

## P40

Hydraulic directional control valves

Max. operating pressure up to 250 bar

Nominal flow up to 40lpm



### 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 = 25MPa T = 5MPa A,B = 30MPa   |
| Leakage                 | 15cm <sup>3</sup> /min at 12MPa  |
| Nominal flow            | 40l/min (see "operating" diagram)  |
| Spool stroke            | ±6mm   |
| Actuating force         | <200N in spool axis direction  |

Ordering details

|   | 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 (order code)

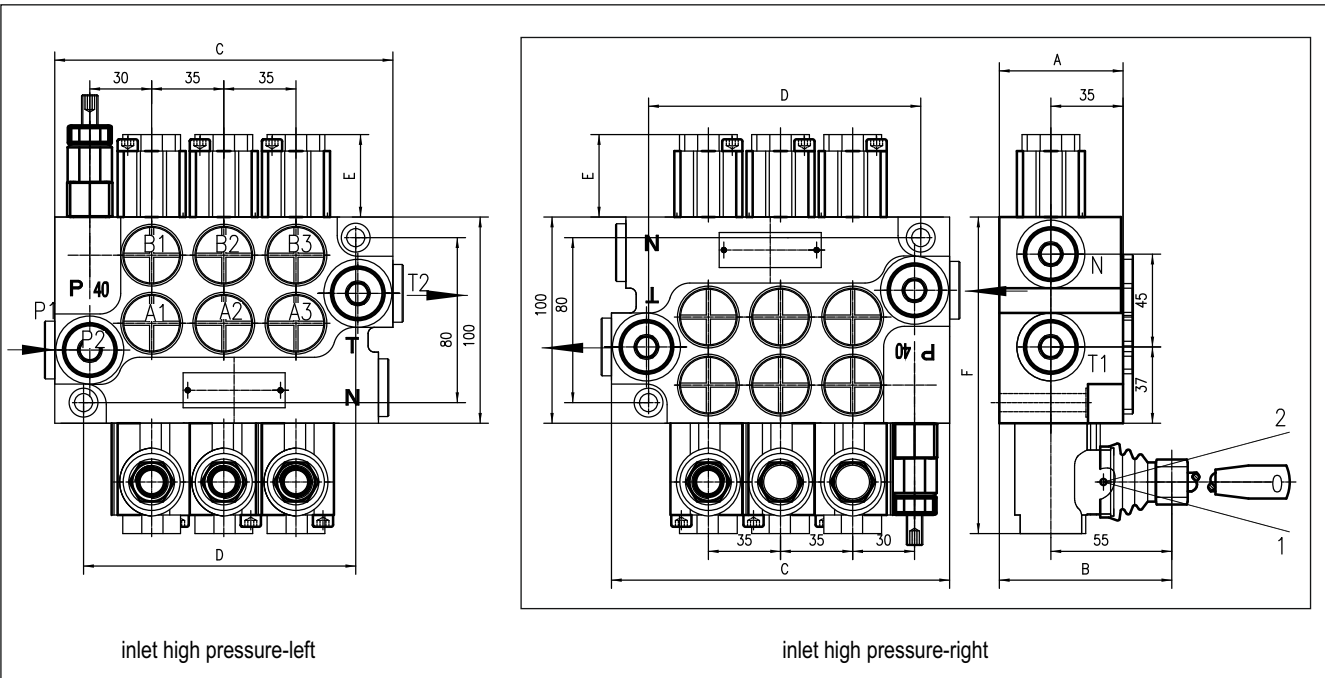


Table 1

|       | 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                |

