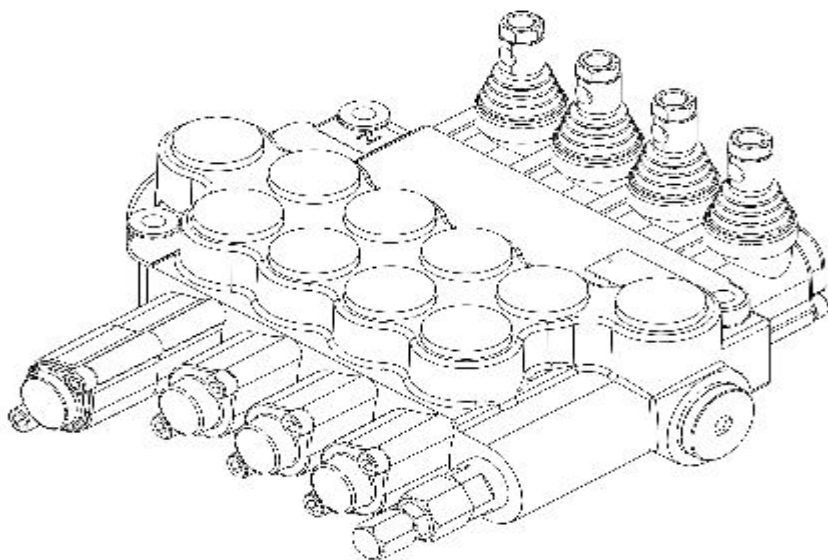


HYDRAULIC DIRECTIONAL CONTROL VALVES  
 РАСПРЕДЕЛИТЕЛИ ГИДРАВЛИЧЕСКИЕ



### Description

#### Назначение и область применения

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

### Specifications

#### Основные показатели:

1. Valve monoblock	моноблок
Конструктивное выполнение	3 bolts M8
2. Mounting	
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. Viskosity	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
	A, B = 300 bar
10. Leakage	18 cm <sup>3</sup> /min at 120 bar
Внутренние потери (A, B – T)	
11. Nominal flow	80 l/min (see “operating” diagram)
Разход рабочей жидкости	
12. Spool stroke	± 7 mm
Ход золотника	
13. Actuating force	< 220 N in spool axis direction

