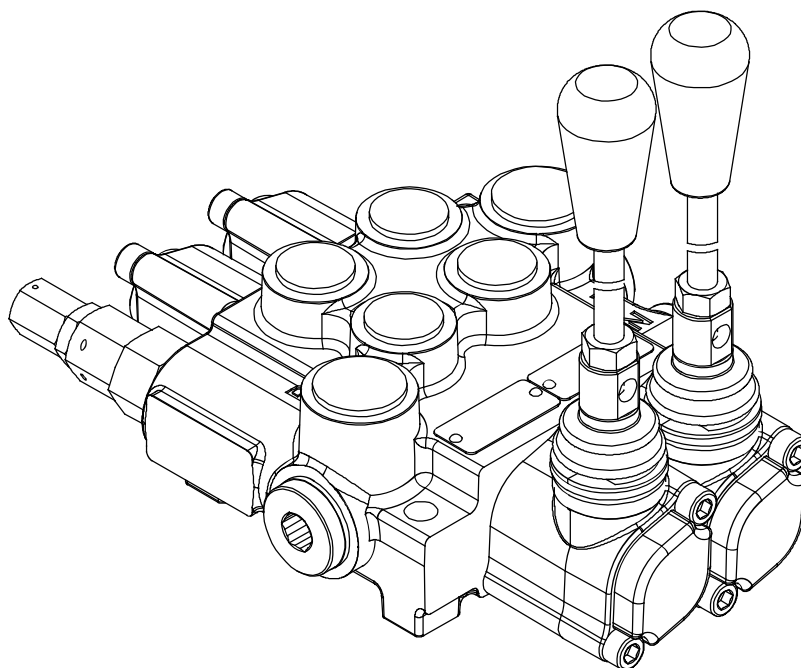




### Description

#### Назначение и применение

For starting, controlling and stopping the working fluid between the generator of pressure flow, the consumers and the Tank. Предназначение для изменения направления потока, ограничения давления рабочей жидкости в гидролинии, разгрузка насоса в нейтральной позиции золотника.

### Specifications

#### Основные показатели

|                             |                                 |
|-----------------------------|---------------------------------|
| 1. Valve monoblock          | моноблок                        |
| Конструктивное решение      |                                 |
| 2. Mounting                 | 2 bolts M8                      |
| Крепление                   |                                 |
| 3. Ports                    | internal thread                 |
| Присоединительные отверстия | резбовые отверстия              |
| 4. Ambient temperature      | –40 – +60 C                     |
| температура воздуха         |                                 |
| 5. Pressure medium          | mineral oil                     |
| Рабочая жидкость            |                                 |
| 6. Viskosity                | 12...800 mm <sup>2</sup> /s     |
| Вязкость                    | 20...100 mm <sup>2</sup> /s     |
|                             | recommended range               |
| 7. Fluid temperature        | –30 – +80 C                     |
| 8. Filtration               | oil contaminations              |
|                             | class 10 to NAS 1683            |
|                             | achived with filter 75          |
| 9. Max. operating pressure  | P = 250 bar                     |
|                             | A, B = 300 bar                  |
|                             | T < 50 bar                      |
| 10 Internal leakage         | 7 ccm/min at 100 bar            |
|                             | viscosity 46 mm <sup>2</sup> /s |
| 11. Nominal flow            | 40 l/min (operating diagram)    |
| 12. Spool stroke            | +– 6 mm                         |
| 13. Actuating force         | < 200 N in spool axis           |