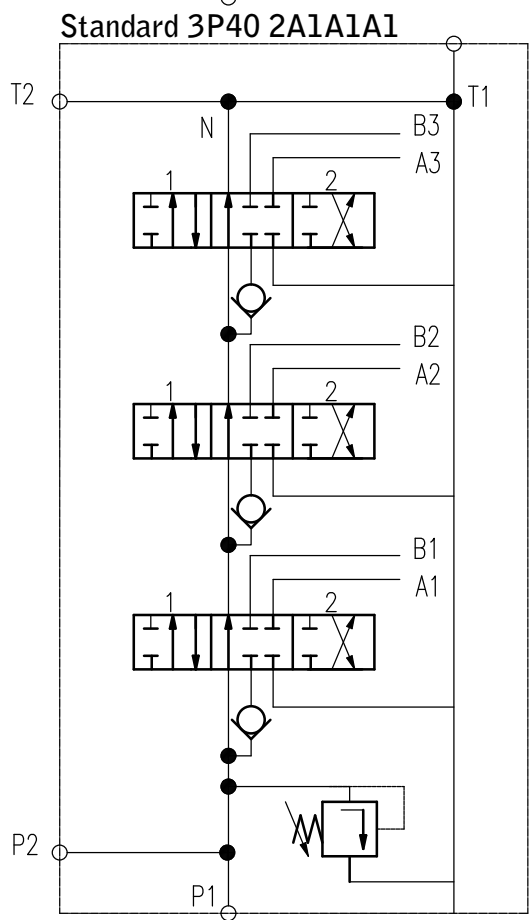
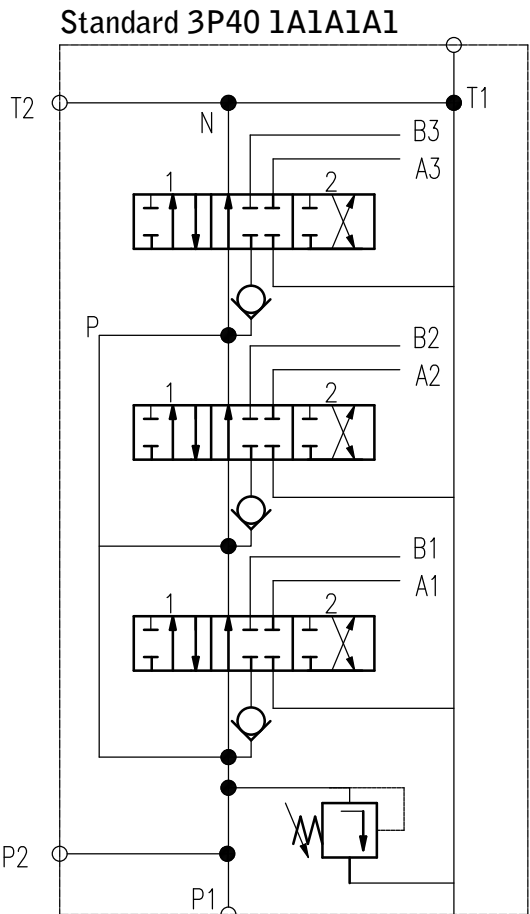
Table 4

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

Table 5

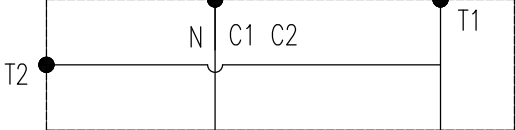
| Code | Spool type | Code | Spool type | Code | Spool type |
|------|------------|------|------------|------|------------|
| A    |            | G    |            | Q    |            |
| B    |            | H    |            | R    |            |
| C    |            | M    |            | S    |    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

Element size model selection (order code)

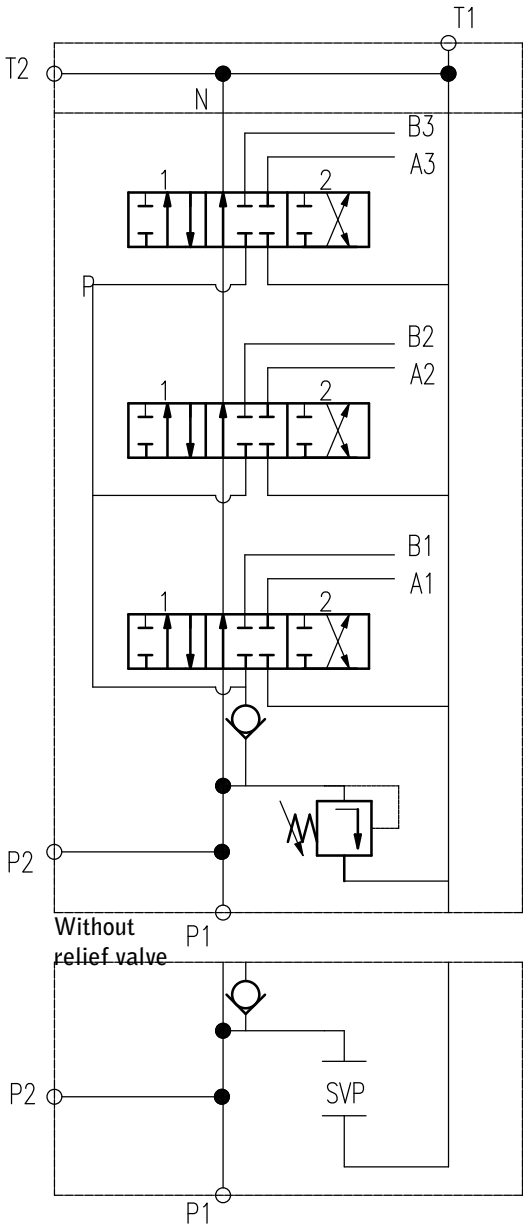
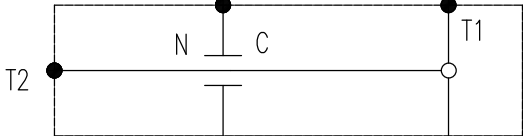