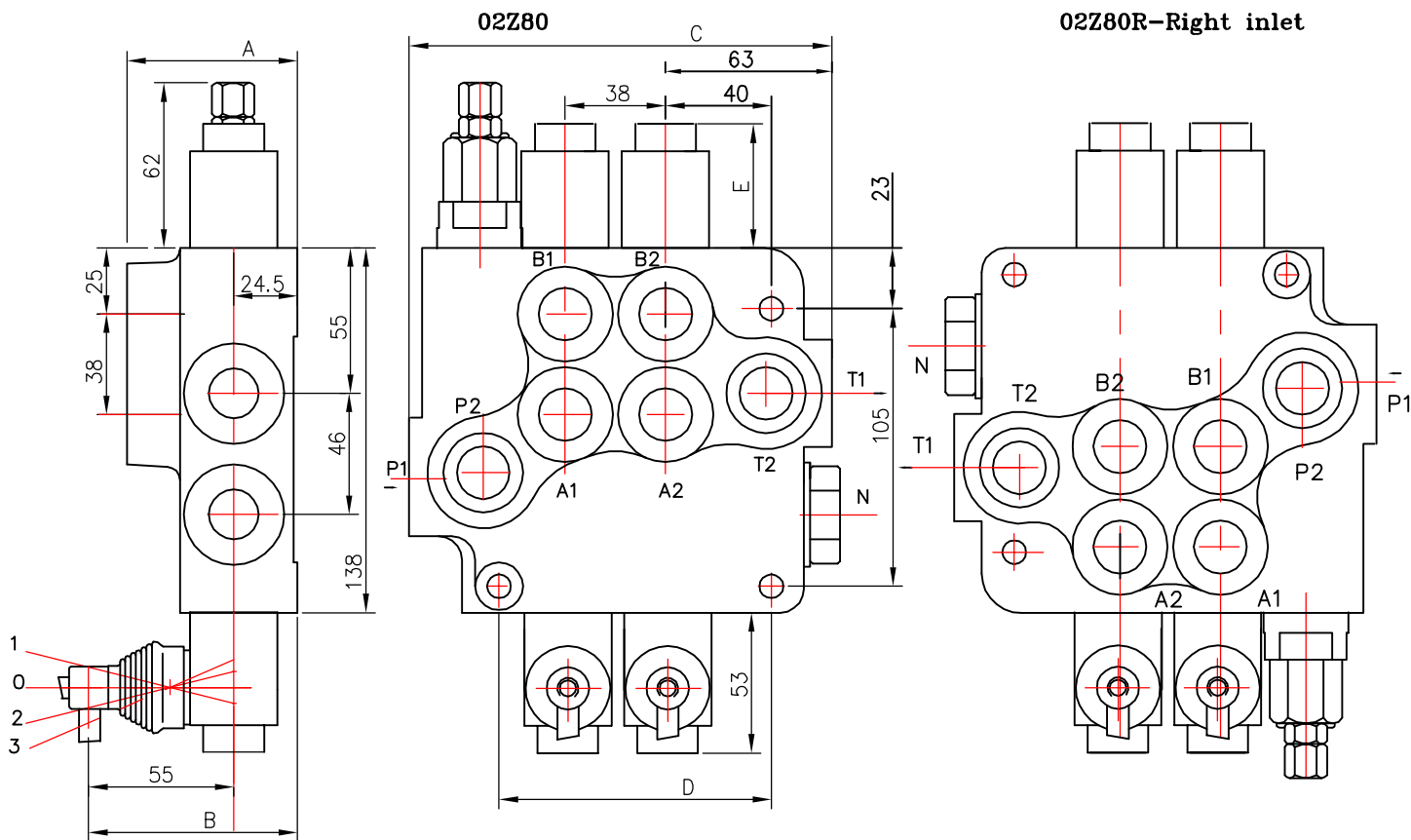


Table 1

	A	B	C	D	P1	P2	T1	T2
01Z80	67	80	122	65	*	*	-	-
02Z80	67	80	160	103	*	*	*	*
03Z80	67	80	198	141	*	*	*	*
04Z80	67	80	236	179	*	*	*	*
05Z80	67	80	274	217	*	*	*	*
06Z80	67	80	312	255	*	*	*	*

Table 2

Spool control	E
1, 4, 5, 6, 7, 8, 9, 10, 11,	40
2, 3, 12, 14	72
13	44

**0** \_\_\_\_\_  
 block with common check valve  
 распределитель с общим клапаном

**2** \_\_\_\_\_  
 number of spools  
 количество золотников

**Z80** \_\_\_\_\_  
 directional control valve type ...  
 распределитель типа ...

**R** \_\_\_\_\_  
 inlet high pressure – right  
 вход давления с правой стороны

**A** \_\_\_\_\_  
 first spool distribution type  
 характеристика первого золотника

**1** \_\_\_\_\_  
 spool control/detend and estr./  
 контрол золотника/фиксация и грузе/

**A** \_\_\_\_\_  
 second spool distribution type  
 вид второго золотника

**1** \_\_\_\_\_  
 spool control/detend and estr./  
 контрол золотника/фиксация и грузе/

**G** \_\_\_\_\_  
 ports /treads/  
 резьбовые отверствия

**KZ1** \_\_\_\_\_  
 general operation feature  
 вид ручного управления

**T** \_\_\_\_\_  
 with "teton"  
 исполнение ручного управления с "тетон"

**P** \_\_\_\_\_  
 operation feature /pneumatic, .../  
 грузе управление

**E** \_\_\_\_\_  
 with electric switch  
 с электрическим выключателем

**C2** \_\_\_\_\_  
 high pressure carry over  
 продолжител потока високого давления

**11** \_\_\_\_\_  
 connection ports in use  
 присоединительные отверствия

way of distribution – parallel; распределение – параллельное

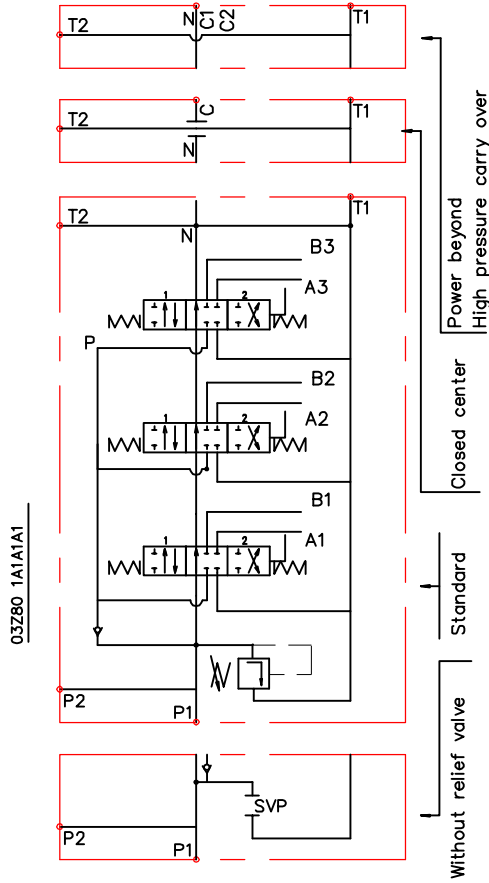


Table 3

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

Table 4

code	spool control
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	

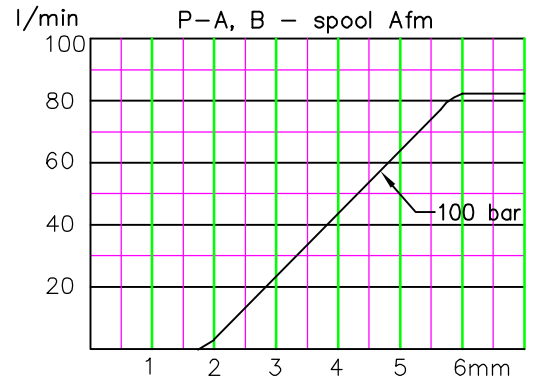
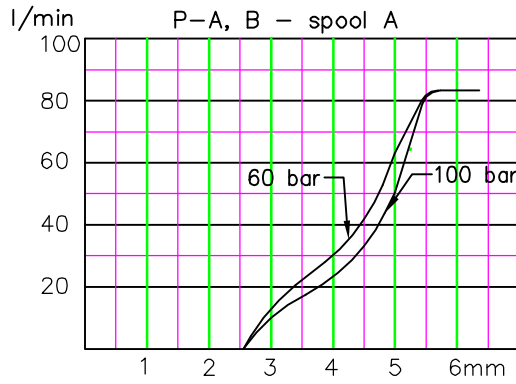


