

### Description

#### Назначение и область применения

For starting, controlling and stopping the working fluid between the generator of pressured flow, the consumers and the Tank. Предназначен для изменения направления потока, ограничения давления рабочей жидкости гидролиниях, разгрузки насоса в нейтральной позиции золотников.

### Specifications

#### Основные показатели:

##### 1.Valve monoblock

Конструктивное выполнение

моноблок

##### 2.Mounting

2 bolts M8

##### Крепление

##### 3.Pressure connections

internal thread

Присоединительные отверстия

внутренние резьбы

##### 4.Ambient temperature

-40C...+60C

Температура воздуха

##### 5.Pressure medium

mineral oil based hydraulic oil

Рабочая жидкость

##### 6.Viscosity

12...800 mm<sup>2</sup>/s permissible range

Кинематическая вязкость

20...100 mm<sup>2</sup>/s recommended range

##### 7.Fluid temperature

- 15C...+80C

##### 8.Filtration

Oil contamination 10 to NAS1638

##### 9. Max. operating pressure

P = 250 bar

Давление max. bar

T = 50 bar

##### 10.Leakage

A, B = 300 bar

Внутренние потери (A, B – T)

15 cm<sup>3</sup>/min at 120 bar

##### 11.Nominal flow

40 l/min (see "operating" diagram)

Разход рабочей жидкости

± 6 mm

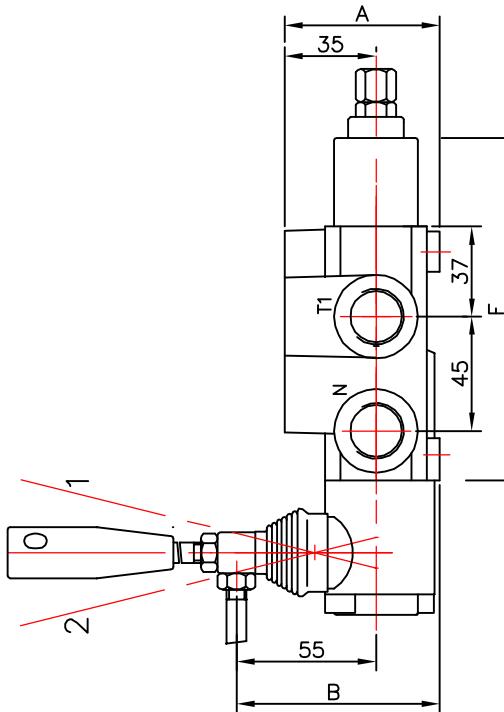
##### 12.Spool stroke

< 200 N in spool axis direction

Ход золотника

##### 13.Actuating force

Left hand configuration – standard



directional control valve Z50

Right hand configuration

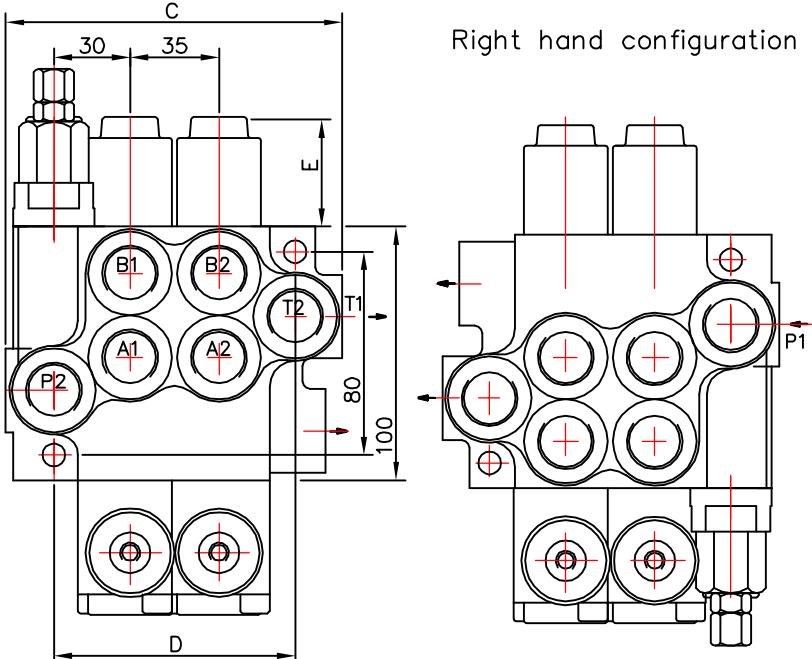


Table 1

	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

спул контроль фиксации 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

first spool distribution type  
характеристика первого золотника

spool control/detend and ets./  
спул контрол золотника/фиксации и другие/

second spool distribution type  
вид второго золотника

spool control/detend and ets./  
контрол золотника/фиксации и другие/

ports/treads/  
разводные отверстия

general operation feature  
функция 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

