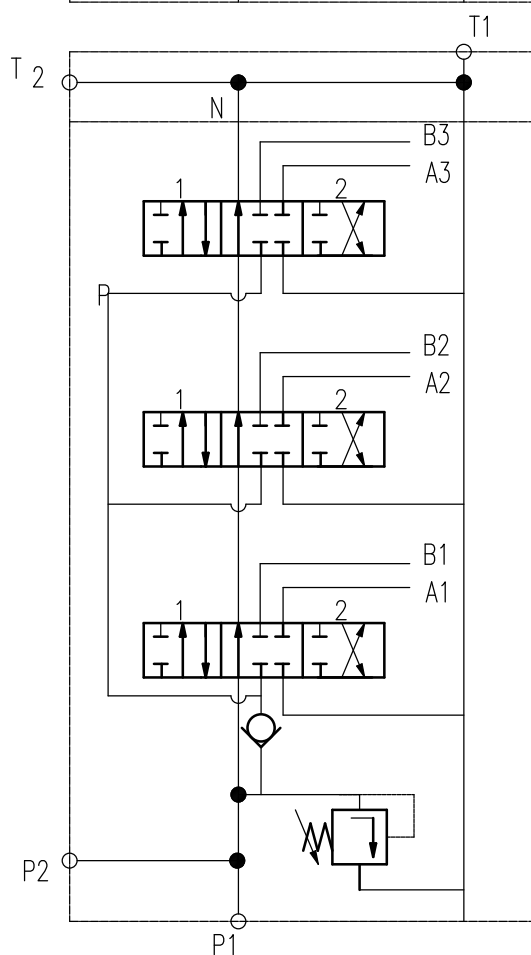
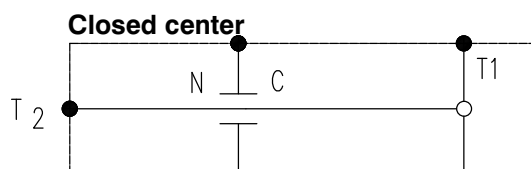
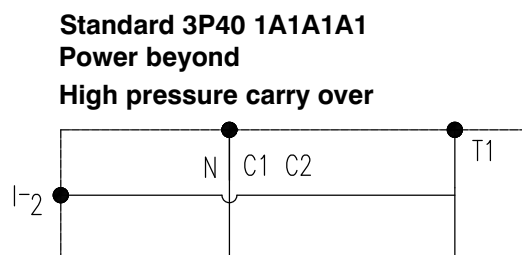
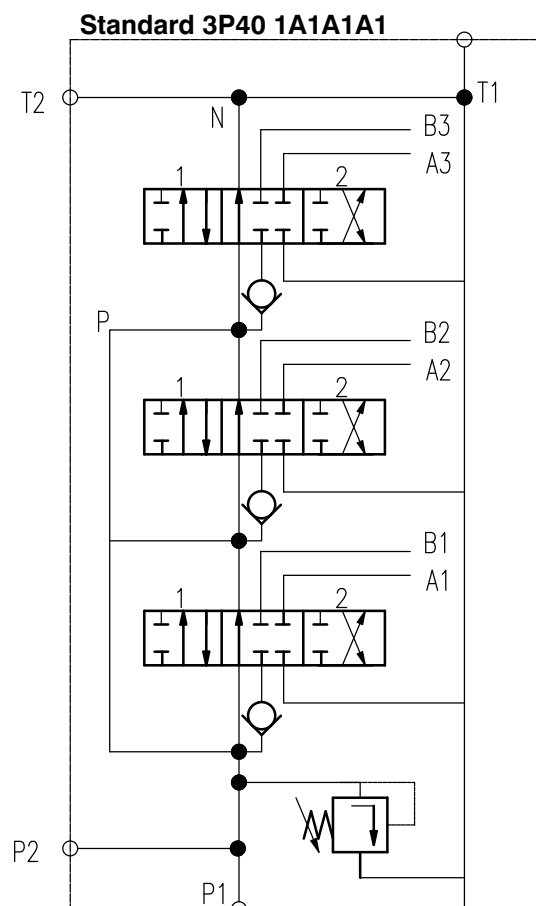
Code	Way of distribution
1	parallel
2	tanden (series parallel)