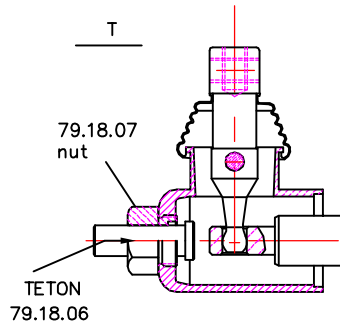
Table 5		с микро шалпер ; incorporated microswitch	
E		mikroswitch type Omron-V 165 I C5	

Table 6		грузое 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	

Z80

Table 7

code	ports (threads) ; присоединительные отверстия				
	P	A ; B	T	N	C2
M	M22x1.5	M22x1.5	M26x1.5	M26x1.5	M26x1.5
G	G1/2	G1/2	G3/4	G3/4	G3/4
S	7/8-14UNF	7/8-14UNF	1 1/16-14UNF	1 1/16-14UNF	1 1/16-14UNF



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 ричажная система управления				

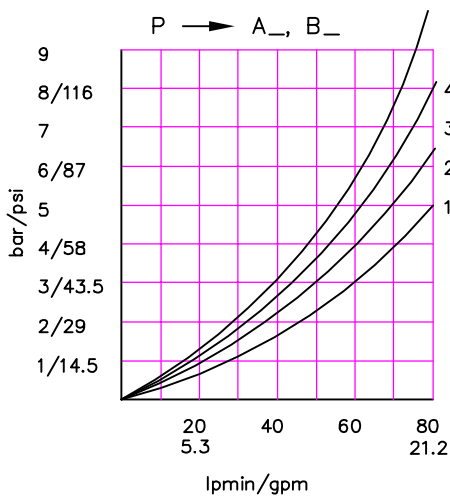
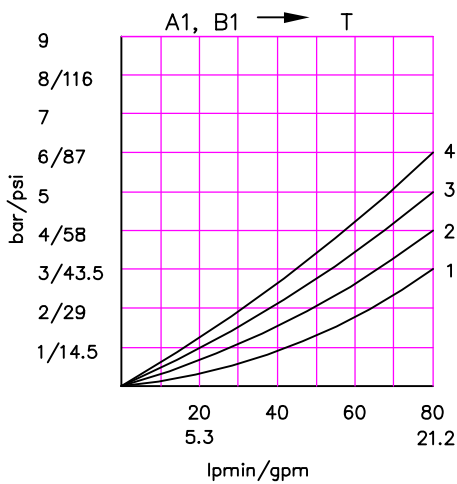
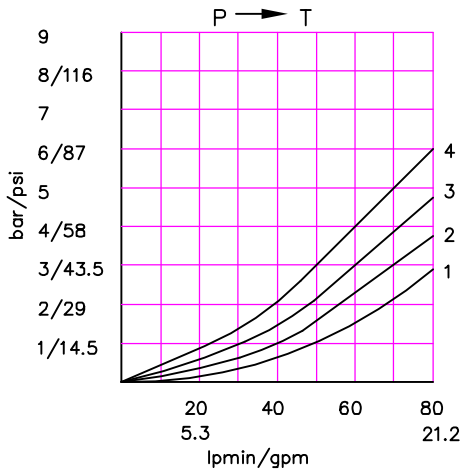
Table 11

