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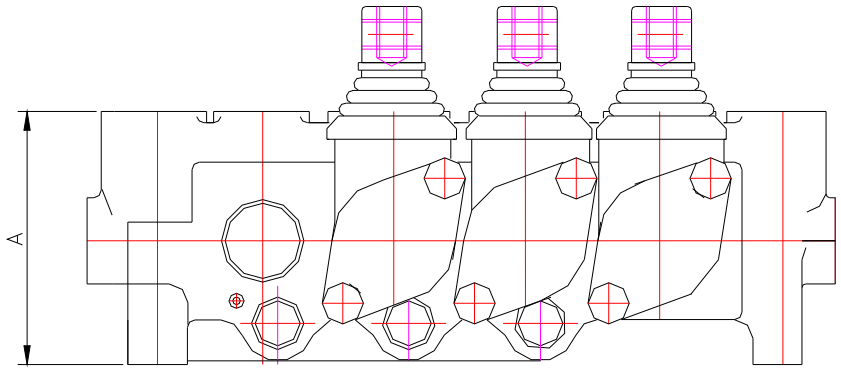
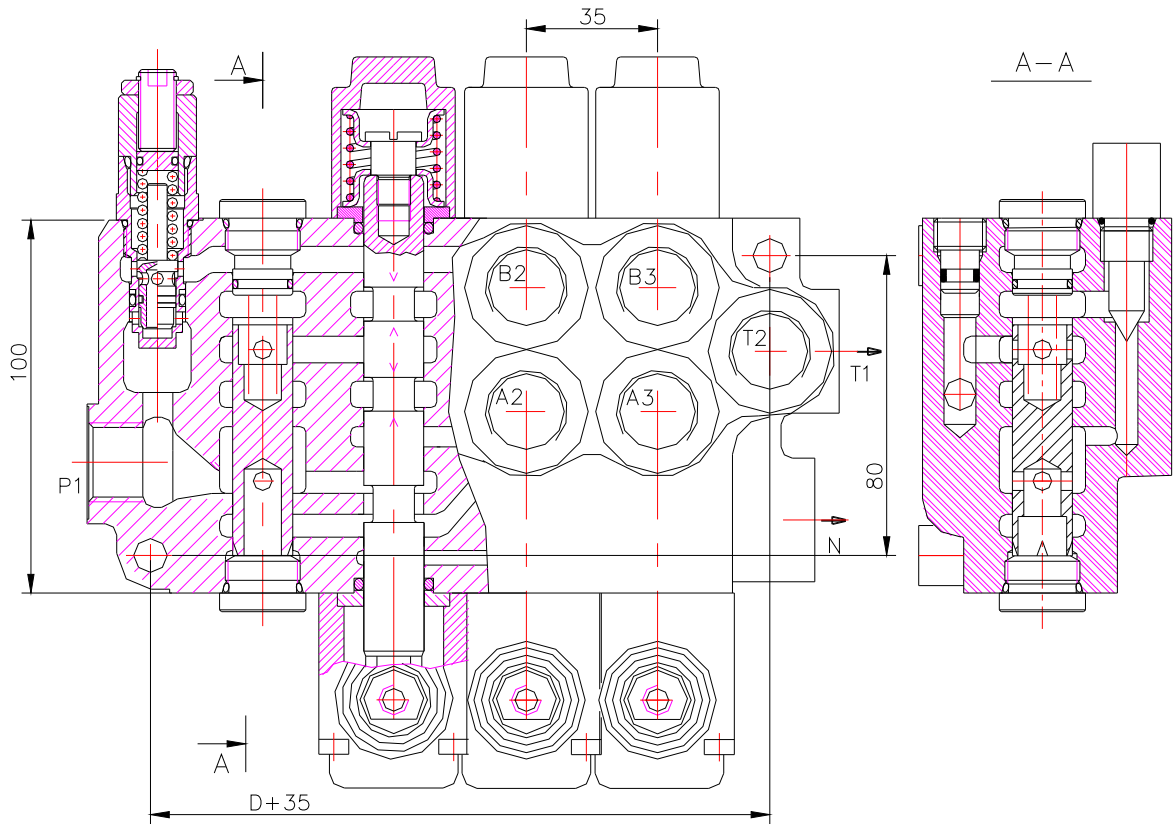
The monoblock valves PF derive from the P40 and differ from them by having at the Inlet 3-ways priority integrated and pressure compensated flow regulator.The first spool ruled by the priority flow (PF) and the second by the exceeding flow (EF).
The flow regulator only works when the first spool is actuated.When the first spool is no actuated the whole flow goes to second or third elements.