directional control valve Z50

Left hand configuration – standard

Right hand configuration

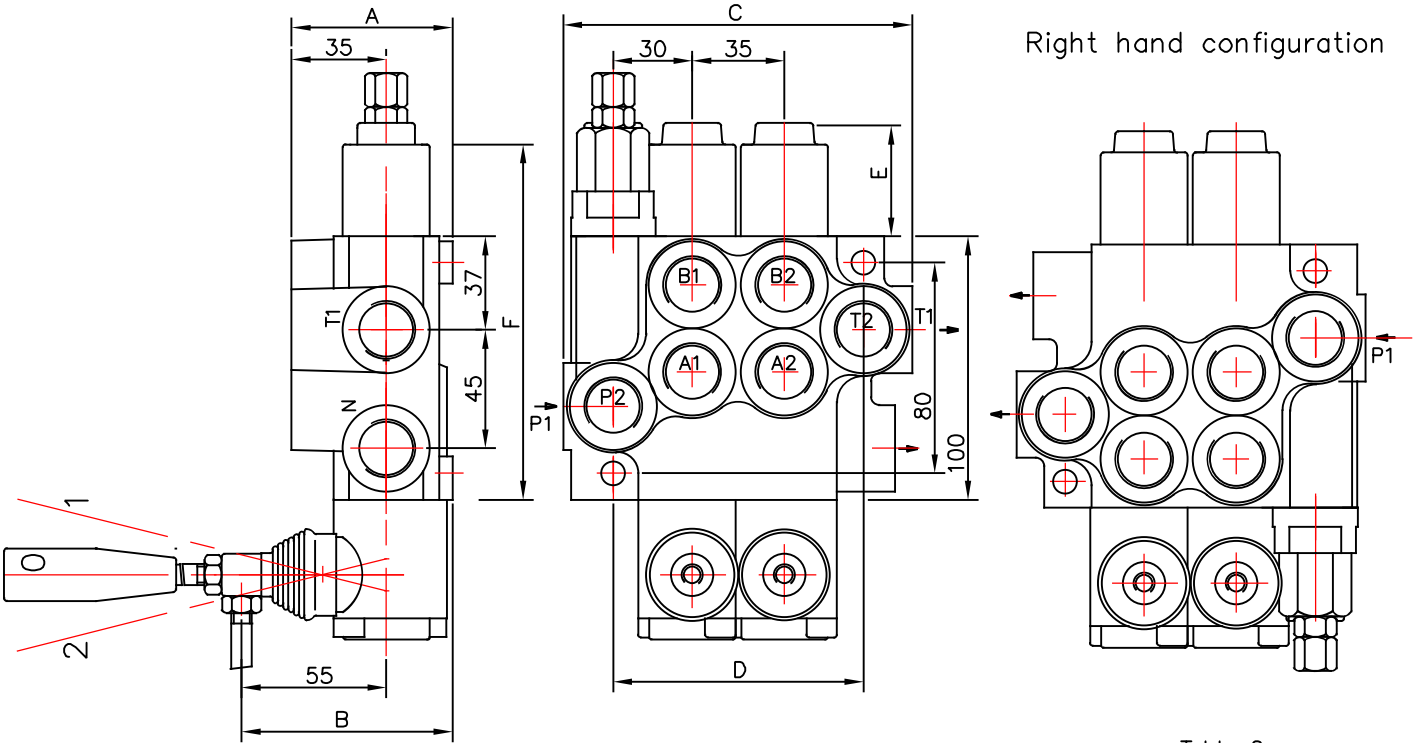


Table 1

|       | A  | B  | C   | D   | P1 | P2 | T1 | T2 |
|-------|----|----|-----|-----|----|----|----|----|
| 01Z50 | 60 | 80 | 85  | 60  | +  | -  | +  | -  |
| 02Z50 | 60 | 80 | 129 | 97  | +  | +  | +  | +  |
| 03Z50 | 60 | 80 | 164 | 132 | +  | +  | +  | +  |
| 04Z50 | 60 | 80 | 199 | 167 | +  | +  | +  | +  |
| 05Z50 | 60 | 80 | 234 | 202 | +  | +  | +  | +  |
| 06Z50 | 60 | 80 | 269 | 237 | +  | +  | +  | +  |
| 07Z50 | 60 | 80 | 304 | 272 | +  | +  | +  | +  |

Table 2

| spool control<br>фиксация золотника | E  | F   |
|-------------------------------------|----|-----|
| 1; 4; 5; 6; 7; 8; 9; 10; 11;        | 40 | 193 |
| 2; 3;                               | 72 | 225 |
| 16                                  | +  | +   |

Table 3

| code | spools |
|------|--------|
| 01   | 1      |
| 02   | 2      |
| 03   | 3      |

ets.

0 2 Z50 R – A 1 A 1 G KZ1 T H E C2 11

block with common check valve  
распределитель с общим клапаном

number of spools  
количество золотников

directional control valve type ...  
распределитель типа ...

inlet high pressure – right  
вход давления с правой стороны

relief valve – standard setting 175; without indication  
(4) Spring for 160 to 315 bar; standard setting 220 bar; red;  
(svp) relief valve blanking plug; без предопр. клапана

first spool distribution type  
характеристика первого золотника

spool control/detend and ets./  
контроль золотника/фиксации и сгружение/

second spool distribution type  
тип второго золотника

spool control/detend and estr./  
контроль золотника/фиксации и сгружение/

ports /treads/  
разброс отверстия

general operation feature  
тип ручного управления

with "teton"  
исполнение ручного управления с "тетон"

operation feature /pneumatic, .../  
другое управление

with electric switch  
с электрическим выключателем

high pressure carry over  
продолжител потока высокого давления

connection ports in use  
присоединительные отверстия

## directional control valve Z50

## INLET RELIEF OPTIONS

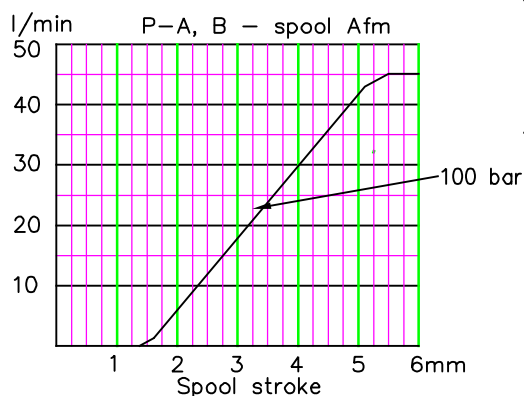
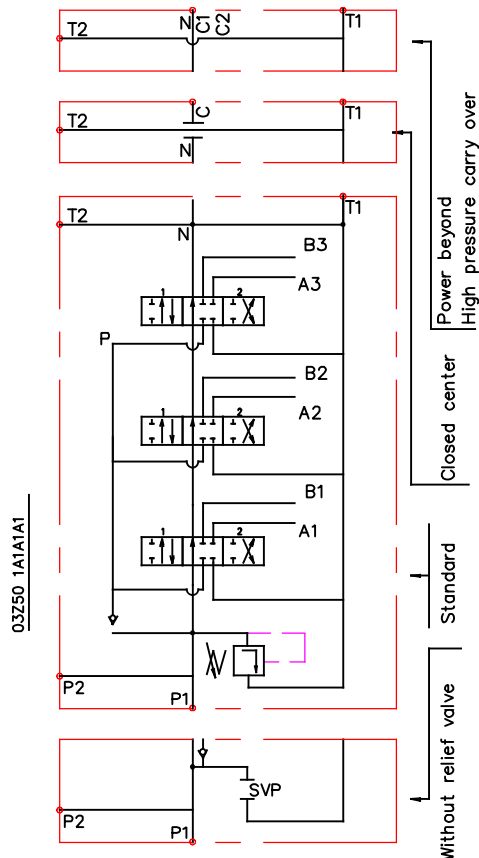
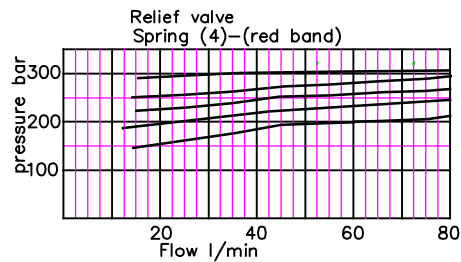
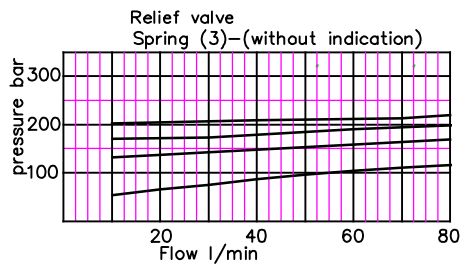


Table 4

| code | way of distribution ; распределение потока |
|------|--------------------------------------------|
| 1    | parallel ; параллельное                    |

Table 5

| code | spool type |
|------|------------|
| A    |            |
| B    |            |
| C    |            |
| D    |            |
| E    |            |
| F    |            |
| G    |            |
| H    |            |
| M    |            |
| N    |            |
| O    |            |
| P    |            |
| Q    |            |
| R    |            |
| S    |            |
| T    |            |
| * K  |            |