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	

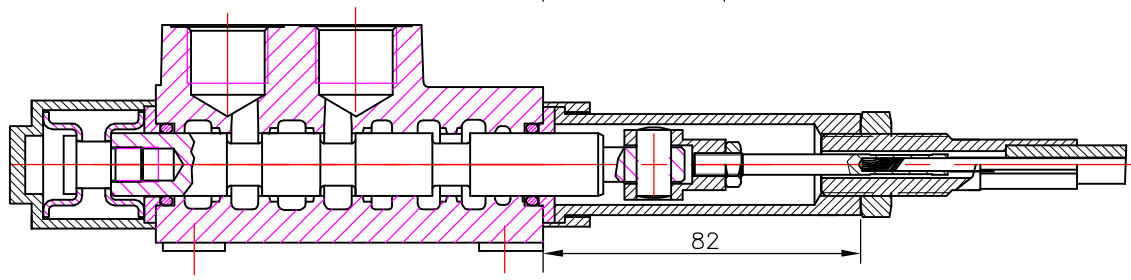
Table 12

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

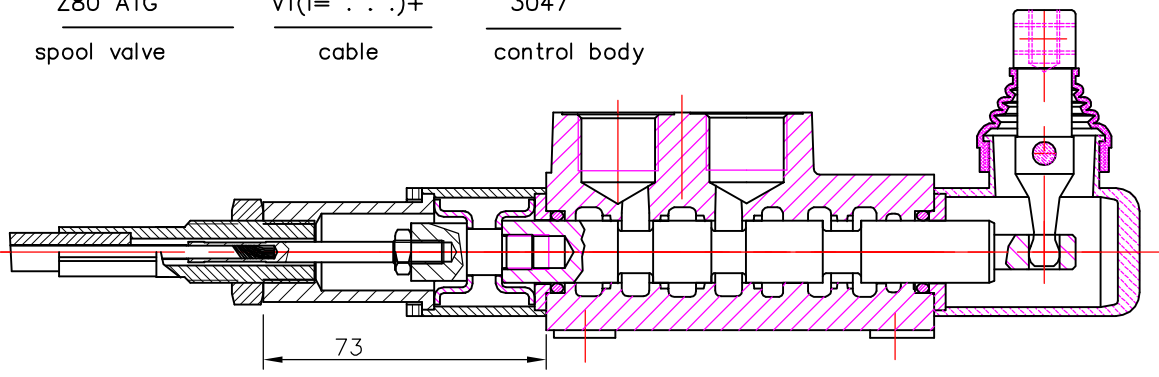
..Z80 directional control valve - A



REMOTE CONTROL  
Управление тросом



Z80 A1G      V1(l= . . .)+      3047  
spool valve      cable      control body

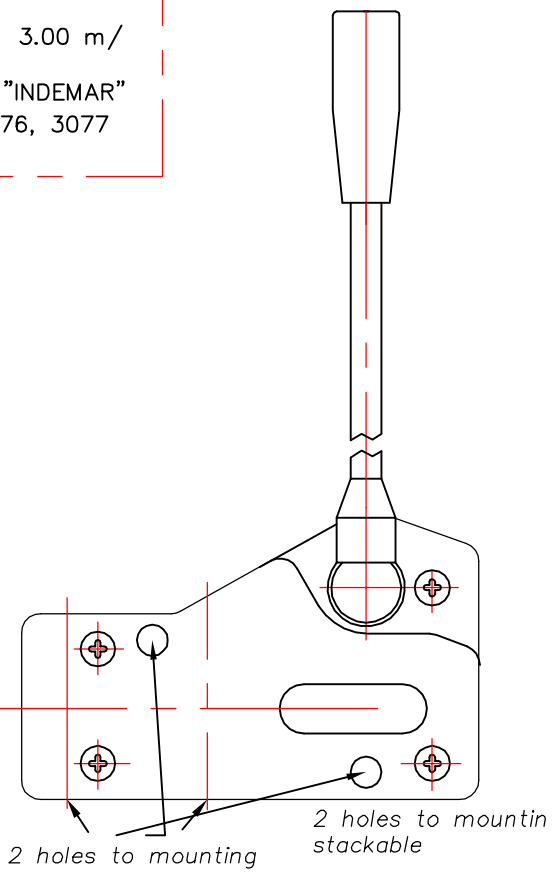


Z80 A1G      V2KZ1(l= . . .)+      3047  
spool valve      cable      control body

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

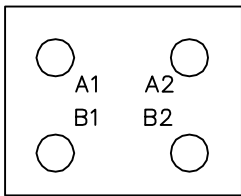
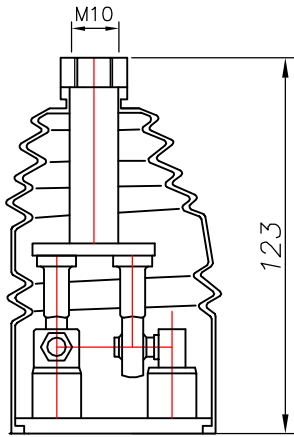
Technical specifications			
	3047	3076	3077
Stroke	13+13 mm	13+13 mm	13+13 mm
Max. load	45 kg	45 kg	45 kg
Level ratio	10:1	10:1	10:1
Lock in neutral	No	No	Yes
Antireverse lock	No	Yes	No
Body colour	Black	Black	Black
Cables type	Heavy Duty	Heavy Duty	Heavy Duty
Operating temperature	-40/+80C	-40/+80C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

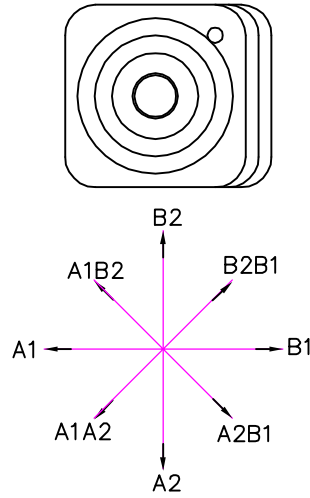


JOYSTICK "+"

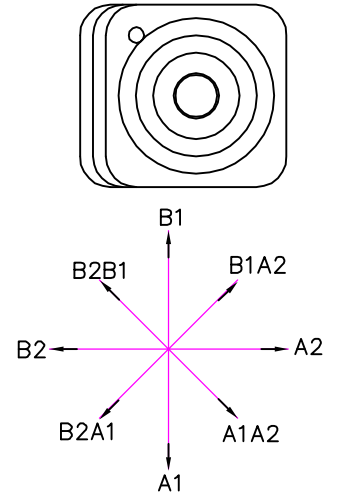
This control gives the possibility to operate, at the same time two spools with a "+" movement.