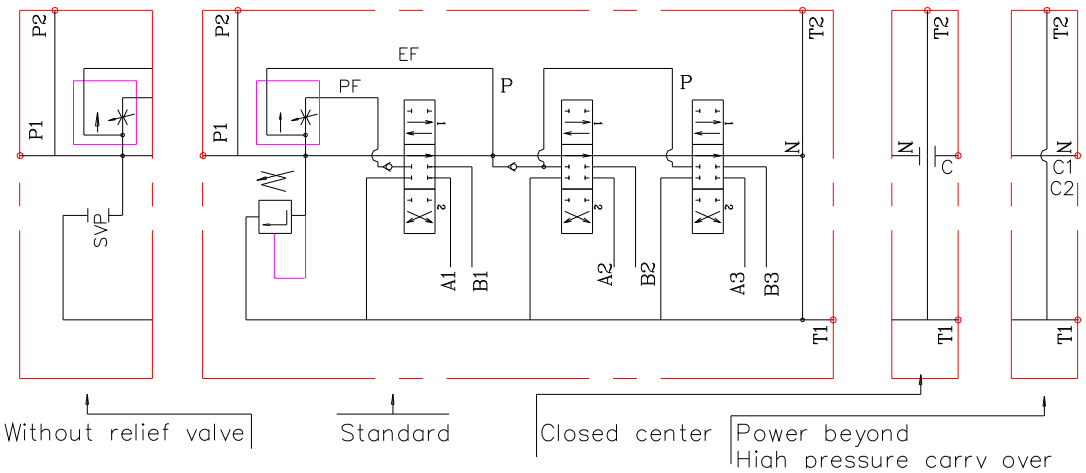
All other P40 technical data refers to PF40 valve too.

Priority flow: 2-25 l/min





3PF40 1A1A1A1 GKZ1



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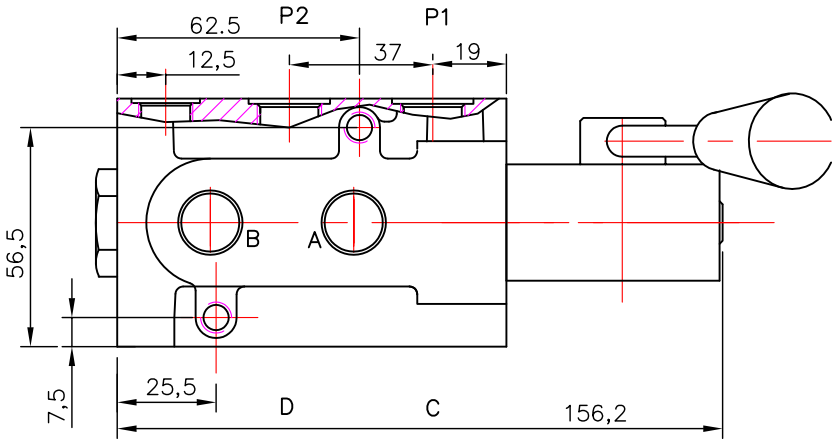
directional control valve DVS6–6/2L–H

All other DVS6–6/2L technical data refers to DVS6–6/2L–H valve too.