Table 4

code	way of distribution ; распределение потока
1	parallel ; паралельное

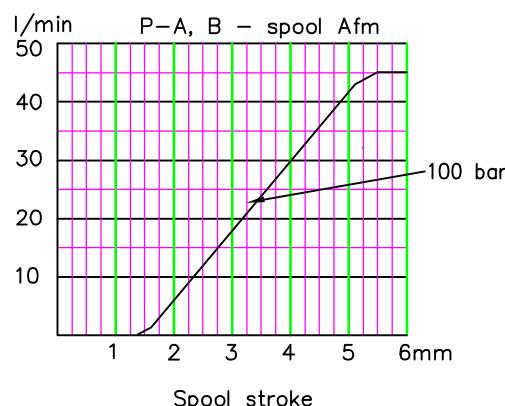
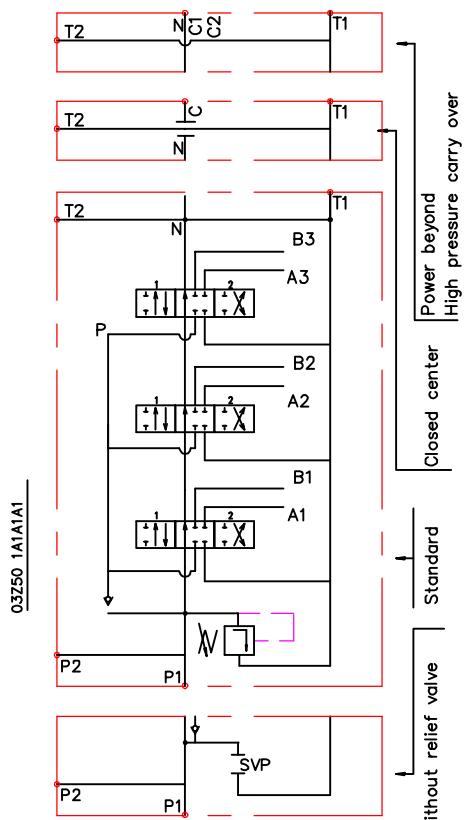


Table 5

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

\* только при вход слева  
only for left hand configuration

\*\* только при вход справа (dyb)  
only for right hand configuration

\*\*\* Spool Afm – fine metering

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 0 2
7	1 0 2
8	1 0 2
9	1 0
10	0 2
11	1 0 2

* 15	3 1 0 2	3 1 0 2
* 16	3 1 0 2	3 1 0 2

* 12	1 0 2 3	1 0 2 3
** 13	1 0 2 3	1 0 2 3

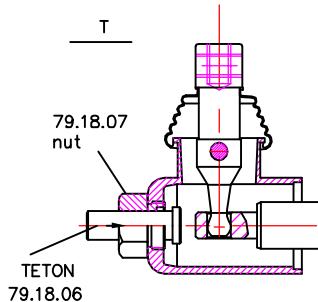
\* только при вход слева  
only for left hand configuration

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

code	с микротипом ; incorporated microswitch
E	mikroswitch type Omron-V 165 I C5

Table 7

code	другое управление ; operation feature
P	пневматическое on-off pneumatic control; 5–10 bar ; ports NPTF 1/8–27
H	гидравлическое on-off hydraulic control ; pn = 5 – 20 bar ; ports G1/4



Z50

Table 9

code	ports (treads) ; 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	ескіз feature	code	ескіз feature	code	ескіз feature
KZ		KY		KI	
KZ1		KY1		KI1	
KZO		KYO		KIO	
KZ01		KY01		KI01	
— without hand control ; без ручажной системы управления					