• Table 5

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



## Element size model selection (ordering code)



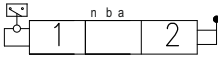


## Element size model selection (ordering code)

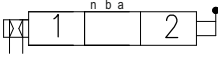
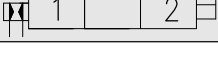
• Table 6

Code	Spool control
1	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
2	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
3	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
4	<div><div>02</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>0</div><div>2</div></div></div>
5	<div><div>10</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div></div></div>
6	<div><div>12</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div></div><div>2</div></div></div>
7	<div><div>12</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div></div><div>2</div></div></div>
8	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
9	<div><div>10</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div></div></div>
10	<div><div>02</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>0</div><div>2</div></div></div>
11	<div><div>02</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div></div><div>2</div></div></div>
13*	<div><div>3102</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div>3</div><div>1</div><div>0</div><div>2</div></div></div>
16*	<div><div>3102</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div>3</div><div>1</div><div>0</div><div>2</div></div></div>
13R**	<div><div>1023</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div><div>3</div></div></div>
12**	<div><div>1023</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div><div>3</div></div></div>

• Table 7

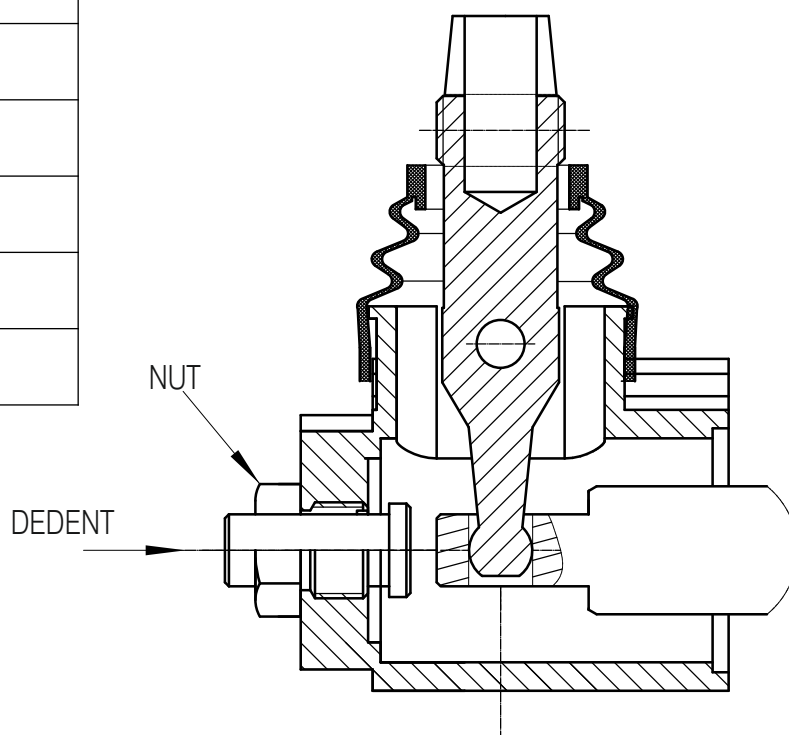
Code	Incorporated microswitch
E	 Microswitch type- Omron-V 165/C5

• Table 8

Code	Operation feature
P	 On-Off pneumatic control; 5-10 bar; parts G1/4
H	 On-Off hydraulic control; 5-20 bar; parts G1/4

• Table 9

Code	Ports (threads)			
	P	A; B	T	N
M	M22X1.5	M18X1.5	M22X1.5	M22X1.5
G	G1/2	G3/8	G1/2	G1/2
S	7/8-14UNF	3/4-14UNF	7/8-14UNF	7/8-14UNF





Element size model selection (ordering code)

• Table 10

Code	Feature	Code	Feature	Code	Feature	Code	Feature
KZ		KZ1		KZ0		KZ01	
KY		KY1		KY0		KY01	
KL		KL1		KL0		KL01	
-	Without hand control						