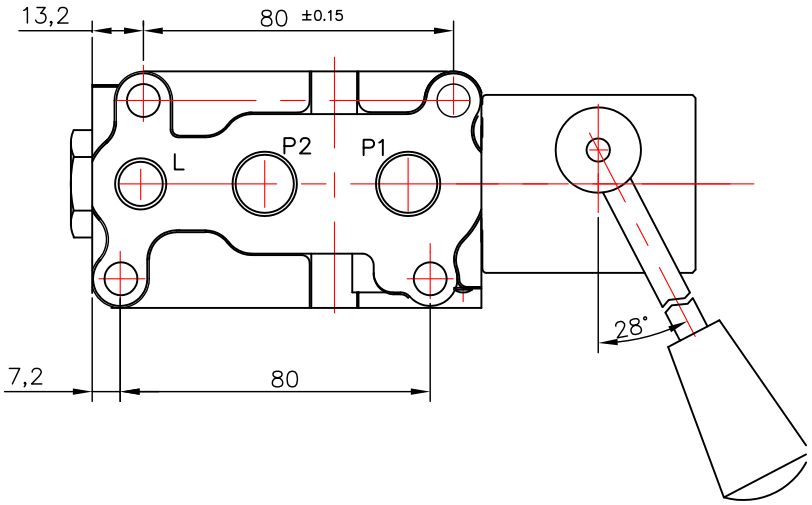
Directional valves DVS6–6/2–H are with Hand control system. They are used as link between two consu–mers and the basic directional valve, when we want to control both consumers alternately by means of one basic directional valve.



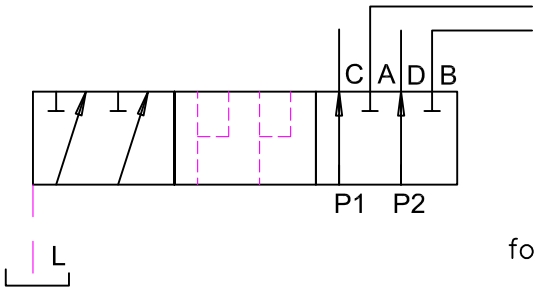
Ordering code

2DVS6–6/2–L–H–G38–

- Number of valves
- Drainage
- Hand control
- Threaded connections
- other



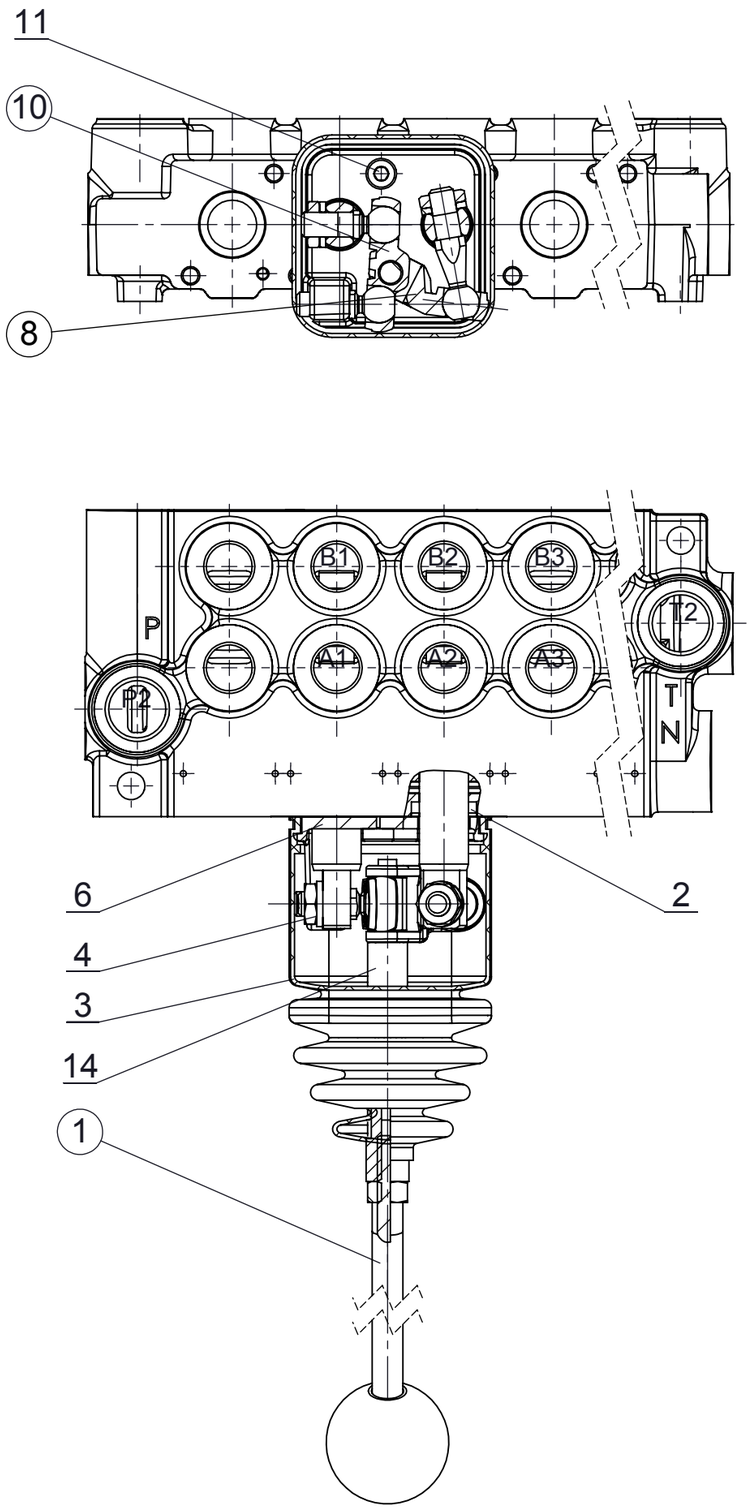
Supply voltage	12DC or 24DC
code	Threaded connections
G38	P1, P2, A, B, C, D – G3/8 ; L = G1/4
G12	P1, P2, A, B, C, D – G1/2 ; L = G1/4
G18	P1, P2, A, B, C, D – M18x1.5 ; L = M14x1.5
G22	P1, P2, A, B, C, D – M22x1.5 ; L = M14x1.5