\* только при входе слева (дуг)  
only for left hand configuration

\*\* L

\*\* только при входе справа (дуг)  
only for right hand configuration

\*\*\* Spool Afm – fine metering

Table 6

| code | spool control |
|------|---------------|
| 1    |               |
| 2    |               |
| 3    |               |
| 4    |               |
| 5    |               |
| 6    |               |
| 7    |               |
| 8    |               |
| 9    |               |
| 10   |               |
| 11   |               |

|      |  |
|------|--|
| * 15 |  |
| * 16 |  |

\* только при входе слева  
only for left hand configuration

|       |  |
|-------|--|
| ** 12 |  |
| ** 13 |  |

\*\* только при входе справа  
only for right hand configuration

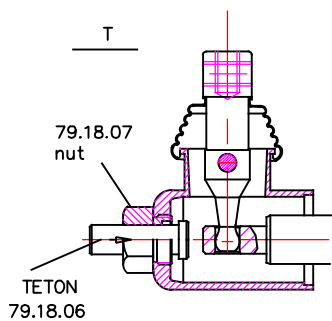
Table 7

| code | с микро шалтер ; incorporated microswitch |
|------|-------------------------------------------|
| E    | mikroswitch type Omron–V 165 I C5         |

Table 8

| code | грузовое управление ; operation feature                                         |
|------|---------------------------------------------------------------------------------|
| P    | пневматическое ; ports NPTF 1/8–27<br>on–off pneumatic control; pn = 5–10 bar ; |
| H    | гидравлическое ; ports G 1/4<br>on–off hydraulic control ; pn = 5 – 20 bar      |

## directional control valve Z50



Z50

Table 9

| code | ports (threads) ; присоединительные отверстия |           |           |           |           |
|------|-----------------------------------------------|-----------|-----------|-----------|-----------|
|      | P                                             | A ; B     | T         | N         | C2        |
| M    | M22x1.5                                       | M18x1.5   | M22x1.5   | M22x1.5   | M22x1.5   |
| G    | G1/2                                          | G3/8      | G1/2      | G1/2      | G1/2      |
| S    | 7/8-14UNF                                     | 3/4-16UNF | 7/8-14UNF | 7/8-14UNF | 7/8-14UNF |

kind of hand control ; вид ручного управления

Table 10

| code | ескиз feature                                          | code | ескиз feature | code | ескиз feature |
|------|--------------------------------------------------------|------|---------------|------|---------------|
| KZ   |                                                        | KY   |               | KI   |               |
| KZ1  |                                                        | KY1  |               | KI1  |               |
| KZ0  |                                                        | KY0  |               | KI0  |               |
| KZ01 |                                                        | KY01 |               | KI01 |               |
| —    | without hand control ; без рычажная система управления |      |               |      |               |

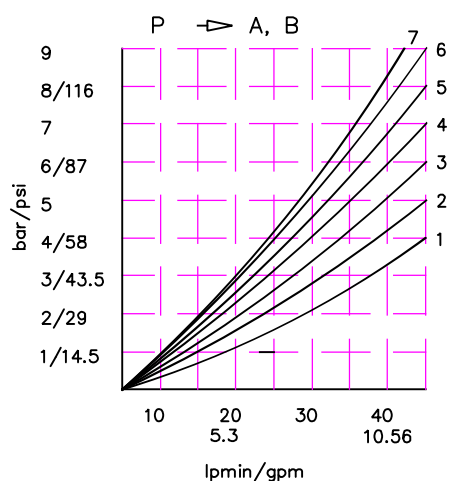
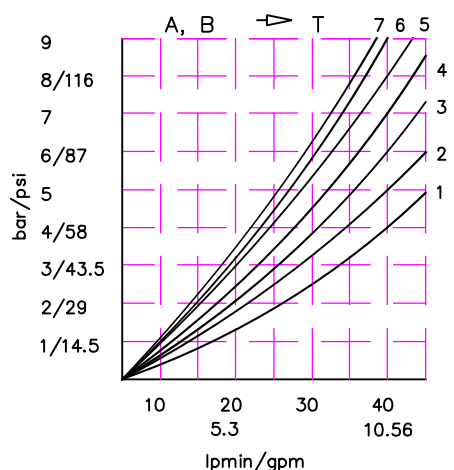
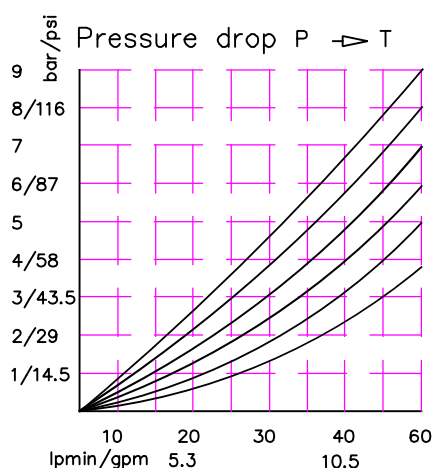
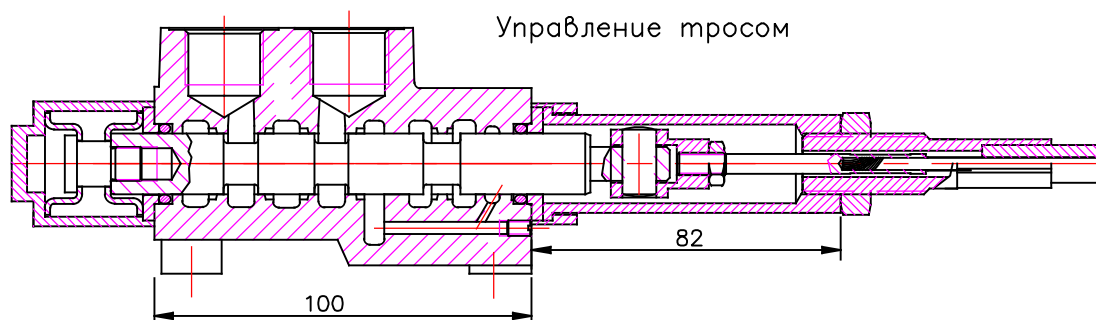


