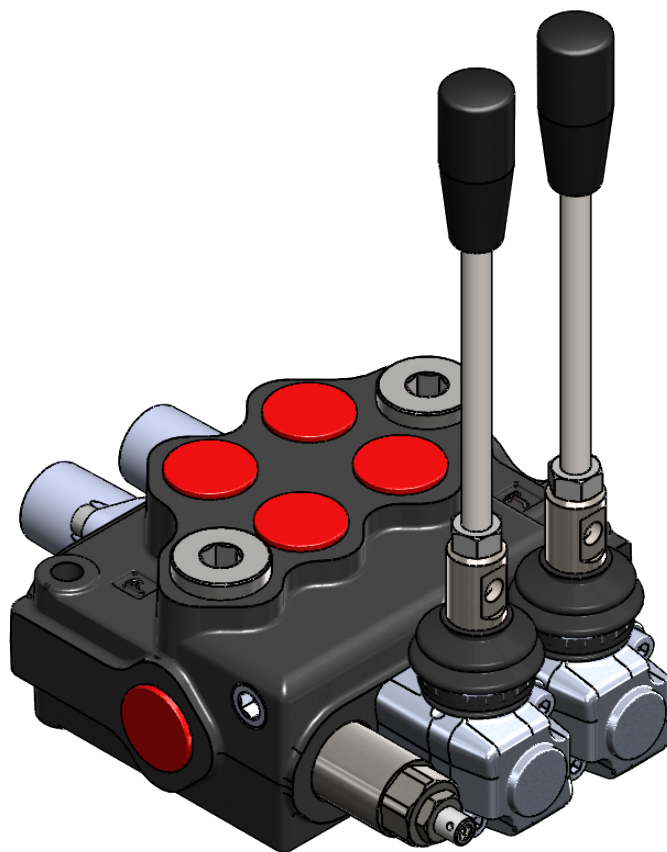

P45



Monoblock directional control valve

Features

Simple, compact, and heavy duty designed monoblock valves from 1 to 7 sections for open and closed centers hydraulic system.

Monoblock valves of the P45 model are characterized by a single body having the following features:

- Low production cost, sound construction, compact size
- Fitted with a main pressure relief valve and load check valve.
- Available with parallel circuit.
- Optional carry-over port.
- Diameter 16 mm (0, 63 in) interchangeable spools.
- A wide variety of service port valve options.
- Actuation is manual, pneumatic, hydraulic, electro-hydraulic, and remote with flexible cables spool control kits.

Additional information

This catalog shows the product in the most usual configurations. Please contact Sales Dpt. for more detail information or special request.

WARNING!

All specifications of this catalog refers to the standard product at this date. Badestnost is oriented to a continuous improvement and reserves the right to discontinue, modify or revise the specifications, without notice.

Nordvalves is not responsible for any damage caused by an incorrect use of the product.

1st edition January 2017

Working conditions

Technical specifications and diagrams measured with mineral oil of 46 cSt viscosity at 40 deg. C

Nominal flow rating		45 l/min	12 US gpm
Operating pressure (max.)	<i>parallel and tandem circuits</i>	315 bar	4600 psi
	<i>series circuit</i>	250	3600 psi
Back pressure (max.)	<i>outlet port T</i>	25 bar	360 psi
Internal leakage (max.) A(B) to T	<i>$\Delta p = 100 \text{ bar (1450 psi)}$ fluid and valve at 40 °C (104 °F)</i>	3 cm ³ /min	0.18 in ³ /min
Fluid		Mineral based oil	
Fluid temperature	<i>with NBR</i>	from -20 °C to 80 °C	from -4 °F to 176 °F
	<i>with FPM</i>	from -20 °C to 100 °C	from -4 °F to 212 °F
Viscosity	<i>operating range</i>	from 15 to 75 mm ² /s	from 15 to 75 cSt
	<i>min.</i>	12 mm ² /s	12 cSt
	<i>max.</i>	400 mm ² /s	400 cSt
Max contamination level		-/19/16 - ISO 4406	NAS 1683 - class 10
Ambient temperature	<i>with mechanical, pneumatic and hydraulic devices</i>	from -40 °C to 60 °C	from -40 °F to 140 °F
	<i>with electric devices</i>	from -20 °C to 60 °C	from -4 °F to 140 °F