Table 11

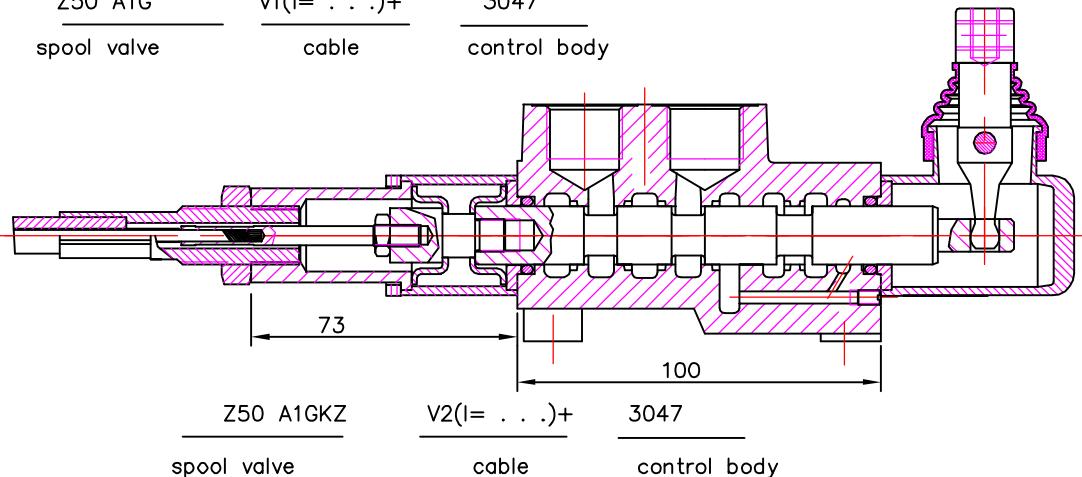
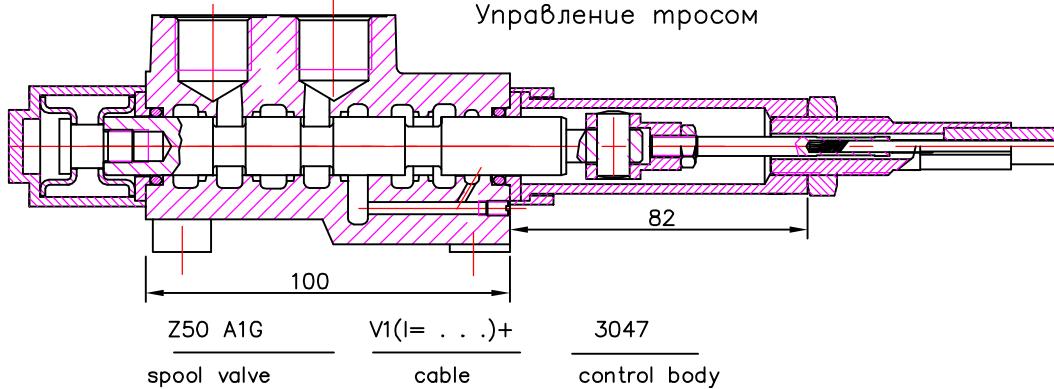
code	вид продължение на дебита
C	отвор "N" затворен closed center
C2	отвор "N" продължава за следващ консуматор part for power beyond sleeve(carry over)
—	отвор "N" е свързан с "T" without part for pressure carry over
X	отвор "N" е винаги свързан с "T" power beyond ever to tank

Table 12

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

## REMOTE CONTROLS

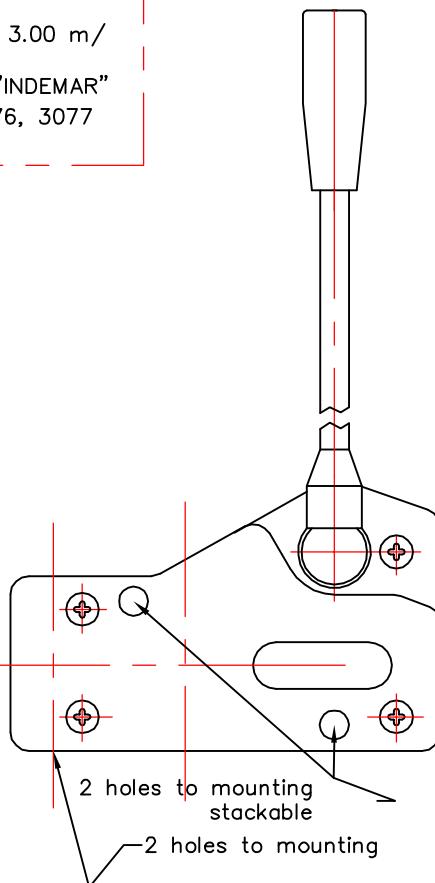
Управление тросом



Cable "INDEMAR" Cod. IT 3056 /l=1.00; 1.50; 2.00; 2.50; 3.00 m/  
+control body "INDEMAR"  
code 3047, 3076, 3077