for stacking 1–5 units

Flow rate		l/min	50	Hand control		
max P	with L	bar	315			
max P	without L	bar	210			
oil temperature		°C	–20+70			
viscosity		mm^2/s	15–380			
filtration	NAS1638		9			

436.00.00



V1
1 : 2

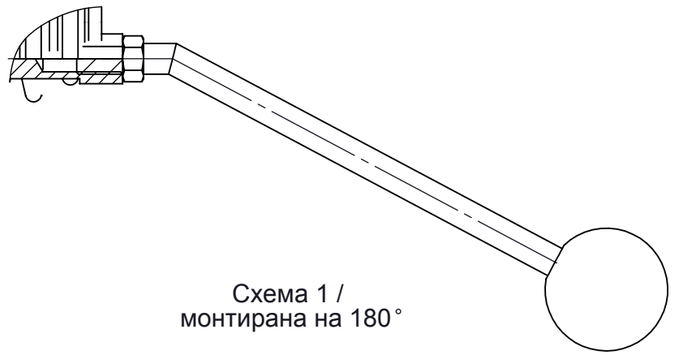


Схема 3

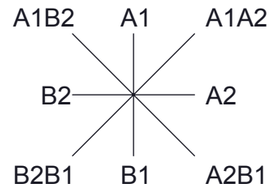


Схема 1 /
монтирана на 180°

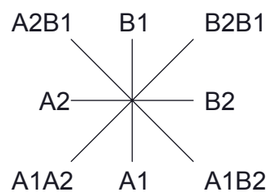


Схема 4

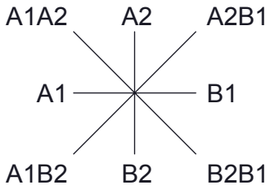
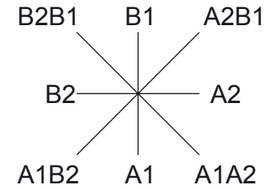