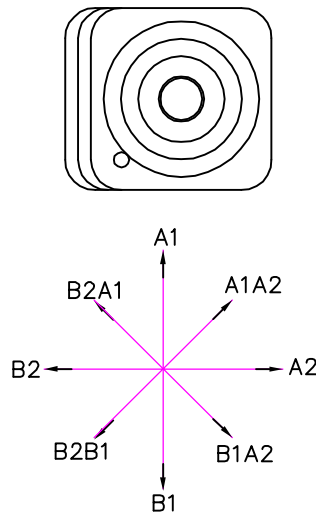
standard version 1



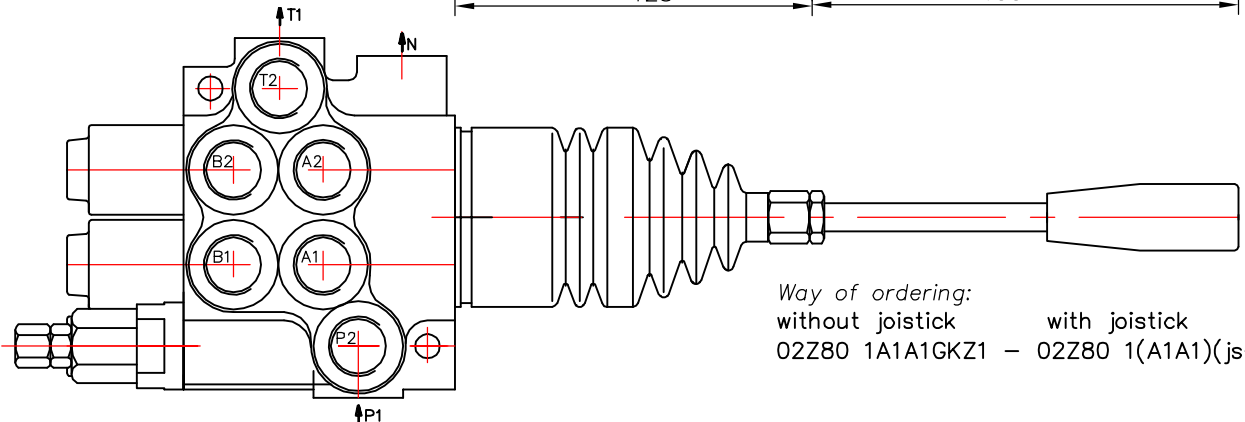
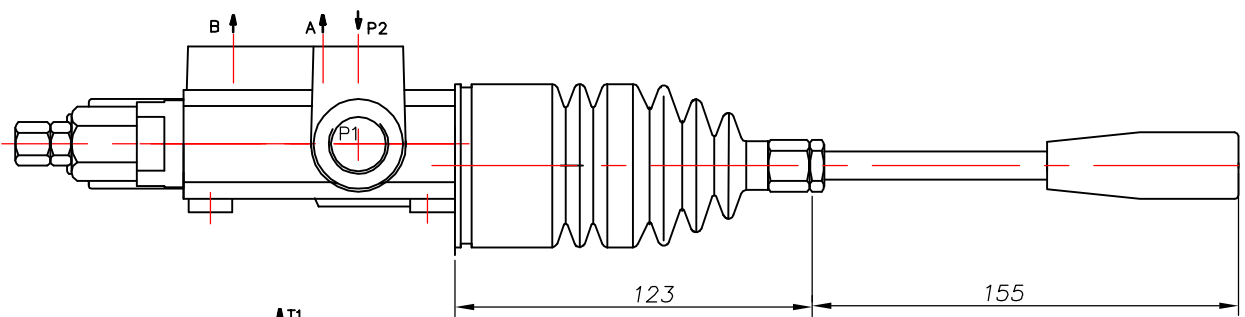
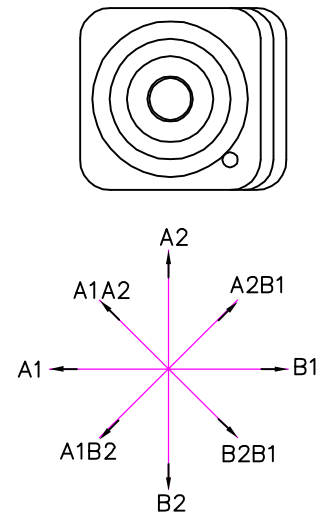
standard version 2



standard version 3

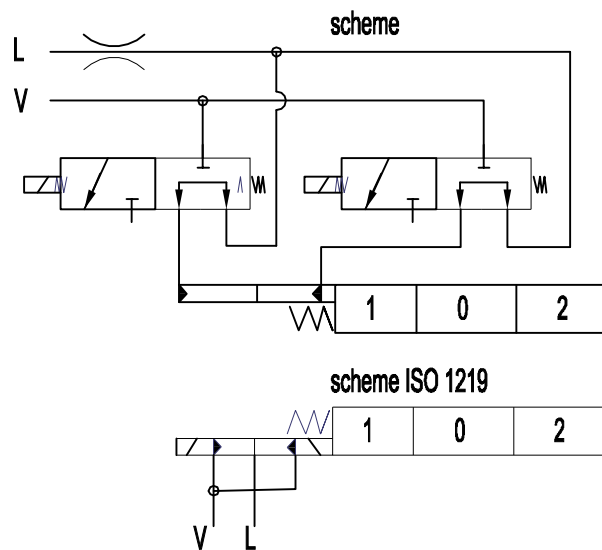
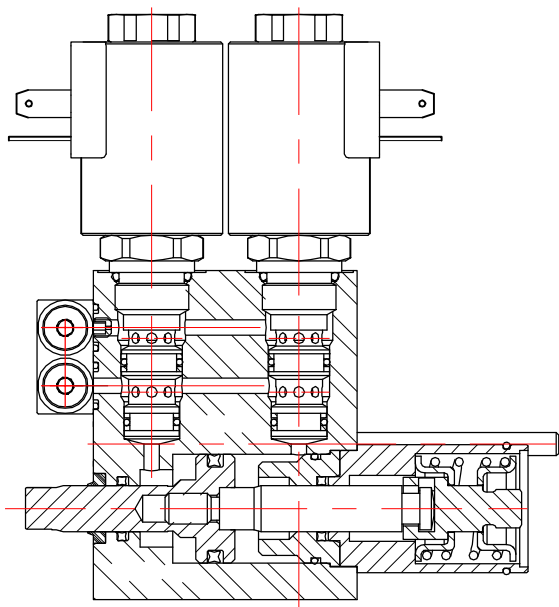


standard version 4



Way of ordering:  
 without joystick      with joystick  
 02Z80 1A1A1GKZ1 - 02Z80 1(A1A1)(js+3)G