Reference standards

Standard		BSP	UN-UNF	METRIC	NPTF
Thread according to		ISO 228/1	ISO 263	ISO 262	ANSI B1.20.3
		BS 2779	ANSI B1.1 unified		
Cavity dimension according to	ISO	1179	11926	9947-1	
	SAE		J1926	J2244	J476a
	DIN	3852-2		3852-1	

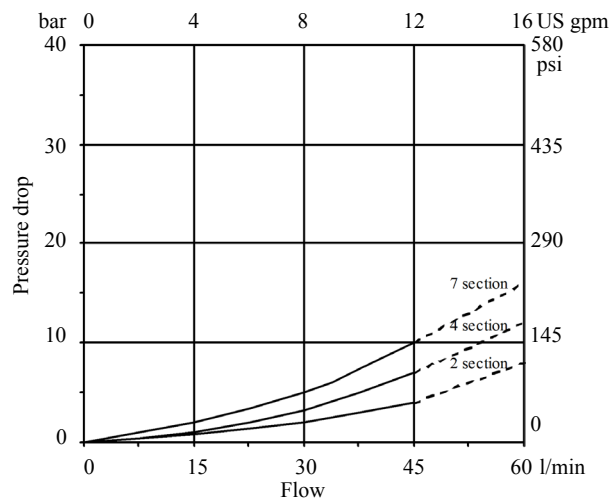
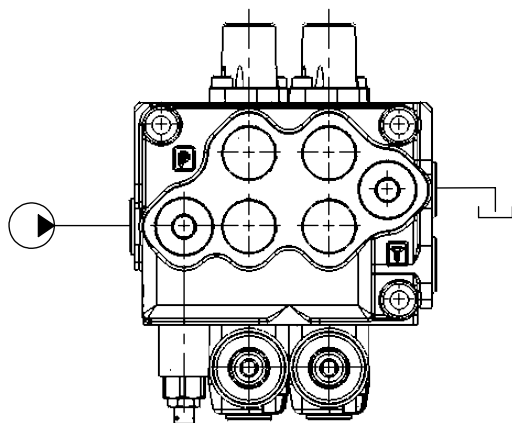
Port threads

	BSP			UN-UNF	Metric
Order code	G	G38	G12	S	M
Inlet P and N	G1/2	G 3/8	G1/2	3/4-16 (SAE8)	M18x1,5
Ports A and B	G 3/8	G 3/8	G1/2	9/16-18 (SAE6)	M18x1,5
Outlet T	G1/2	G 3/8	G1/2	3/4-16 (SAE8)	M18x1,5
Hydraulic pilots	G 1/4			9/16-18 (SAE6)	G 1/4
Pneumatic pilots	NPTF 1/8-27				

Performance data (pressure drop vs. flow)

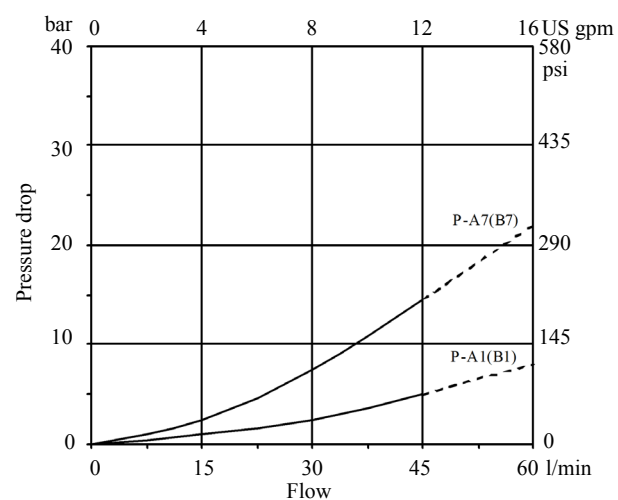
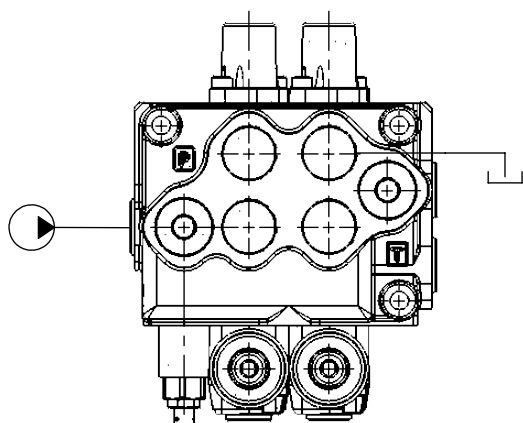
Open center