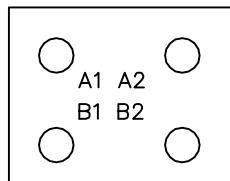
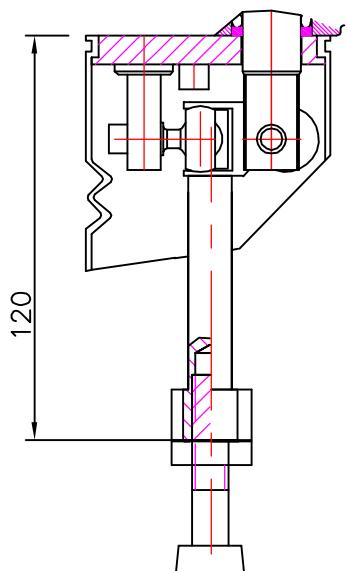
Technical specifications			
	3047	3076	3077
Stroke	13+13 mm	13+13 mm	13+13 mm
Max. load	45 kg	45 kg	45 kg
Level ratio	10:1	10:1	10:1
Lock in neutral	No	No	Yes
Antireverse lock	No	Yes	No
Body colour	Black	Black	Black
Cables type	Heavy Duty	Heavy Duty	Heavy Duty
Operating temperature	-40/+80C	-40/+80C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

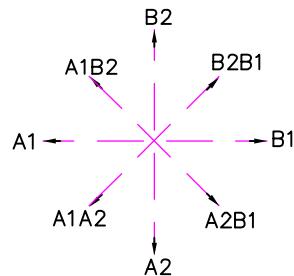
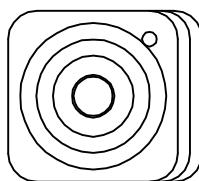


## JOYSTICK "+"

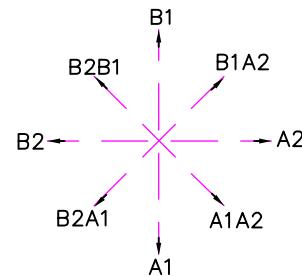
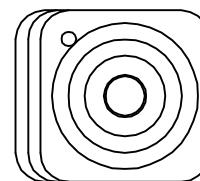
This control gives the possibility to operate, at the same time two spools with a "+" movement.



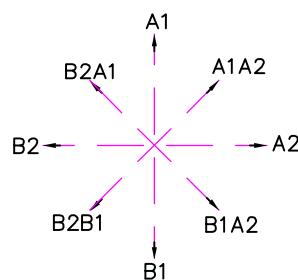
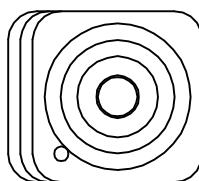
## standard version 1



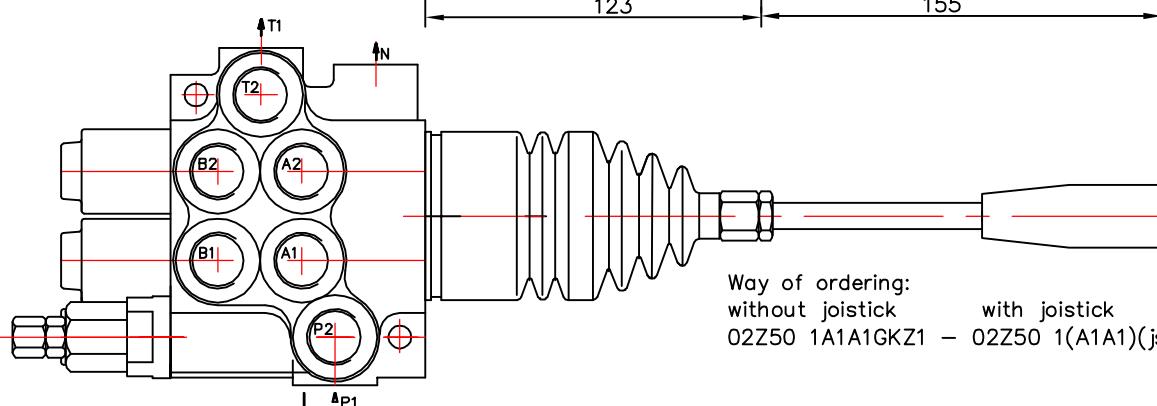
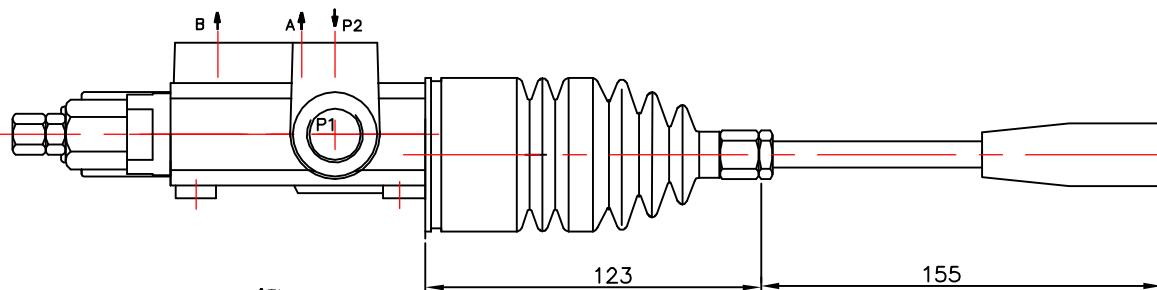
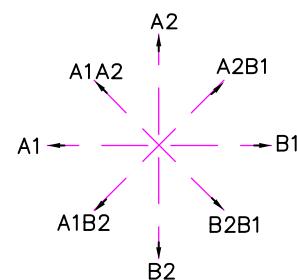
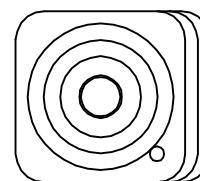
## standard version 2