**Standard 3P40 1A1A1A1**

**Power beyond  
High pressure carry over**



**Closed center**



Element size model selection (order code)

Table 6
















| Code   | Spool control   |   |   |     |
|--------|---|---|---|-----|
| 1      |    | 1 | 0 | 2   |
| 2      |    | 1 | 0 | 2   |
| 3      |    | 1 | 0 | 2   |
| 4      |    | 0 | 2 |     |
| 5      |    | 1 | 0 |     |
| 6      |    | 1 |   | 2   |
| 7      |    | 1 |   | 2   |
| 8      |    | 1 | 0 | 2   |
| 9      |    | 1 | 0 |     |
| 10     |   | 0 | 2 |     |
| 11     |  | 1 |   | 2   |
|        |   |   |   |     |
| 13 *   |  | 3 | 1 | 0 2 |
| 16 *   |  | 3 | 1 | 0 2 |
|        |   |   |   |     |
| 13R ** |  | 1 | 0 | 2 3 |
| 12 **  |  | 1 | 0 | 2 3 |

Table 7

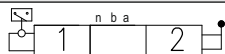
| Code | Incorporated microswitch  |
|------|---|
| E    |  Microswitch type- Omron-V 165/C5 |

Table 8

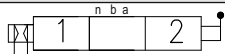
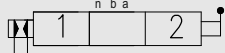
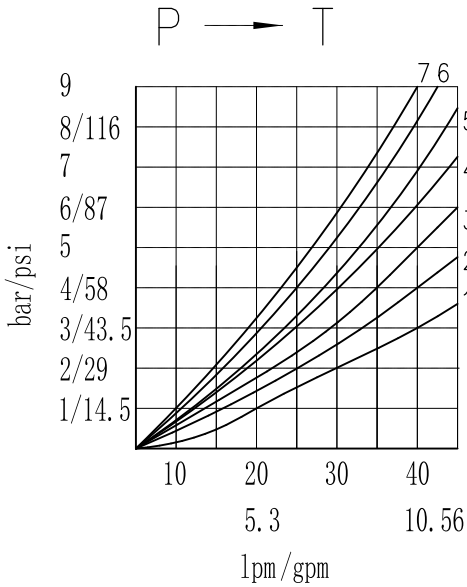
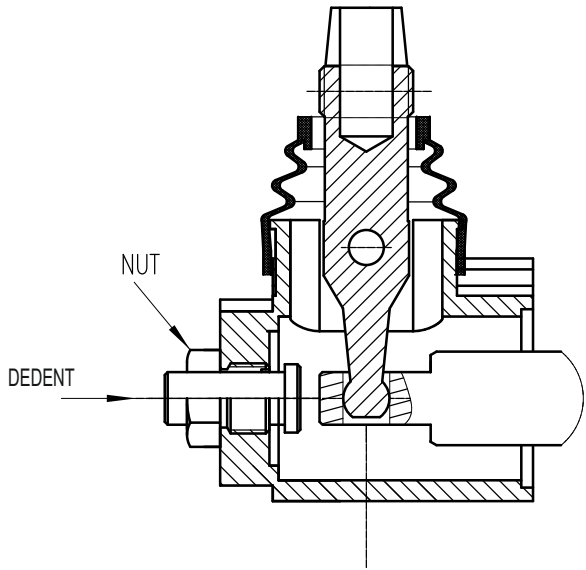
| Code | Operation feature   |
|------|---|
| P    |  On-Off pneumatic control; 5-10 bar; parts G1/4 |
| H    |  On-Off hydraulic control; 5-20 bar; parts G1/4 |

Table 9

| Code | Ports (treads) |           |           |           |
|------|----------------|-----------|-----------|-----------|
|      | 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 (order code)