Table 11

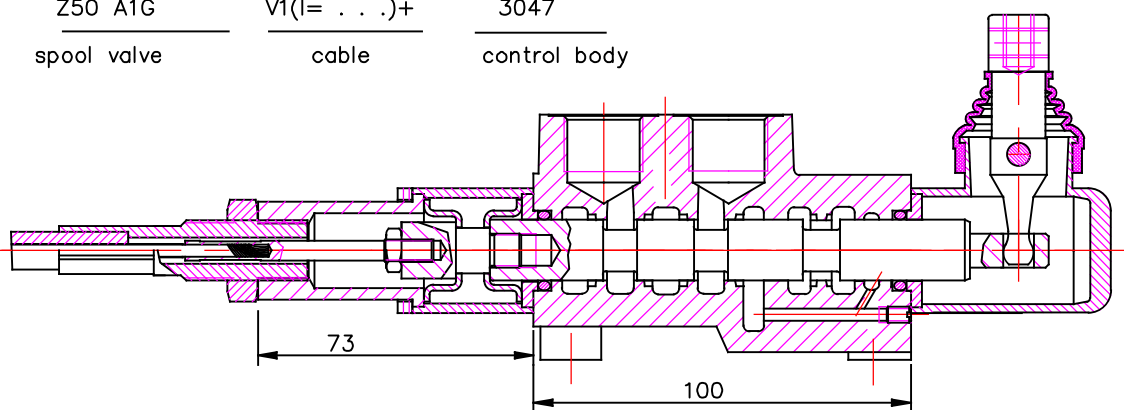
| code | вид продолжение на дебита                                                               |  |
|------|-----------------------------------------------------------------------------------------|--|
| C    | отвор "N" затворен<br>closed center                                                     |  |
| C2   | отвор "N" продължава за следващ консуматор<br>part for power beyond sleeve (carry over) |  |
| —    | отвор "N" е свързан с "T"<br>without part for pressure carry over                       |  |
| X    | отвор "N" е винаги свързан с "T"<br>power beyond ever to tank                           |  |

Table 12

| code | used connection ports ; присоединительные отверстия |
|------|-----------------------------------------------------|
| 11   | P1 ; T1                                             |
| 12   | P1 ; T2                                             |
| 21   | P2 ; T1                                             |
| 22   | P2 ; T2                                             |

REMOTE CONTROLS  
Управление тросом

Z50 A1G      V1(l= . . .)+      3047  
spool valve      cable      control body



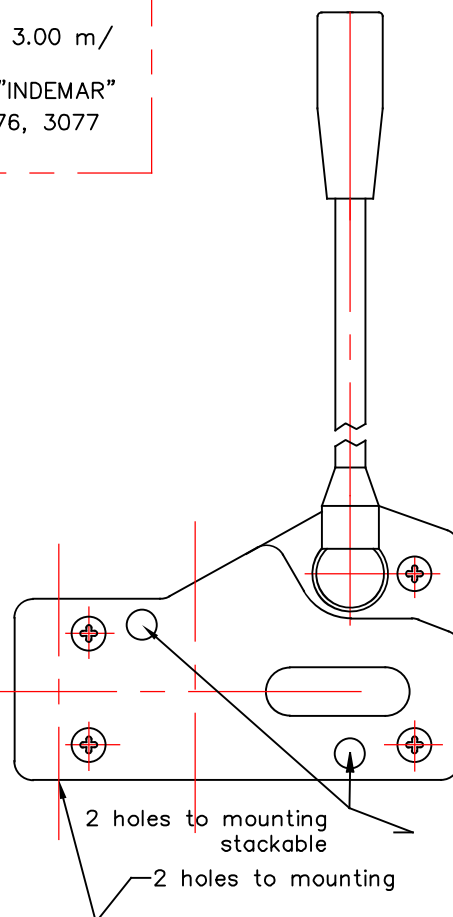
Z50 A1GKZ      V2(l= . . .)+      3047  
spool valve      cable      control body

Cable "INDEMAR" Cod. IT 3056 /l=1.00; 1.50; 2.00; 2.50; 3.00 m/

+control body "INDEMAR"  
code 3047, 3076, 3077

| Technical specifications |            |            |            |
|--------------------------|------------|------------|------------|
|                          | 3047       | 3076       | 3077       |
| Stroke                   | 13+13 mm   | 13+13 mm   | 13+13 mm   |
| Max. load                | 45 kg      | 45 kg      | 45 kg      |
| Level ratio              | 10:1       | 10:1       | 10:1       |
| Lock in neutral          | No         | No         | Yes        |
| Antireverse lock         | No         | Yes        | No         |
| Body colour              | Black      | Black      | Black      |
| Cables type              | Heavy Duty | Heavy Duty | Heavy Duty |
| Operating temperature    | -40/+80C   | -40/+80C   | -40/+80C   |

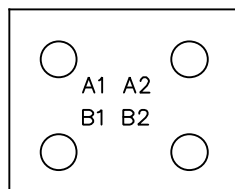
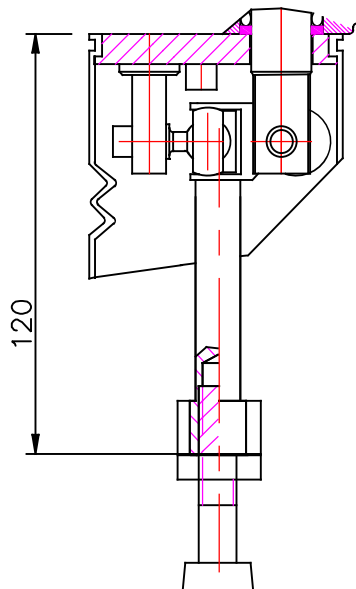
High solidity controls for easy mounting on every type of distributor. They can be mounted stand alone or packed together. They use push-pull heavy duty cables that provide a positive smooth operating lever and are manufactured in three different models to meet different needs of Clients.