From side inlet to side outlet



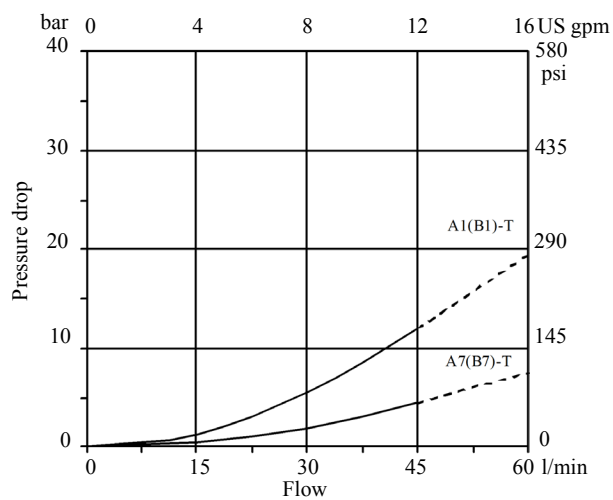
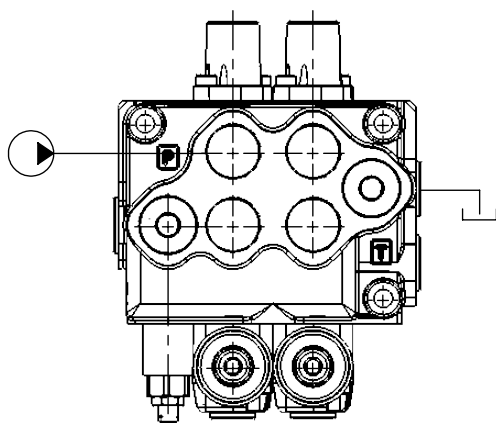
Inlet to work port

From side inlet to A port (spool in pos. 2) or B port (spool in pos. 1)