## standard version 3

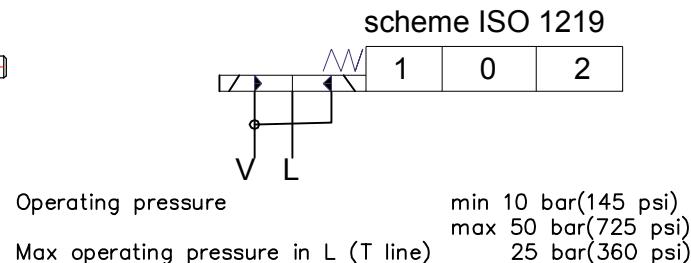
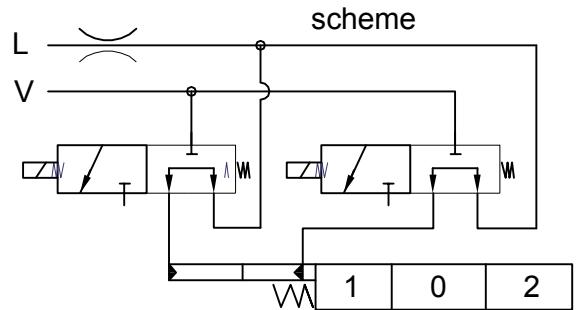
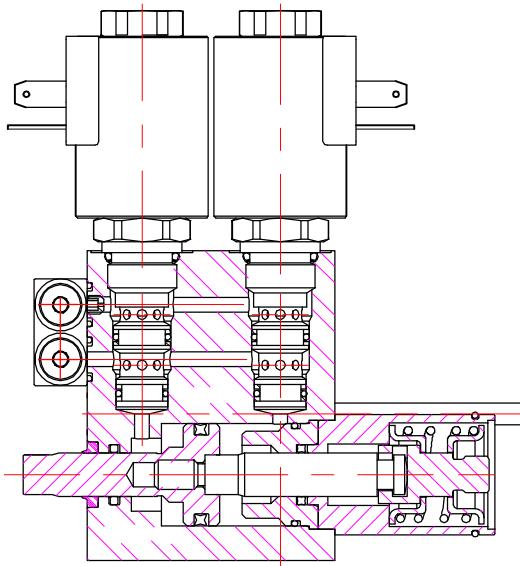


## standard version 4



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

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



Operating pressure

min 10 bar(145 psi)

Max operating pressure in L (T line)

max 50 bar(725 psi)

25 bar(360 psi)

**Ordering codes**

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

**Solenoid operating features**

Nominal voltage tolerance

±10%

Power rating

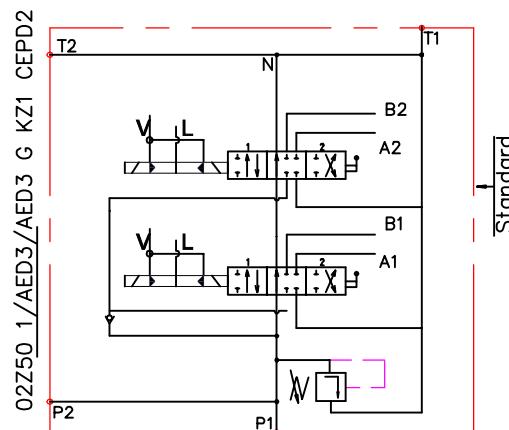
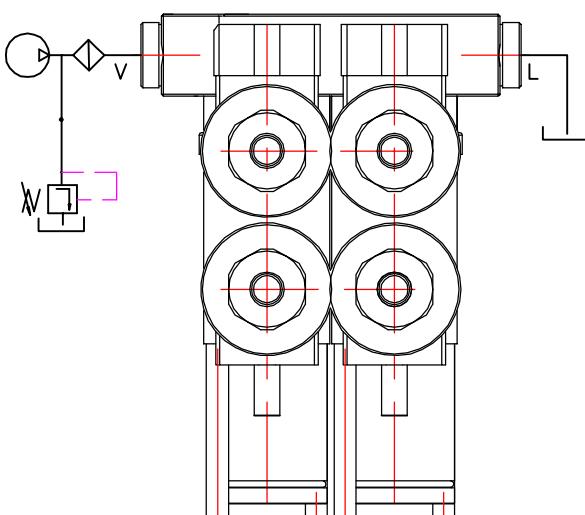
24W