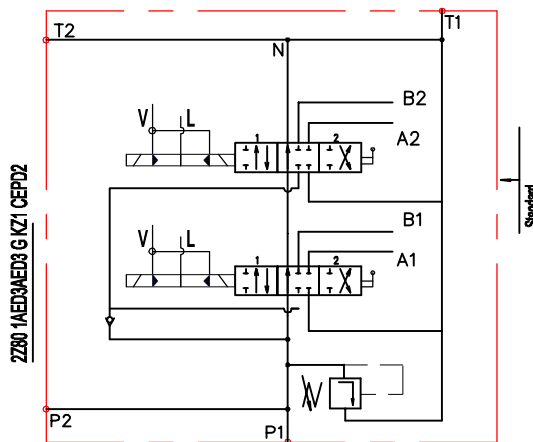
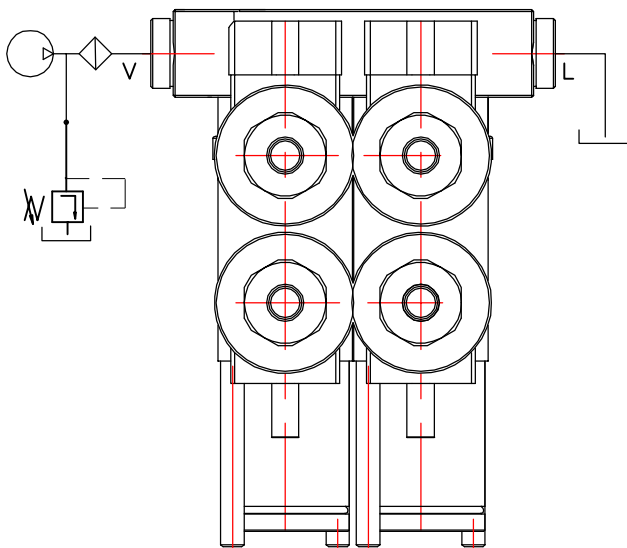
ED3 – electro-hydraulic control ON-OFF  
 Электрогидравлический контрол ON-OFF



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	±10%
Power rating	24W
Duty cycle	100 %

Collector kit for external pilot and drain – CEED...(1,2,3 ...)  
 Коллектор для внешнего питания управления и слив

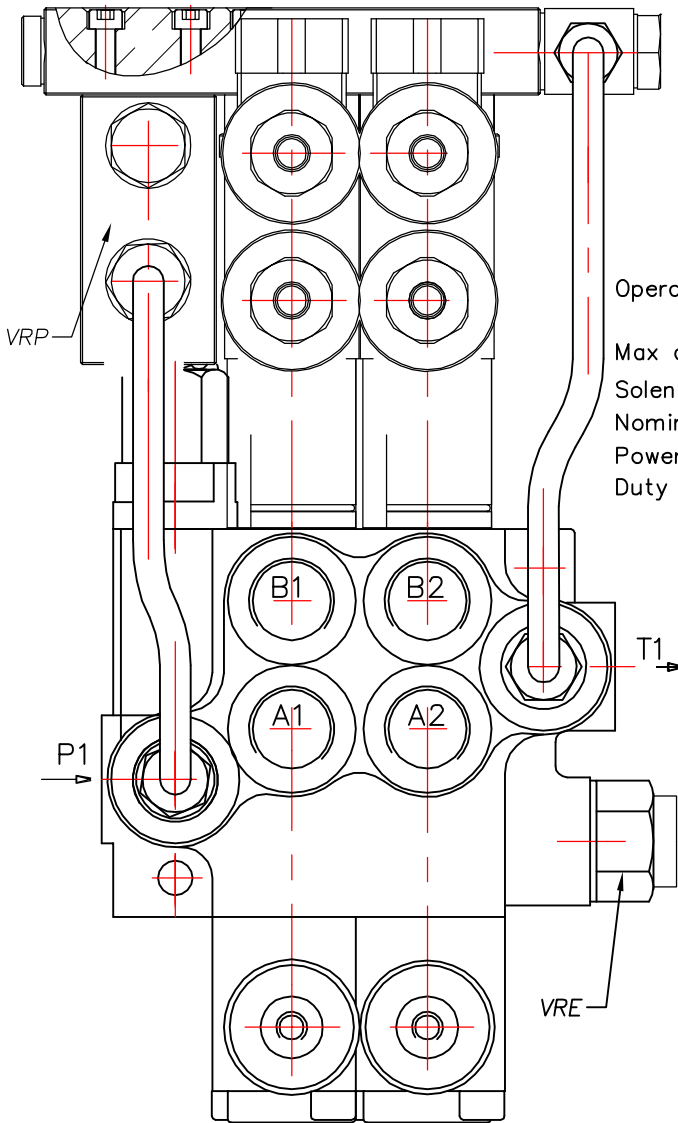


Ordering example  
 02Z80 1A1ED3A1ED3 G KZ1-CEED2-12VDC

Ordering codes (BSP threads)

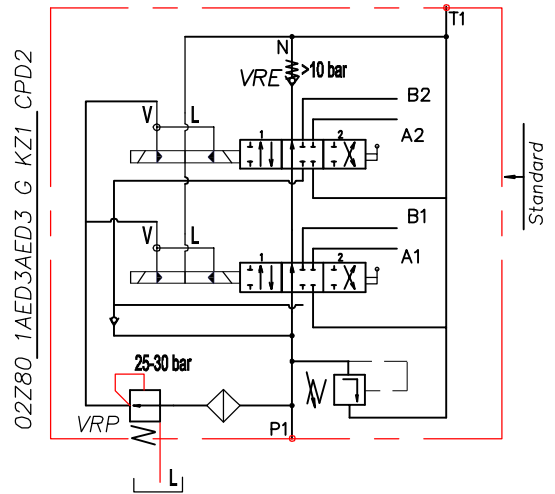
CEED1P80	Kit for 1 section
CEED2P80	Kit for 2 section
CEED3P80	Kit for 3 section
CEED480	Kit for 4 sektion
.....	