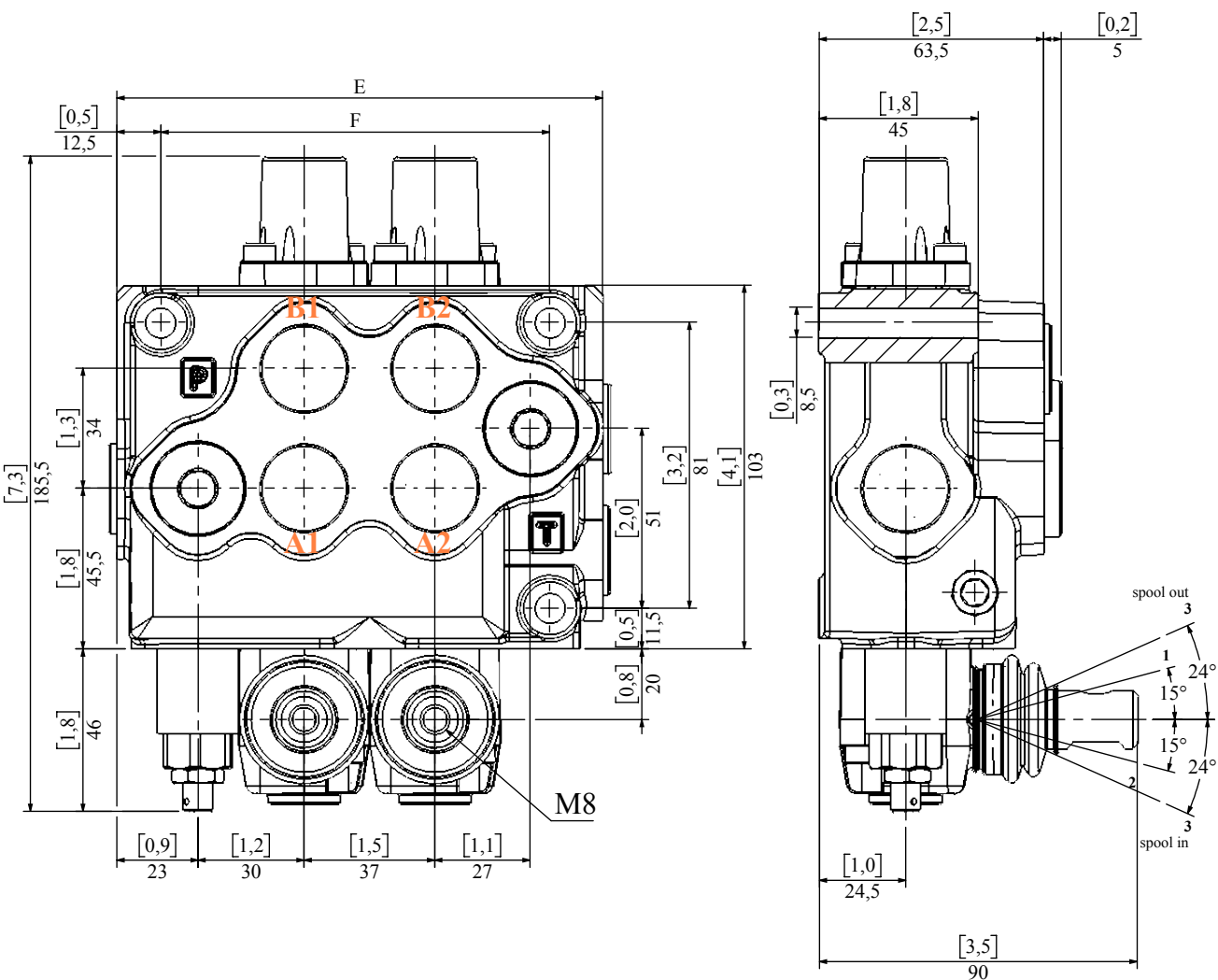
Work port to outlet

From A port (spool in pos. 2) or Bport (spool in pos. 1) to side outlet



P45

Dimensional data (parallel circuit)