Duty cycle

100 %

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

Коллектор для внешнего пневмания управления и слива

**Ordering example**

02Z50-1/A1ED3/A1ED3 G KZ1-CEED2-12VDC

**Ordering codes (BSP threads)**

CEED1P40

Kit for 1 section

CEED2P40

Kit for 2 section

CEED3P40

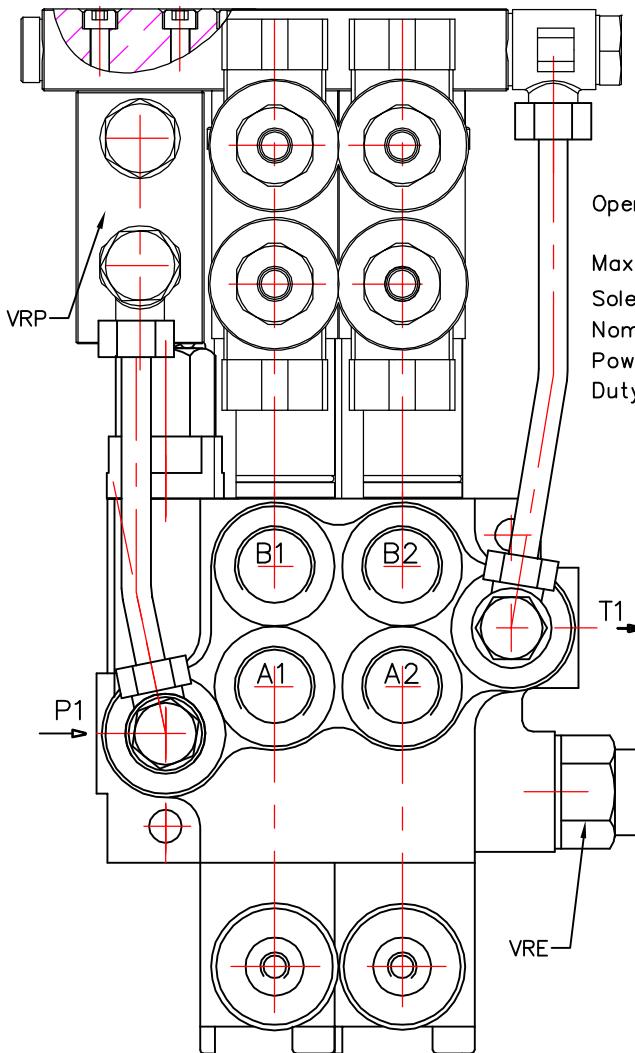
Kit for 3 section

CEED4P40

Kit for 4 section

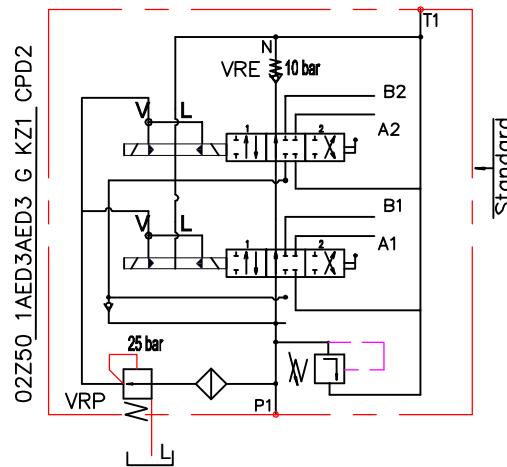
....