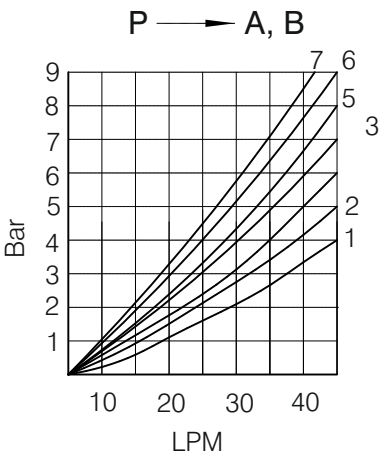
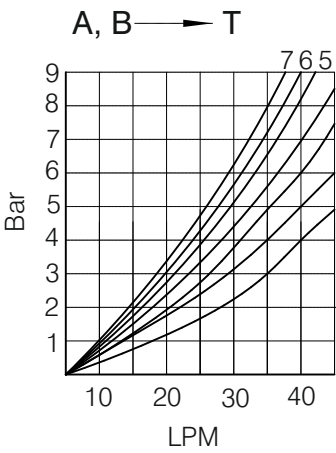
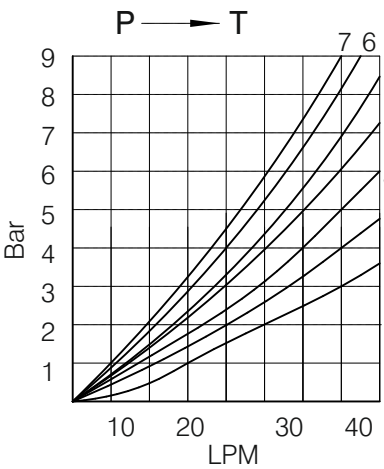
• Table 11

Code	
C	Closed center
C1	Part for power beyond sleeve (carry over) (N : Ø14 M22X1.5)
C2	Part for power beyond sleeve (carry over) (N : G1/2 M22X1.5)
-	Without part for pressure carry over
X	Power beyond ever to tank

• Table 12

Code	Used connection ports
11	P1 ; T1
12	P1 ; T2
21	P2 ; T1
22	P2 ; T2

Pressure drop curves

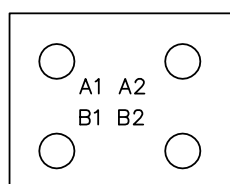
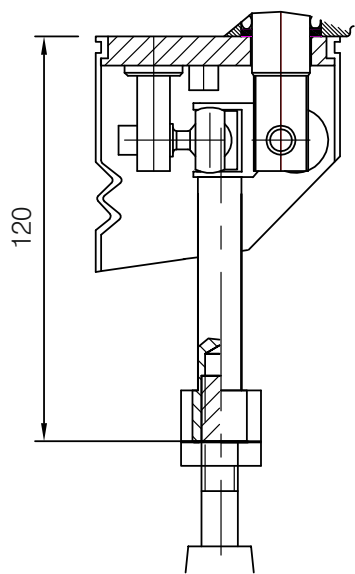




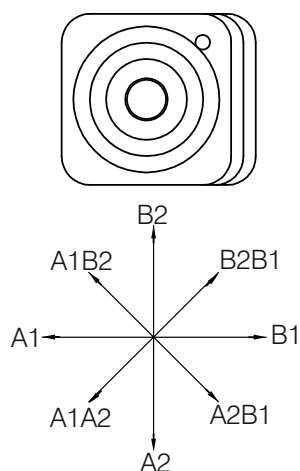
## Joystick details

### Joystick “+”

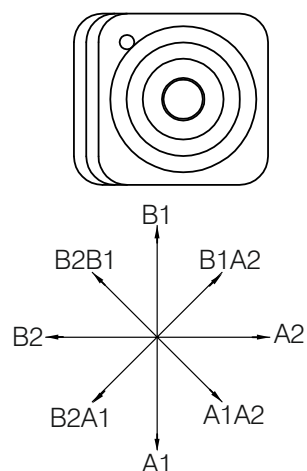
This control gives the possibility to operate, at the same time two spools with a “+” movement.