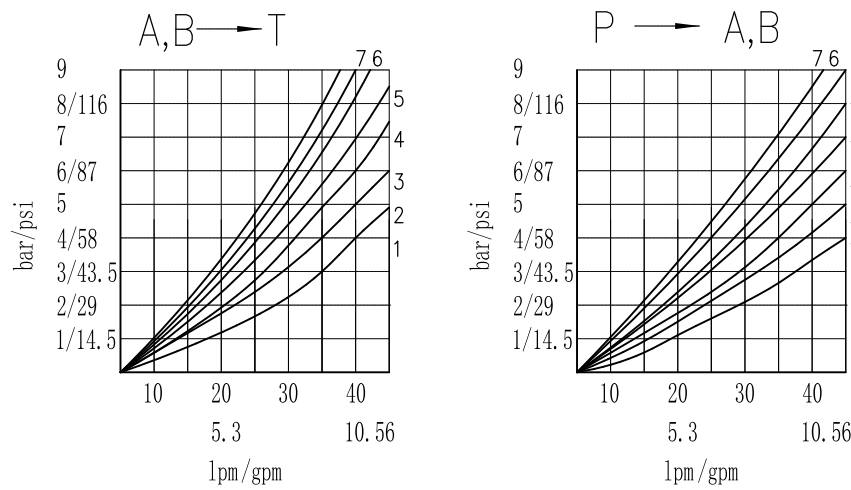


Table 10

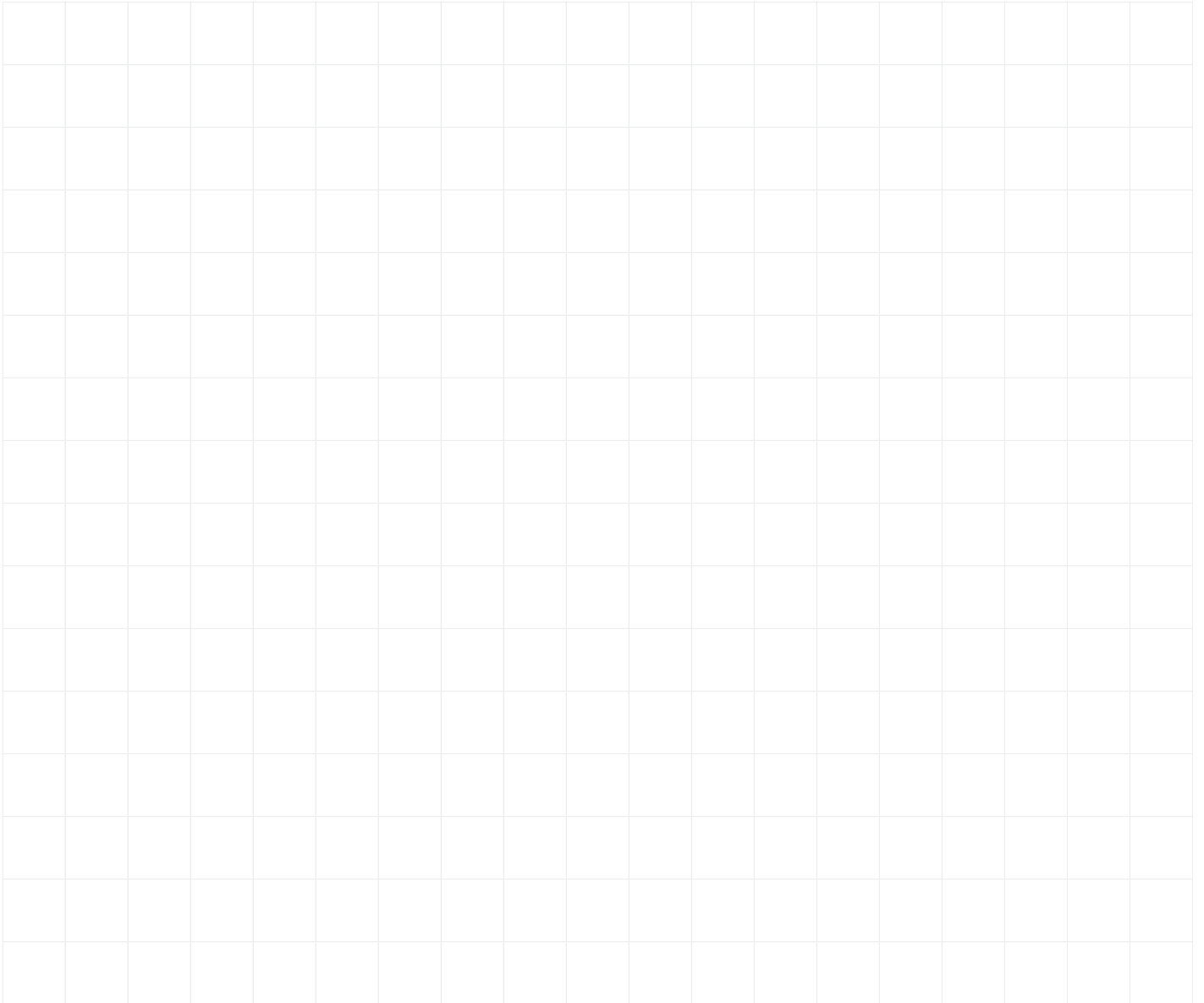
| Code | Feature              | Code | Feature | Code | Feature | Code | Feature |
|------|----------------------|------|---------|------|---------|------|---------|
| KZ   |                      | KZ1  |         | KZ0  |         | KZ01 |         |
| KY   |                      | KY1  |         | KY0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

Table 11

| Code |   |
|------|---|
| C    | Closed center   |
| C1   | Part for power beyond sleeve (carry over)<br>(N : Ø14 M22X1.5)  |
| C2   | Part for power beyond sleeve (carry over)<br>(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               |



The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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