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



Order codes  
3-wai 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	$\pm 10\%$
Power rating	24W
Duty cycle	100 %



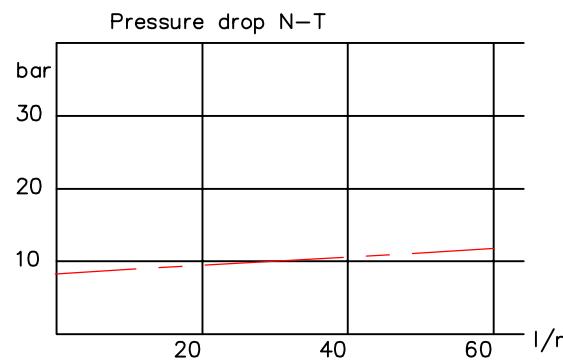
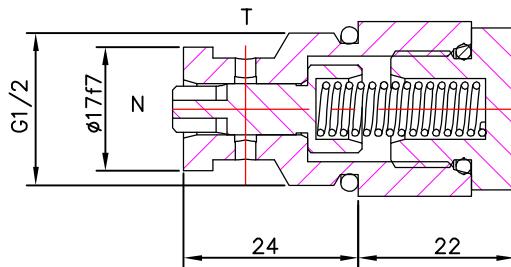
Collector kit – BSP threads  
Ordering codes

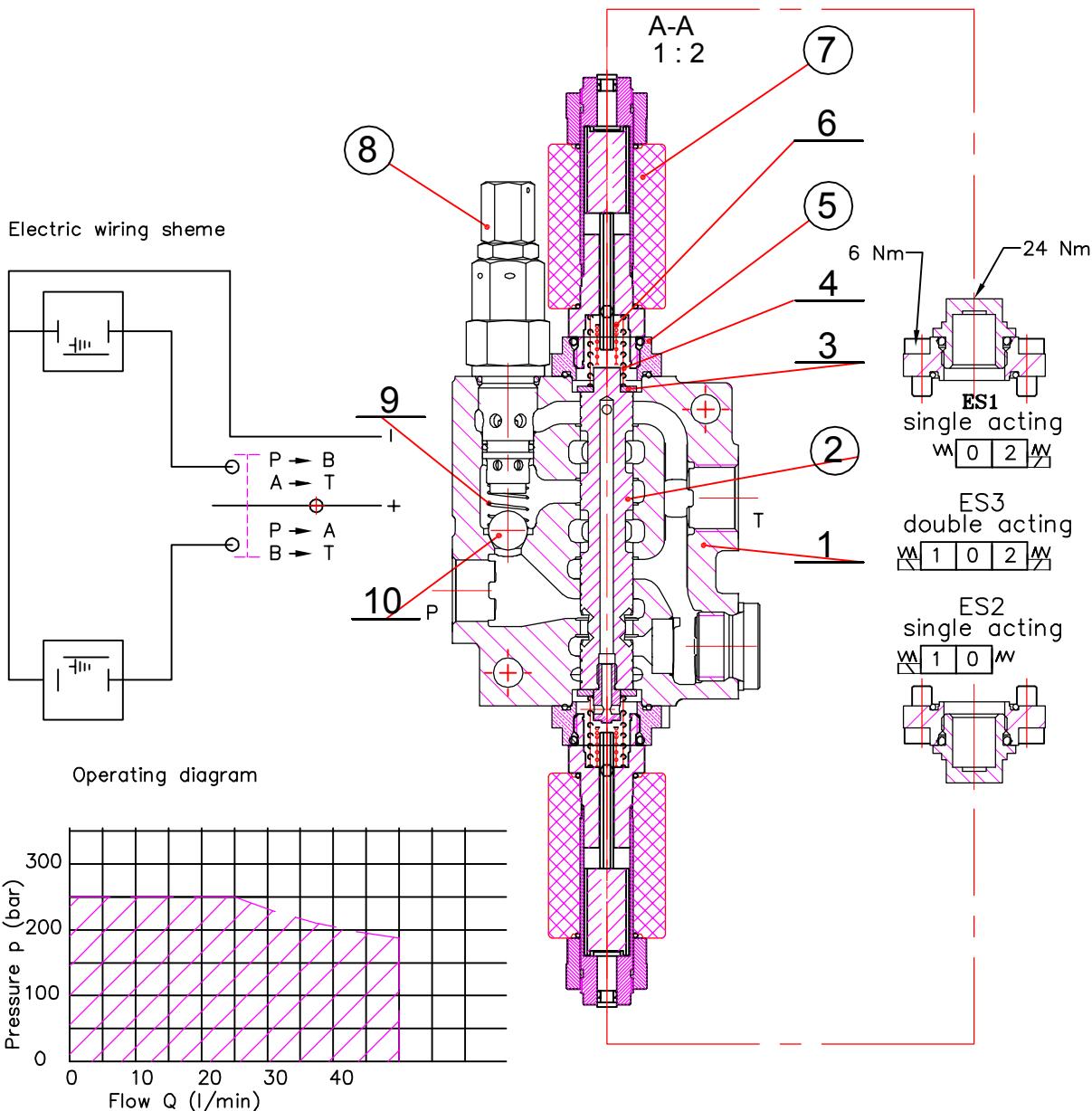
CED1	Kit for 1 section
CED2	Kit for 2 section
CED3	Kit for 3 section
CED4	Kit for 4 section
...	