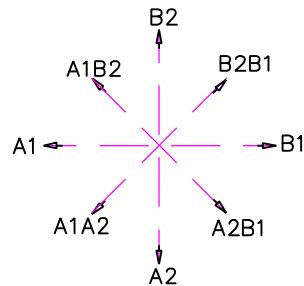
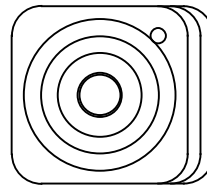
directional control valve 750

## JOYSTICK "+"

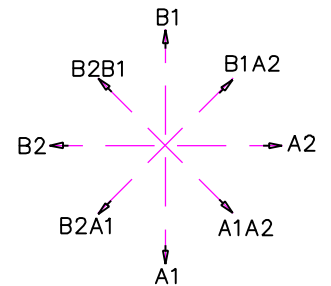
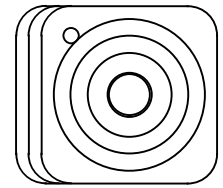
This control gives the possibility to operate, at the same time two spools with a "+" movement.



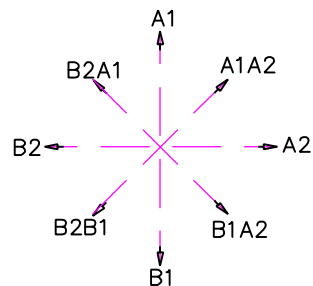
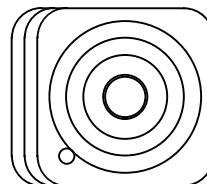
## standard version 1



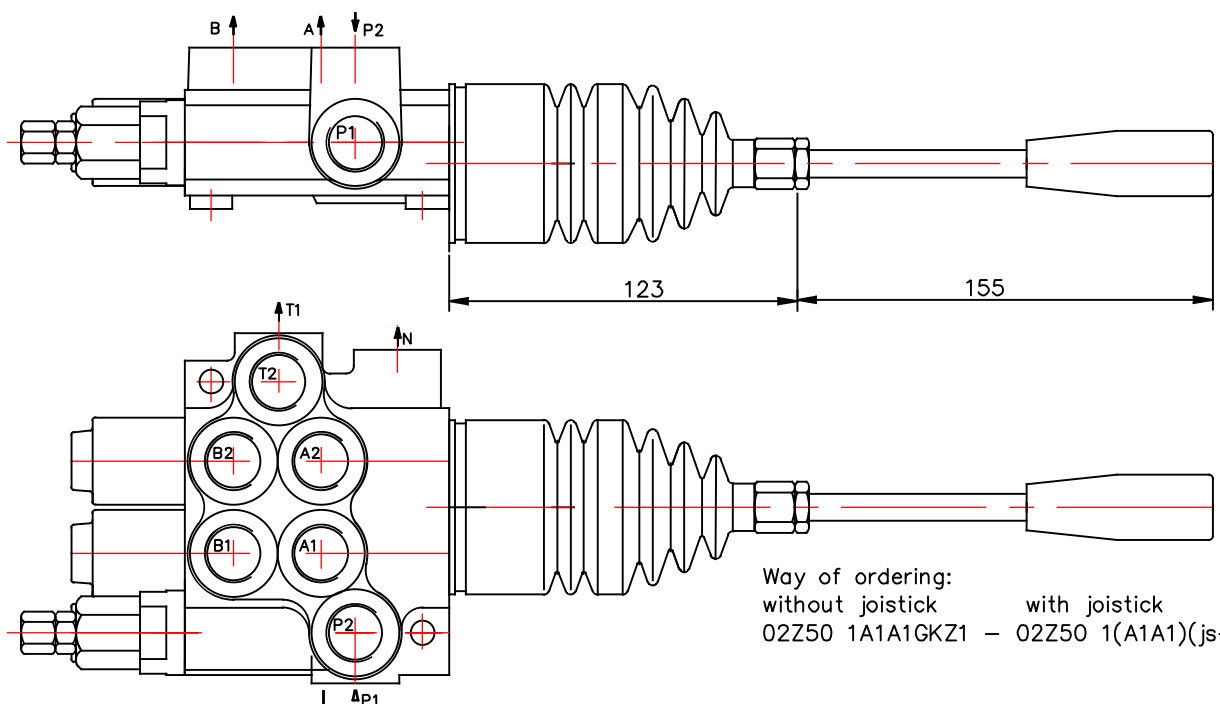
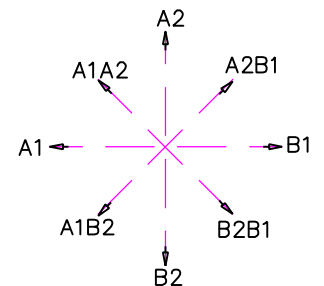
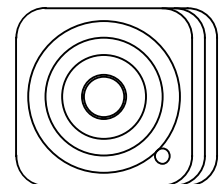
## standard version 2



## standard version 3

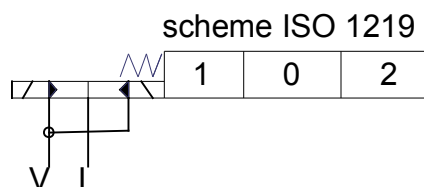
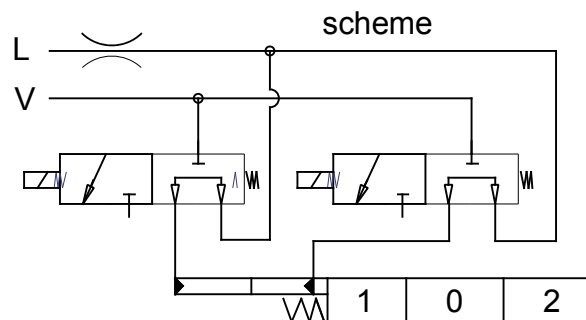
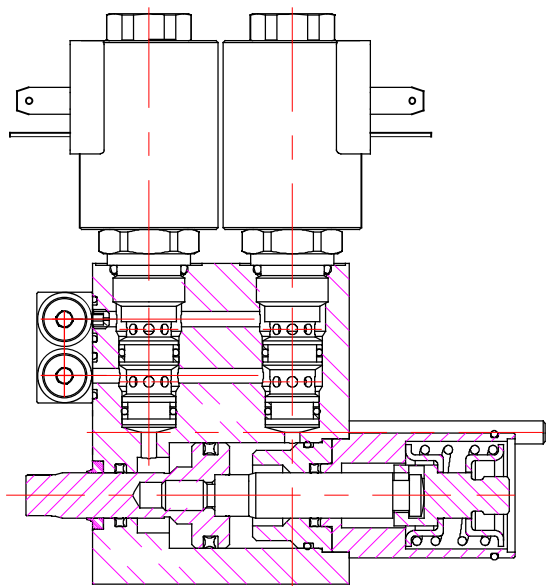