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



Order codes  
 3-way solenoid valve-LSV2-08-3C-NNN  
 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 %



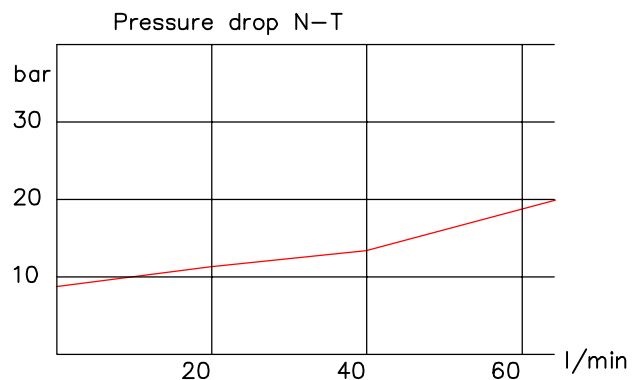
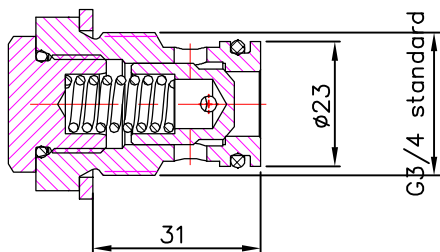
Ordering example

02Z80 VRP 1A1ED3A1ED3 G KZ1-CED2-VRE-12VDC

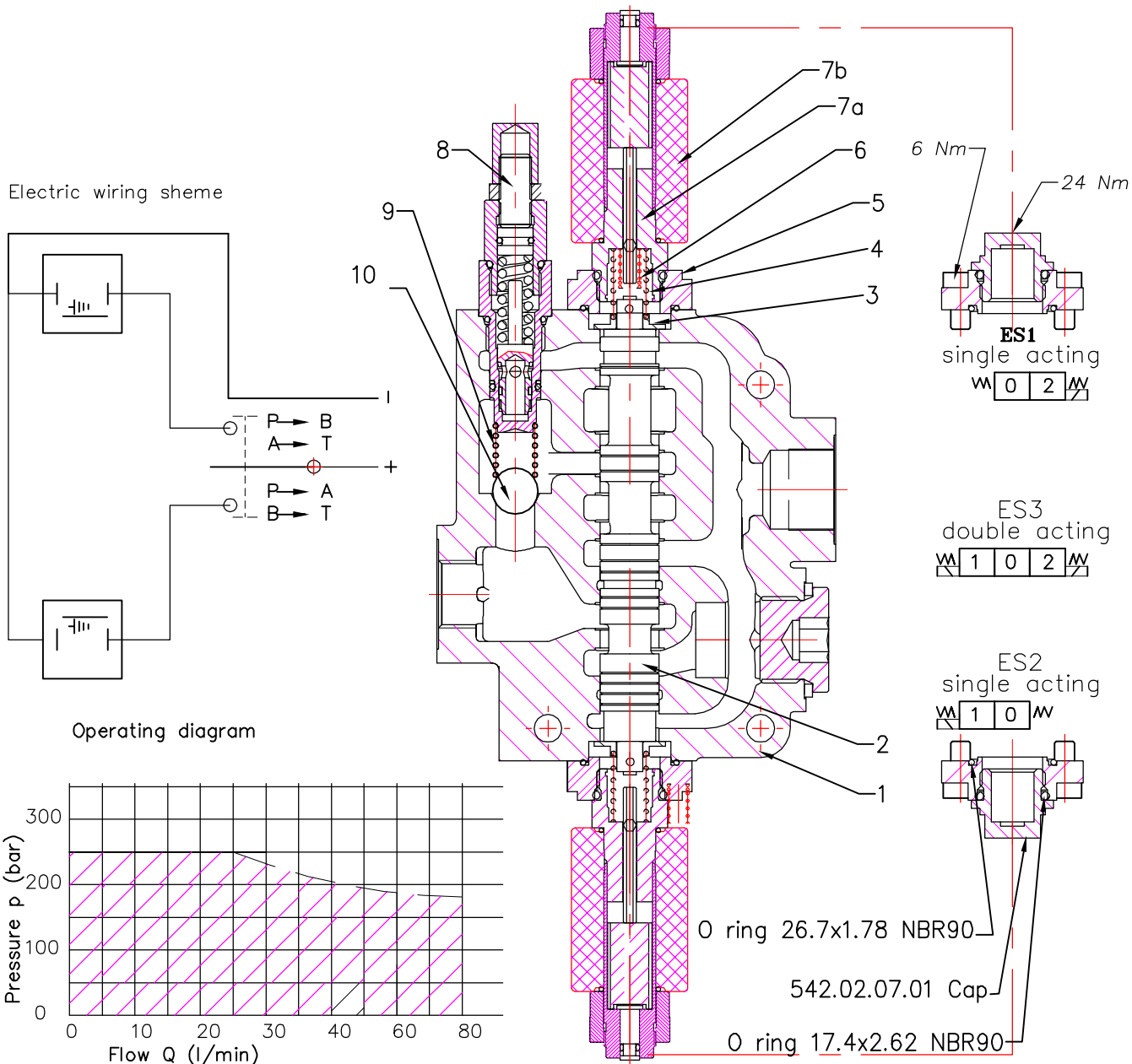
Collector kit – BSP threads  
 Ordering codes

CED1P80 Kit for 1 section  
 CED2P80 Kit for 2 section  
 CED3P80 Kit for 3 section  
 CED480 Kit for 4 sektion  
 . . . . .