Ordering example

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

Back pressure valve VRE-P40  
Клапан подпорний на слив





## Operating features

## Технические примечания

## Control

Internal leakage  $A(B) \rightarrow T$   
( $p=120$  bar, Viscosity=32 mm<sup>2</sup>/s : max 30 ccm/min)  
Fluid temperature -  $-20^{\circ}\text{C}$ (short time) ...  $80^{\circ}\text{C}$   
Max. back pressure on outlet port T - 25 bar(360 psi)

## Coil

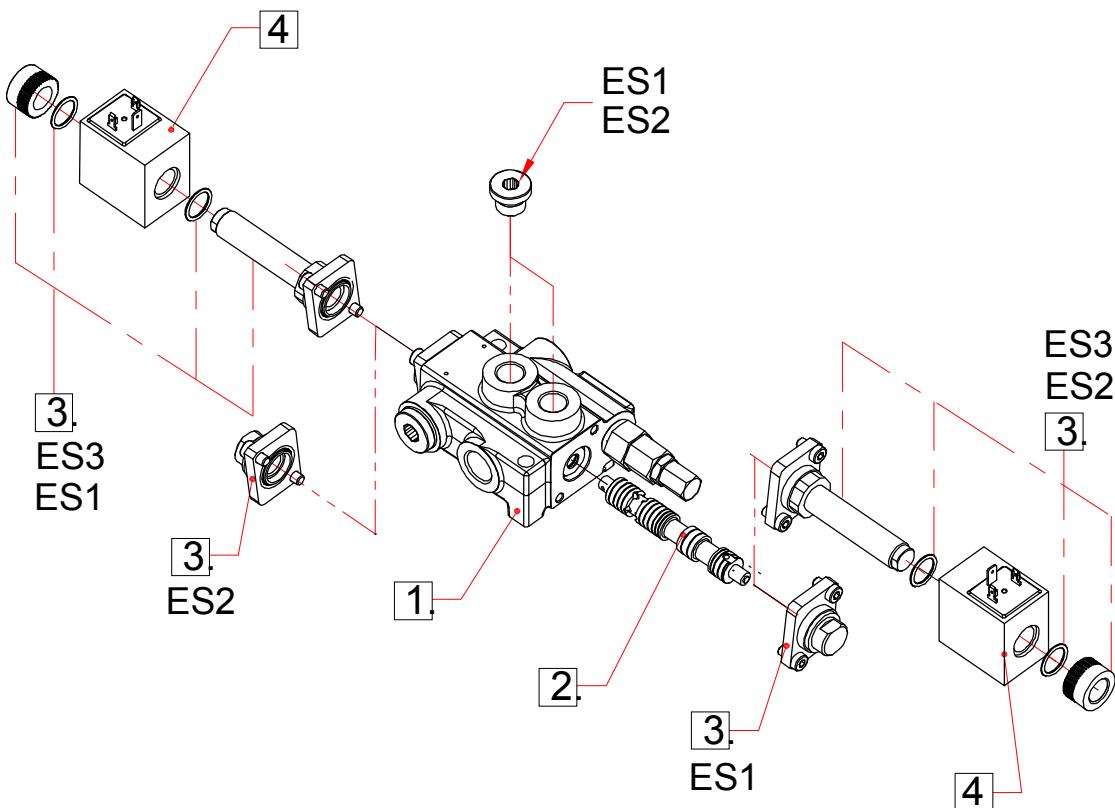
Nominal voltage tolerance . . . . .  $\pm 10\%$   
Power rating . . . . . 37 W  
Coil insulation . . . . . class H  
Duty cycle . . . . . 100%  
Connector ISO 4400  
Emergency manual override

pos.	Part.No	Description	Quantity
10		Ball 12	1
9	79.00.03	Spring	1
8	79.04.00	Relief valve	1
7b	C35D012RC P01	Solenoid coil	2
7a	GM4060/BD	Solenoid Tube	2
6	542.02.00.07	Additional spring	2
5	542.02.03.00	Intermediate unit	2
4	542.02.00.04	Spring	2
3	542.02.00.02	Washer	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

## 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

## 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

## 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