## standard version 4



Way of ordering:  
without joystick      with joystick  
02Z50 1A1A1GKZ1 – 02Z50 1(A1A1)(js+3)G

## directional control valve Z50

ED3 – electro-hydraulic control ON–OFF  
Электрогидравлический контрол ON–OFF

## Ordering codes

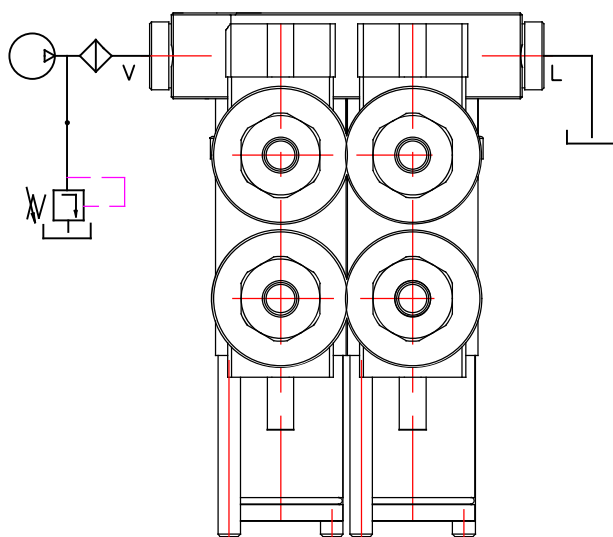
3-way solenoid valve–SV08–33  
coil P40ED3–G–12VDC  
coil P40ED3–G–24VDC

Operating pressure min 10 bar(145 psi)  
max 50 bar(725 psi)  
Max operating pressure in L (T line) 25 bar(360 psi)

Solenoid operating features  
Nominal voltage tolerance  $\pm 10\%$   
Power rating 24W  
Duty cycle 100 %

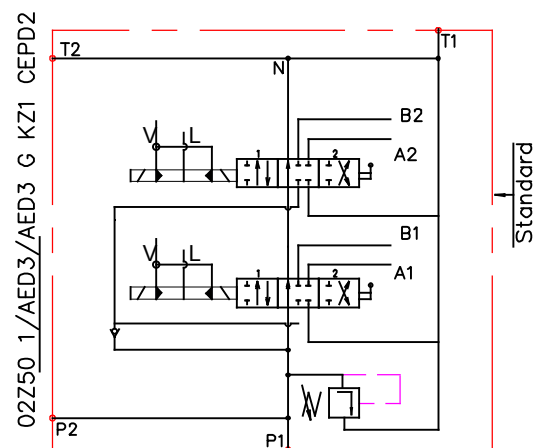
Collector kit for external pilot and drain – CEED...(1,2,3 ...)

Колектор для внешнего питания управления и слив



## Ordering example

02Z50–1/A1ED3/A1ED3 G KZ1–CEED2–12VDC



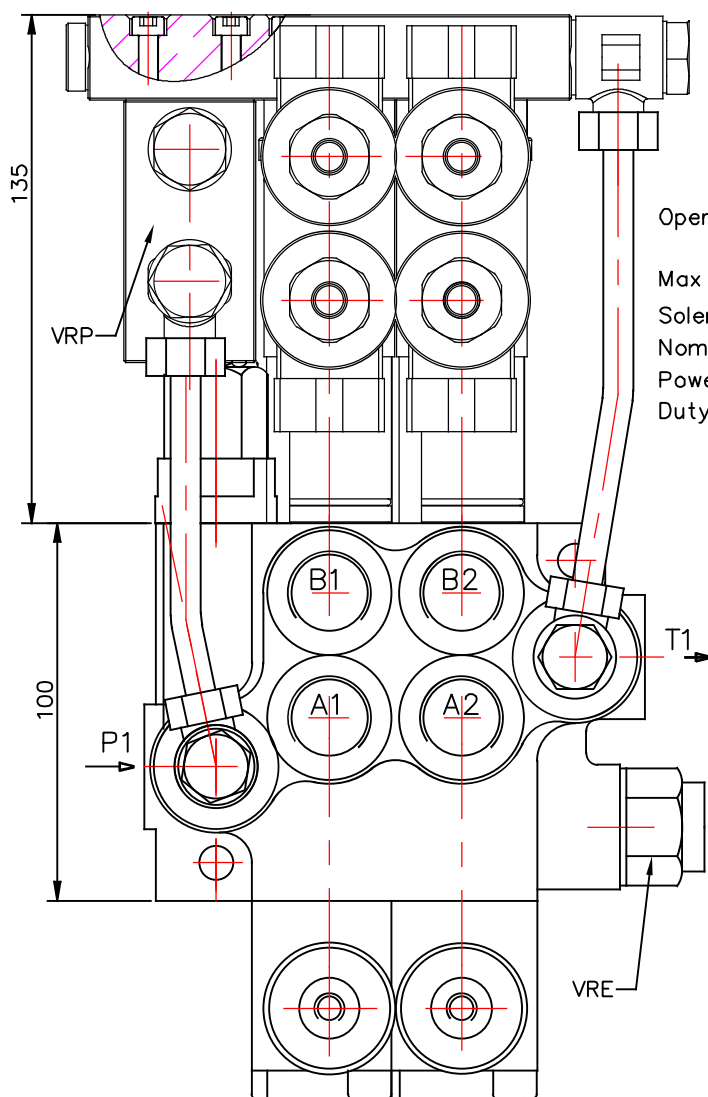
## Ordering codes (BSP threads)

CEED1P40  
CEED2P40  
CEED3P40  
CEED4P40  
...Kit for 1 section  
Kit for 2 section  
Kit for 3 section  
Kit for 4 section

## directional control valve Z50

ED3 – electro-hydraulic control ON–OFF

Электрогидравлический контрол ON–OFF



## Order codes

3-way solenoid valve–LSV2–08–3C

coil P40ED3–G–12VDC

coil P40ED3–G–24VDC

Operating pressure

min 10 bar(145 psi)  
max 50 bar(725 psi)

Max operating pressure in L (T line)

25 bar(360 psi)