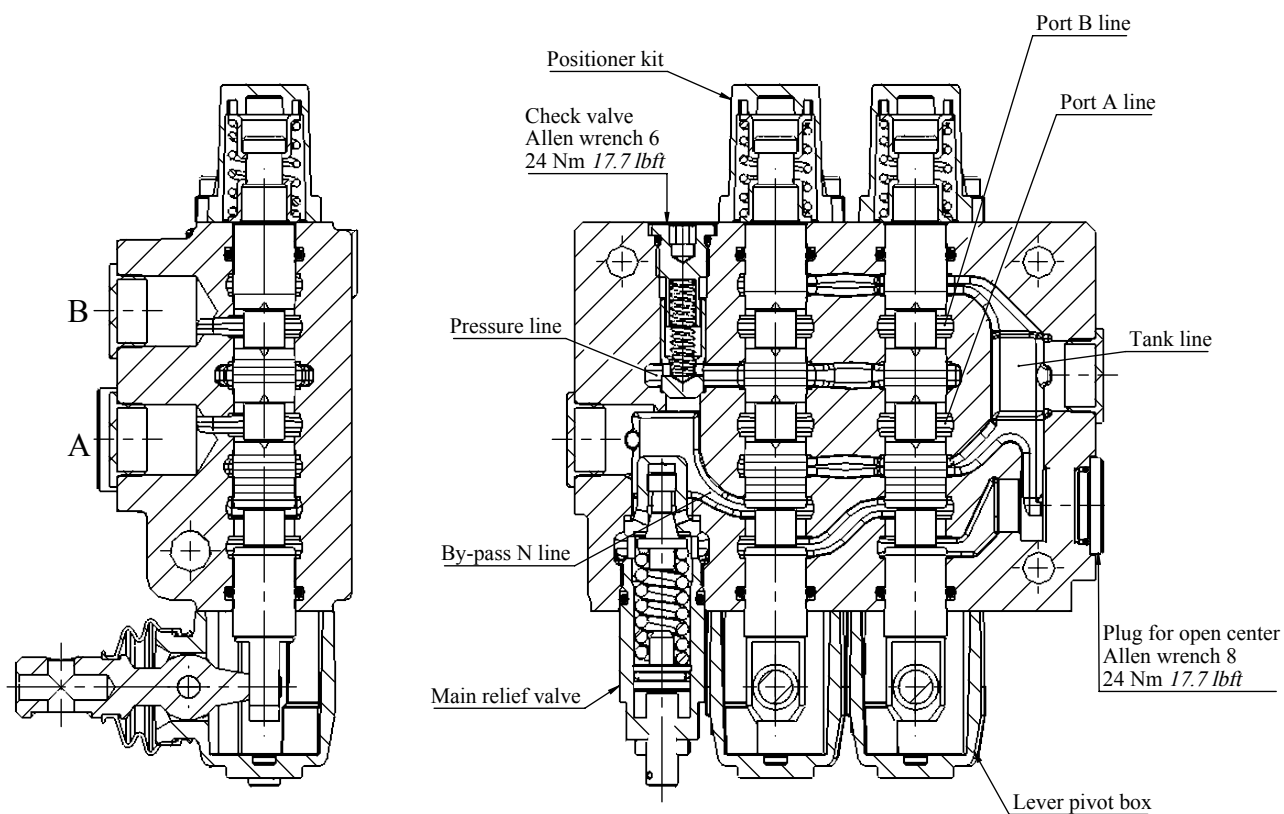


Type	E		F		Weight	
	mm	<i>in</i>	mm	<i>in</i>	kg	<i>lb</i>
P45	100,5	3,96	73	2,87	3,5	7,7
02P45	137,5	5,41	110	4,33	5,2	11,5
03P45	174,5	6,87	147	5,79	6,9	15,2
04P45	211,5	8,33	184	7,24	8,1	17,9

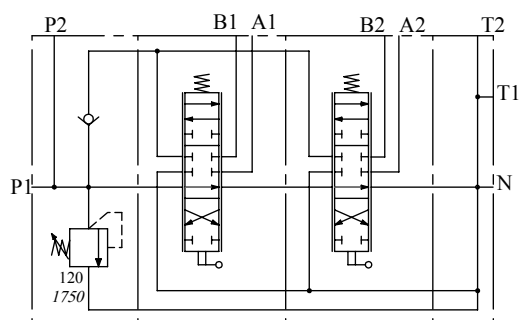
Type	E		F		Weight	
	mm	<i>in</i>	mm	<i>in</i>	kg	<i>lb</i>
05P45	248,5	<i>9,78</i>	221	<i>8,70</i>	10,1	<i>22,3</i>
06P45	285,5	<i>11,24</i>	258	<i>10,16</i>	11,7	<i>25,8</i>
07P45	322,5	<i>12,70</i>	295	<i>11,61</i>	13,2	<i>29,1</i>

Hydraulic circuit

Standard configuration with side inlet and outlet and open center.