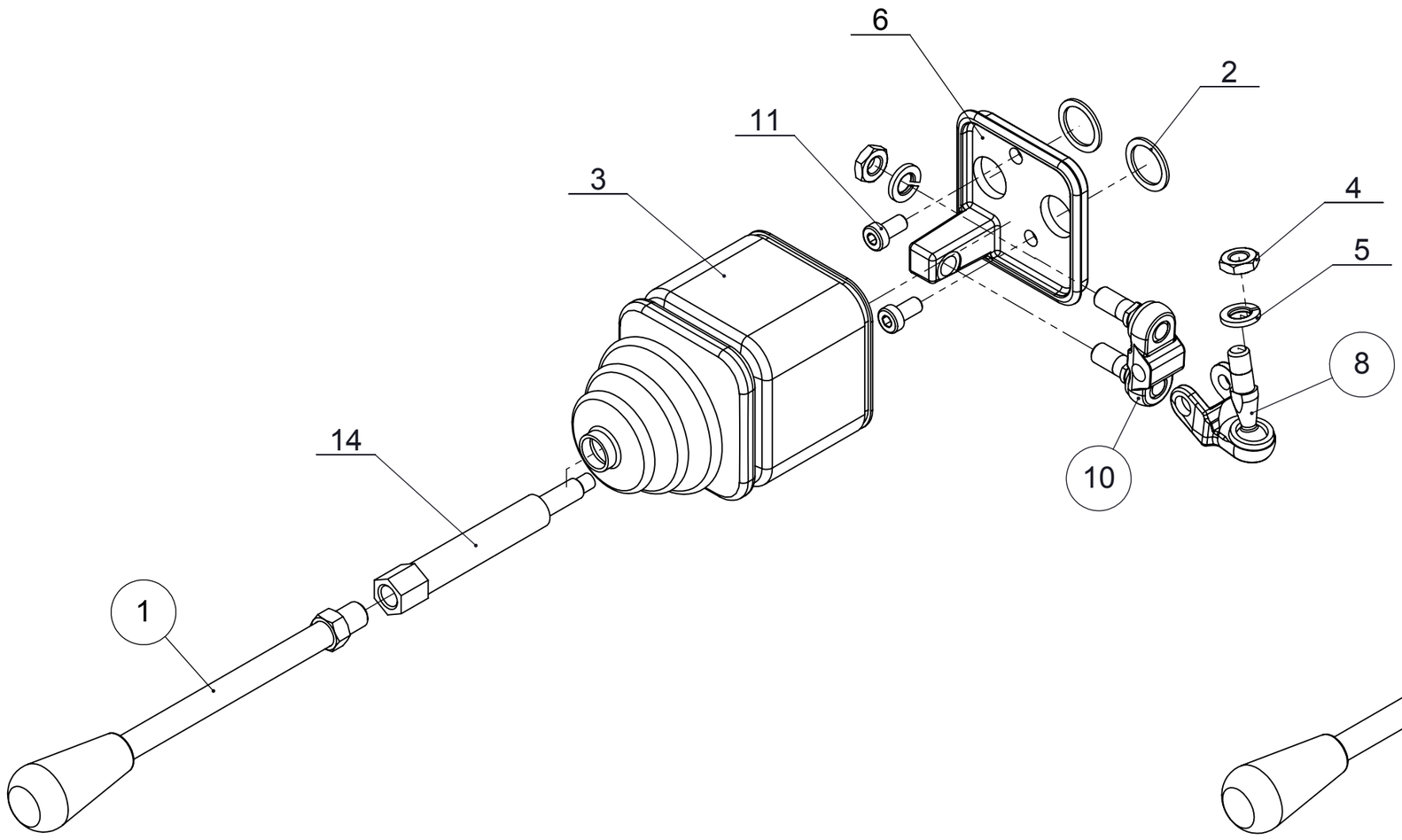
Схема 2 /
монтирана на 180°

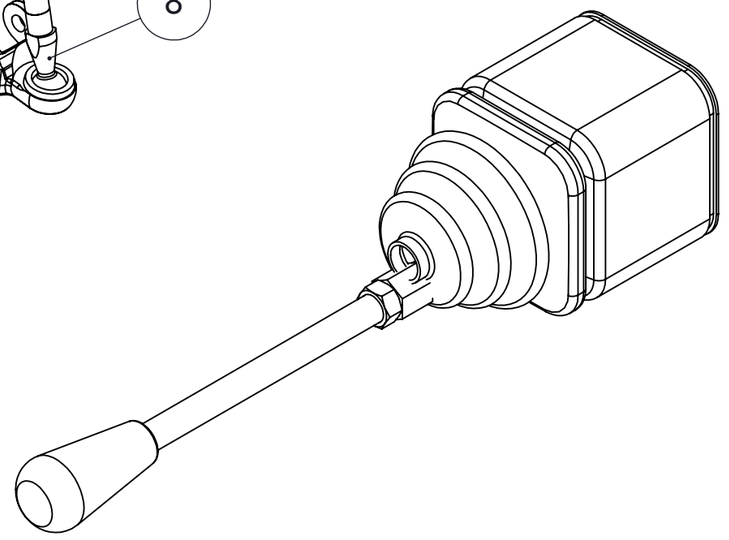


При монтаж на дет.поз.14 за резбата да се използва лепило , а по ∅6 и ∅8 антифрикционна смазка.

изм.	*бр.*	*фамилия*	*подп.*	*дата*	*заповед №*	*описание на изменението*	*проверил*	*подпис*