Solenoid operating features

Nominal voltage tolerance

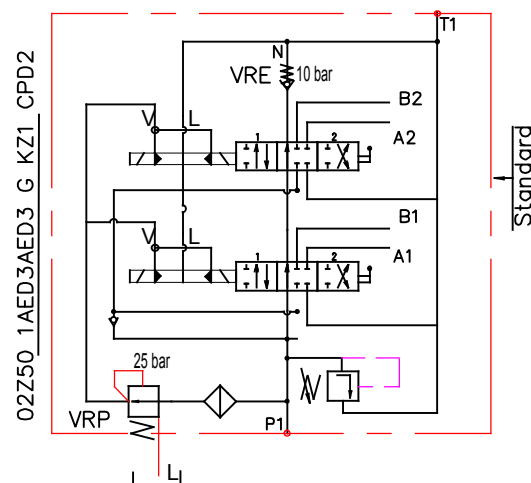
±10%

Power rating

24W

Duty cycle

100 %



## Ordering example

02Z50–VRP– 1/A1ED3/A1ED3 G KZ1–CED2–VRE–12VDC

Collector kit – BSP threads  
Ordering codes

CED1

CED2

CED3

CED4

. . . .

Kit for 1 section

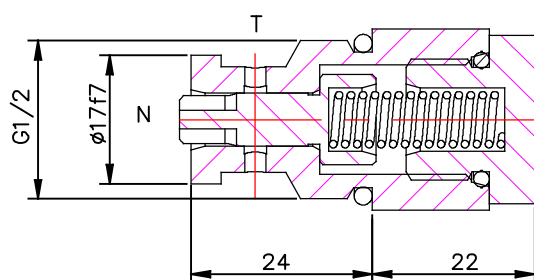
Kit for 2 section

Kit for 3 section

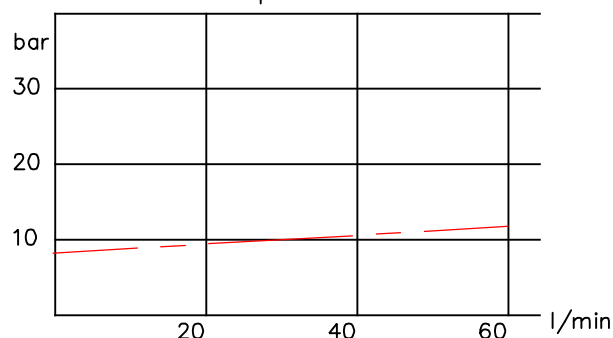
Kit for 4 section

Back pressure valve VRE–P40

Клапан подпорный на слив



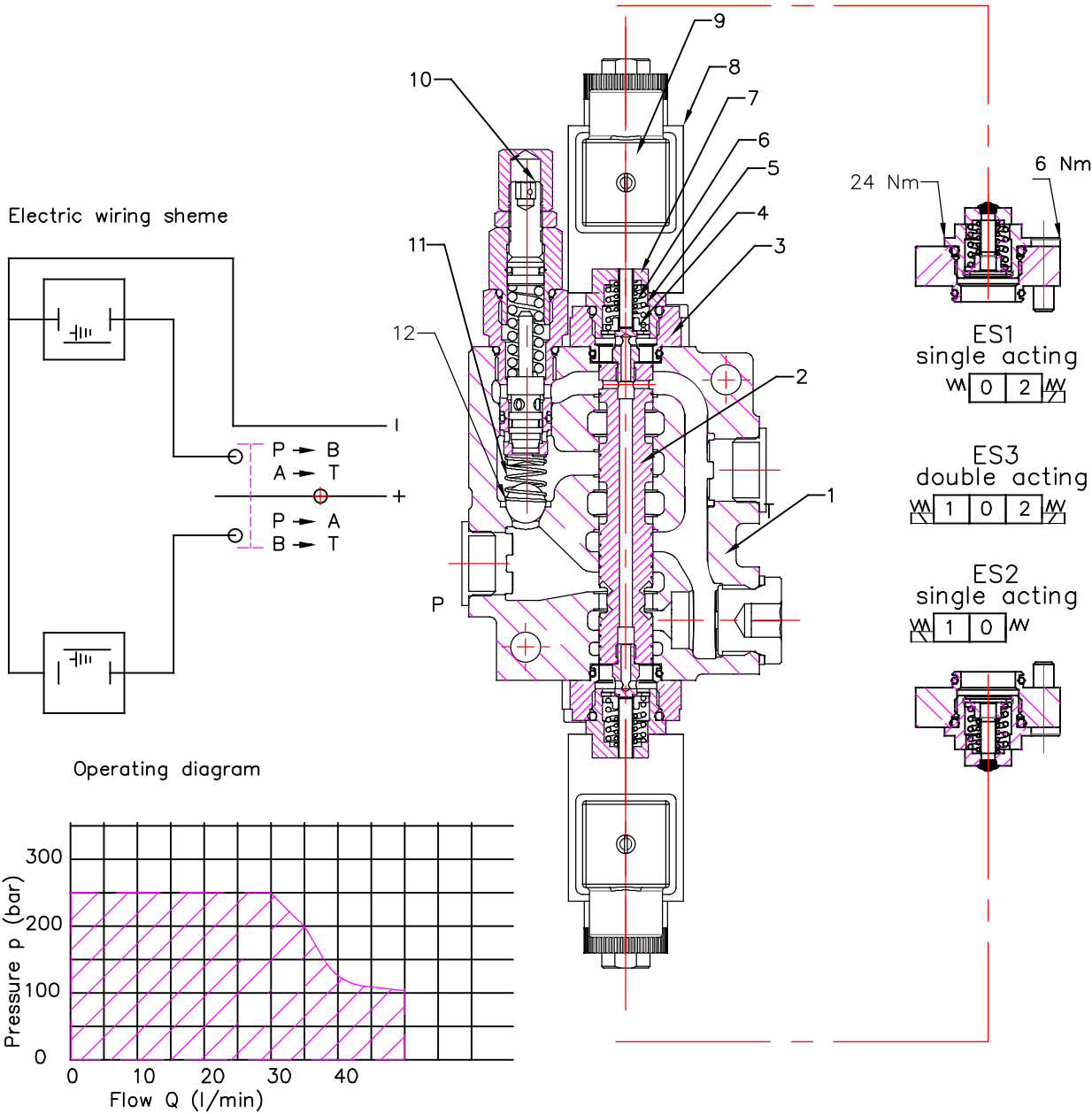
## Pressure drop N–T





directional control valve Z50

ES ... SOLENOID DIRECT CONTROL



Operating features  
Технические примечания

Control  
Internal leakage A(B) → T  
(p=120 bar, Viscosity=32 mm<sup>2</sup>/s : max 30 ccm/min)  
Fluid temperature – -20°C(short time) ... 80°C  
Max. back pressure on outlet port T – 25 bar(360 psi)