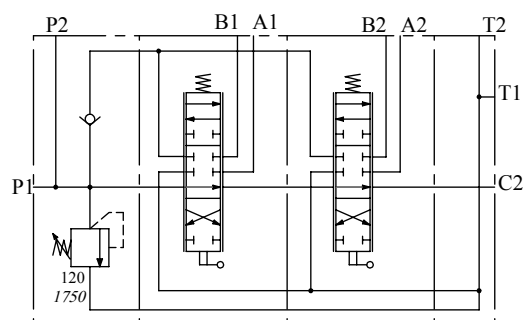


Standard configuration



Description example
02P45(DG3-120)/A1KZ1/A1KZ1-G

Configuration with carry-over



Description example
02P45(DG3-120)/A1KZ1/A1KZ1/C2-G

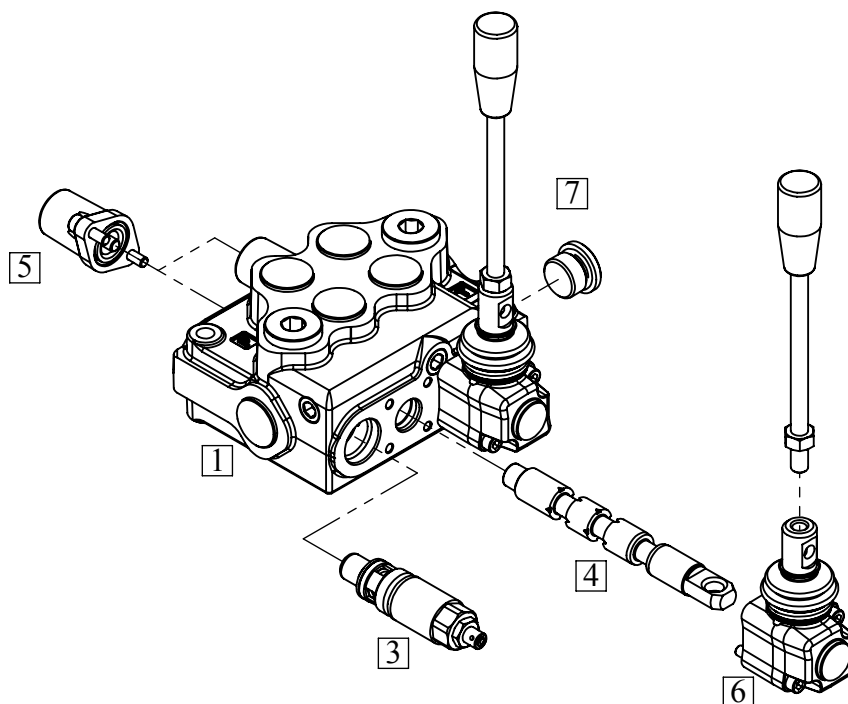
P45

Ordering codes

Description example:

02P45 R (DG3-120)/ A 1 KZ1/ D 1 KZ1- 11 G

1 2 3 4 5 6 7 8 9



1. Body kits

Type	Description
P45	Parallel, 1 section
02P45	Parallel, 2 section
03P45	Parallel, 3 section
04P45	Parallel, 4 section
05P45	Parallel, 5 section
06P45	Parallel, 6 section
07P45	Parallel, 7 section
<i>Include body, seals and load check valve</i>	

3. Inlet relief options

Type	Description
(DG2-63)	Range 40 to 63 bar
(DG3-120)	Range 50 to 200 bar
(DG4-220)	Range 160 to 315 bar
svp	Relief valve blanking plug

2. Left/right hand configuration

Code	Description
	Left hand configuration (pump port is on the left hand side)
R	Right hand configuration (pump port is on the right hand side)

Ordering codes

4. Spool options	
Code	Description
<i>Open center spools</i>	
A	Double acting, 3 positions, with A and B closed in neutral position.
B	Single acting on A, 3 positions, port B is plugged
C	Single acting on B, 3 positions, port A is plugged
D	Double acting, 3 positions, with A and B open to tank
E	Double acting, 3 positions, with B open to tank
F	Double acting, 3 positions, with A open to tank

5. Spool positioners	
Code	Description
1	With spring return in neutral
2	Detent in position 1 and spring return to neutral from position 2
3	Detent in position 2 and spring return to neutral from position 1
4	2 positions, with spring return to neutral from position 2
5	2 positions, with spring return to neutral from position 1
6	2 positions, with spring return to position 1 from position 2
7	2 positions, with spring return to position 2 from position 1
8	Detent in positions neutral, 1 and 2
9	Detent in positions neutral and 1
10	Detent in positions neutral and 2
11	Detent in positions 1 and 2

6. Type of hand control	
Code	Description
-	Without lever box, with dust proof plate
V1	Flexible cable connection
KZ1	Standard lever box (M8 lever by default) lever up, with lever M8 L = 180 mm
KZ01	Standard lever box (M8 lever by default) lever down, with lever M8 L = 180 mm

7. Outlet plug	
Code	Description
-	Open center plug (standard plug on port N, port N and T are connected)
C	Closed center plug
C1	High pressure carry-over kit with outlet for 12L/12S
C2	High pressure carry-over kit with outlet G 1/2 " (DIN 3852-2).
C2d	High pressure carry-over kit for direct connection to a second valve body.

8. Connection port in use	
Code	Description
11	Ports in use P1, T1 (ports P2, T2 - plugged)
12	Ports in use P1, T2 (ports P2, T1 - plugged)
21	Ports in use P2, T1 (ports P1, T2 - plugged)
22	Ports in use P2, T2 (ports P1, T1 - plugged)

9. Thread type (page 3)