разработил		Димитров	*подп.*	06.10.2008	*лист sheet* 1/5	*материал material*	*стандарт*	
проверил		Тодоров	*подп.*		*мащаб scale* 1:2			
утвърдил						*наименование description* Джойстик за Р40 Универсален Yes		*маса/weight kg* 0.971
					Badestnost AD	*№* 436.00.00		

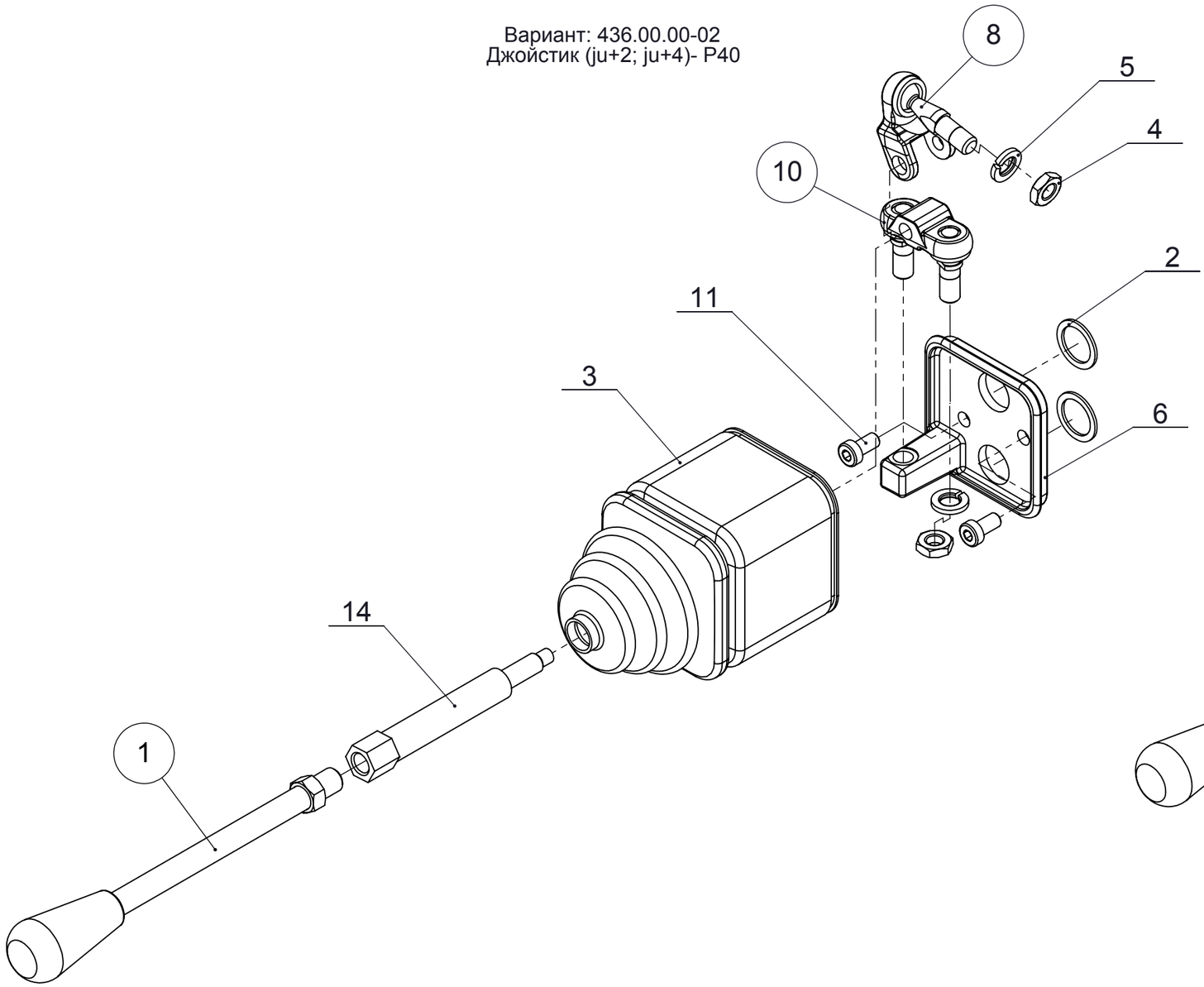
Вариант: 436.00.00-01
Джойстик(ju+3; ju+1)-P40