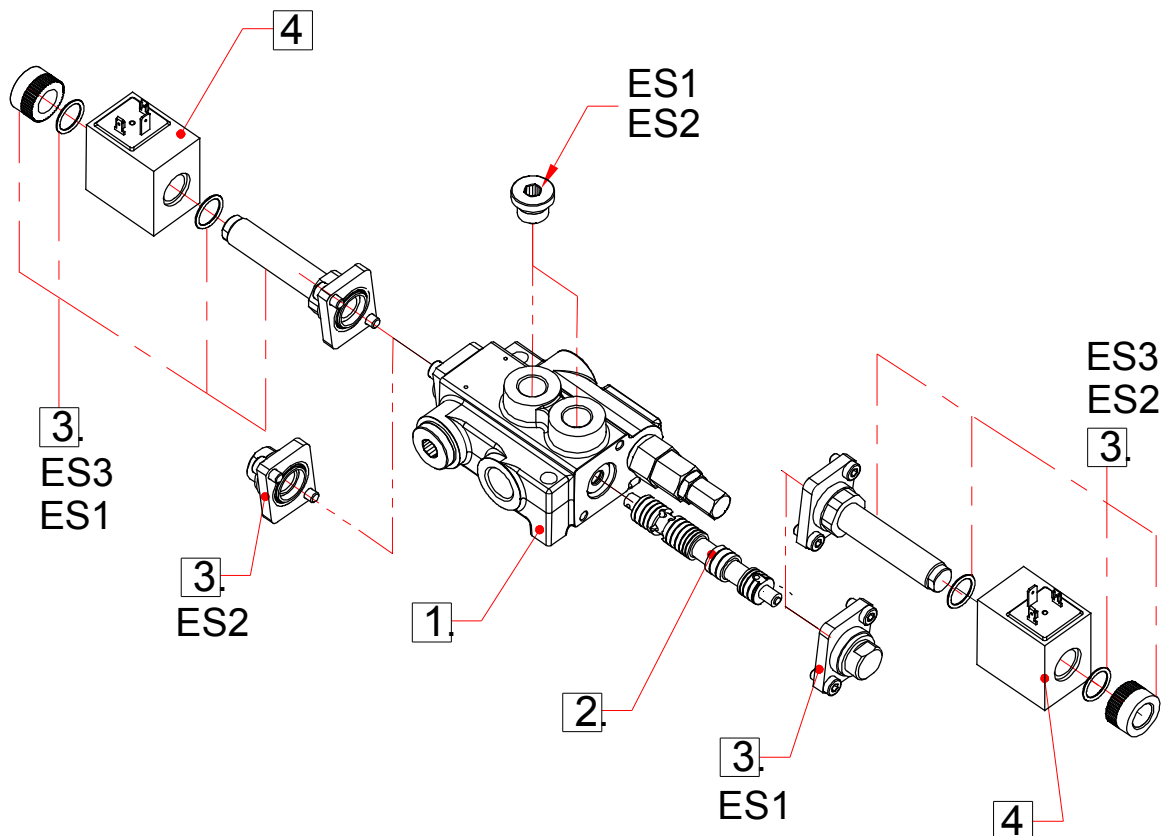
Coil  
Nominal voltage tolerance . . . . . ±10%  
Power rating . . . . . 37 W  
Coil insulance . . . . . class H  
Duty cycle . . . . . 100%  
Connector ISO 4400  
Emergency manual override

| pos. | Part.No       | Description       | Quantity |
|------|---------------|-------------------|----------|
| 12   |               | Ball 12           | 1        |
| 11   | 79.00.03      | Spring            | 1        |
| 10   | 79.04.00      | Relief valve      | 1        |
| 9    |               | Connector         | 2        |
| 8    | C35D012RC P01 | Solenoid coil     | 2        |
| 7    | GM4060/BD     | Solenoid Tube     | 2        |
| 6    | 542.02.04.15  | Additional spring | 2        |
| 5    | 542.02.04.12  | Spring            | 2        |
| 4    | 542.02.04.04  | Washer            | 2        |
| 3    | 542.02.08.00  | Intermediate unit | 2        |
| 2    |               | Spool ...         | 1        |
| 1    |               | Body ...          | 1        |

Solenoid direct control with spring return to neutral position.  
Needs special spools and special body Z50.

## ORDERING EXAMPLE

|     |   |     |       |   |
|-----|---|-----|-------|---|
| Z50 | A | ES3 | 12VDC | G |
| 1   | 2 | 3   | 4     | 5 |



## 1.Body kit

| Type  | Description |
|-------|-------------|
| Z50   | 1 spool     |
| 02Z50 | 2 spool     |
| 03Z50 | 3 spool     |
| 04Z50 | 4 spool     |
| 05Z50 | 5 spool     |
| 06Z50 | 6 spool     |

## 2.Spool options

| Type | Description                                                              |
|------|--------------------------------------------------------------------------|
| A    | Double acting, 3 positions with A and B closed in neutral position       |
| D    | Double acting, 3 positions with A and B open to Tank in neutral position |

## 3.Control kit

| Type | Description                                                    |
|------|----------------------------------------------------------------|
| ES1  | Single acting P – A with spring return in neutral position     |
| ES2  | Single acting P – B with spring return in neutral position     |
| ES3  | Double acting P – A (B) with spring return in neutral position |

## 4.Coils

| Type                      | Description           |
|---------------------------|-----------------------|
| (with connector ISO 4400) |                       |
| 12VDC                     | Nominal voltage 12VDC |
| 24VDC                     | Nominal voltage 24VDC |

## 5.Threads

|   |                          |
|---|--------------------------|
| G | P, T – G1/2; A, B – G3/8 |
|---|--------------------------|