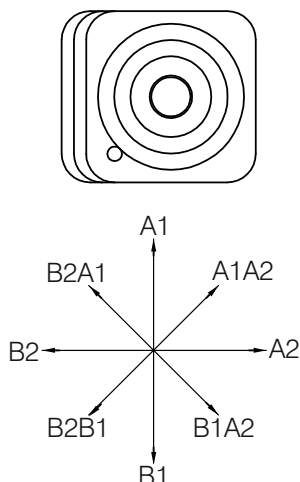
Standard version 1



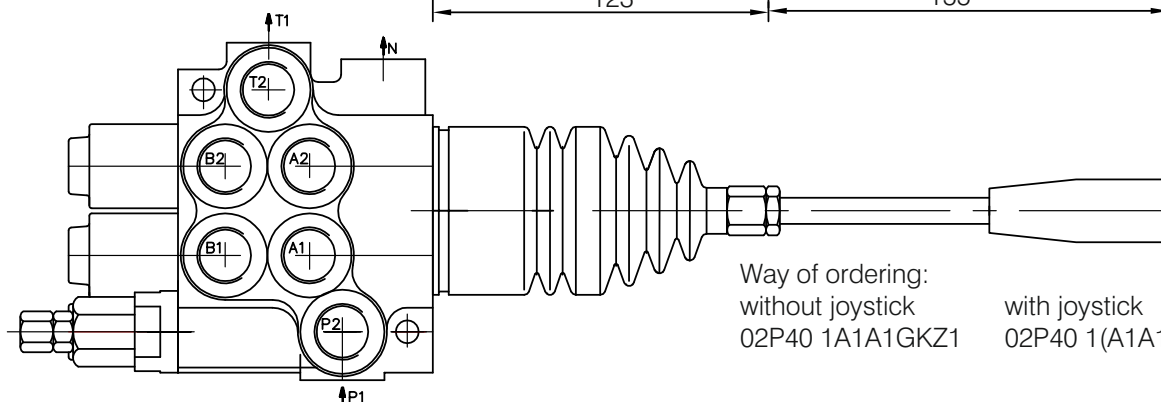
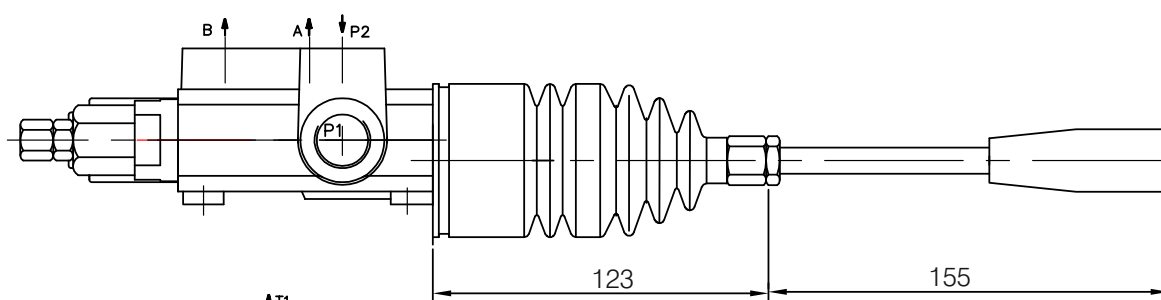
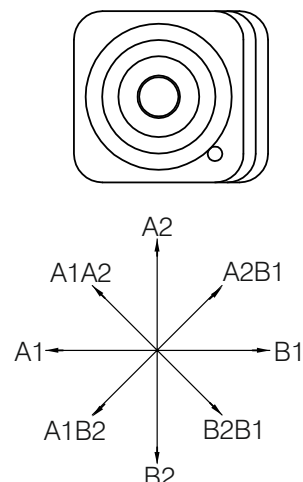
Standard version 2



Standard version 3



Standard version 4



Way of ordering:  
without joystick  
02P40 1A1A1GKZ1

with joystick  
02P40 1(A1A1)(js+3)G

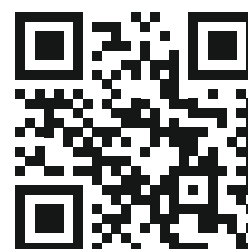


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