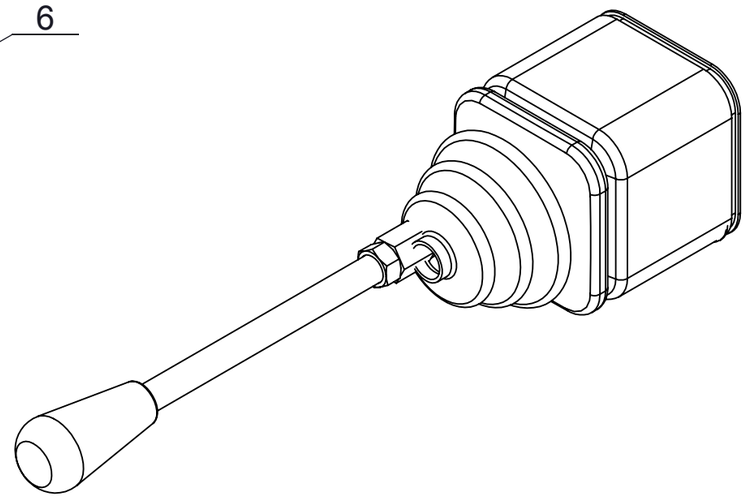




изм.	*бр.*	*фамилия*	*подп.*	*дата*	*заповед №*	*описание на изменението*	*проверил*	*подпис*
разработил		Димитров	*подп.*	06.10.2008	*лист sheet* 2/5	*материал material*	*стандарт*	
проверил		Тодоров	*подп.*		*мащаб scale* 1:2			
утвърдил						*наименование description* Джойстик за P40 Универсален Yes		*маса/weight kg* 0.971
					Badestnost AD	№ 436.00.00		