Back pressure valve VRE-P80  
 Клапан подпора







Operating features  
 Технические примечания

Control

Internal leakage A(B) → T  
 (p=120 bar, Viscosity=32 mm<sup>2</sup>/s : max 40 ccm/min)  
 Fluid temperature - -20°C(short time) ... 80°C  
 Max. back pressure on outlet port T - 25 bar (360psi)

Coil

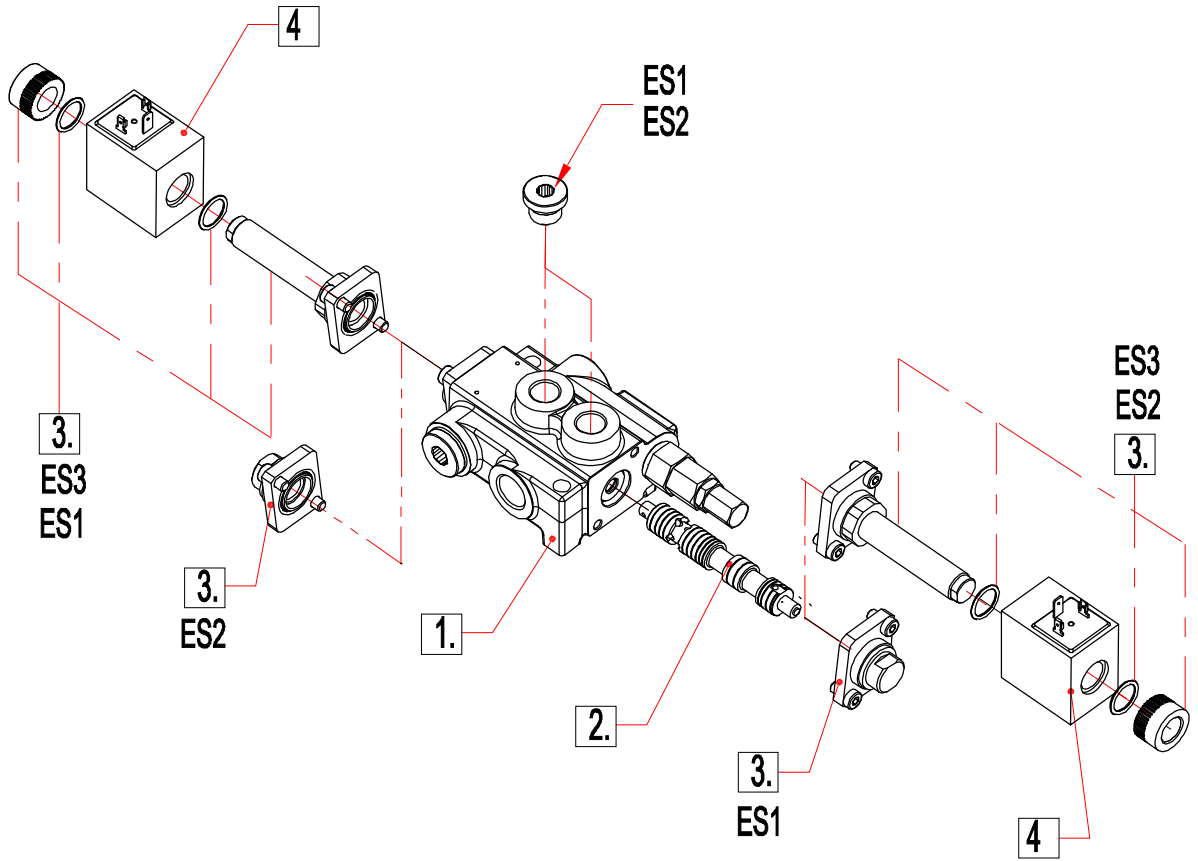
Nominal voltage tolerance . . . . . ±10%  
 Power rating . . . . . 37 W  
 Coil insulation . . . . . class H  
 Duty cycle . . . . . 100%  
 Connector ISO 4400  
 Emergency manual override

pos.	Part.No	Description	Quantity
10		Ball 14.28	1
9	123.00.47	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	511.02.02.00	Intermediate unit	2
4	542.02.00.04	Spring	2
3	511.02.00.02	Washer	2
2		Spool ...	1
1		Body ...	1

Solenoid direct control with spring return to neutral position.  
Needs special spools and special body Z80.

ORDERING EXAMPLE

Z80	A	ES3	12VDC	G
1	2	3	4	5



1.Body kit

Type	Description
01Z80	1 spool
02Z80	2 spool
03Z80	3 spool
04Z80	4 spool
05Z80	5 spool
06Z80	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
12VDC	(with connector ISO 4400) Nominal voltage 12VDC
24VDC	Nominal voltage 24VDC

5.Threads

G	P, A, B – G1/2; T – G3/4
---	--------------------------