Вариант: 436.00.00-02
Джойстик (ju+2; ju+4)- P40

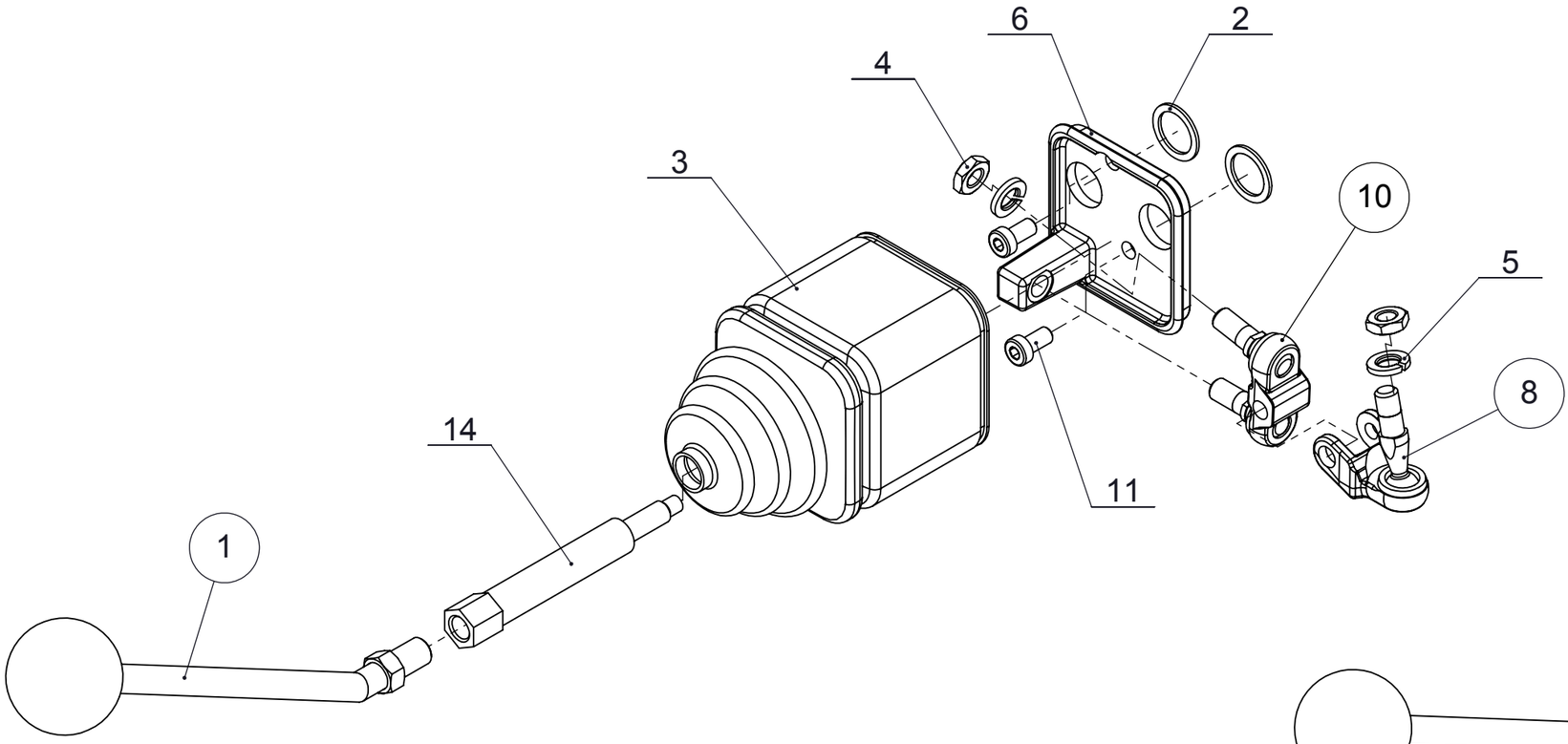


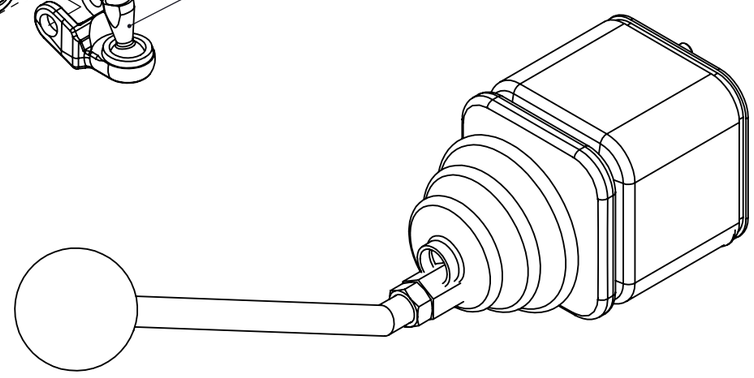


изм.	бр.	фамилия	подп.	дата	заповед №	описание на изменението	проверил	подпис
разработил		Димитров	подп.	06.10.2008	лист sheet 3/5	материал material	стандарт	
проверил		Тодоров	подп.		мащаб scale 1:2			
утвърдил						наименование description Джойстик за P40 Универсален Yes		маса/weight kg 0.971
					Badestnost AD	№ 436.00.00		

436.00.00

Вариант: 436.00.00-03
Джойстик (ju+1L) P40

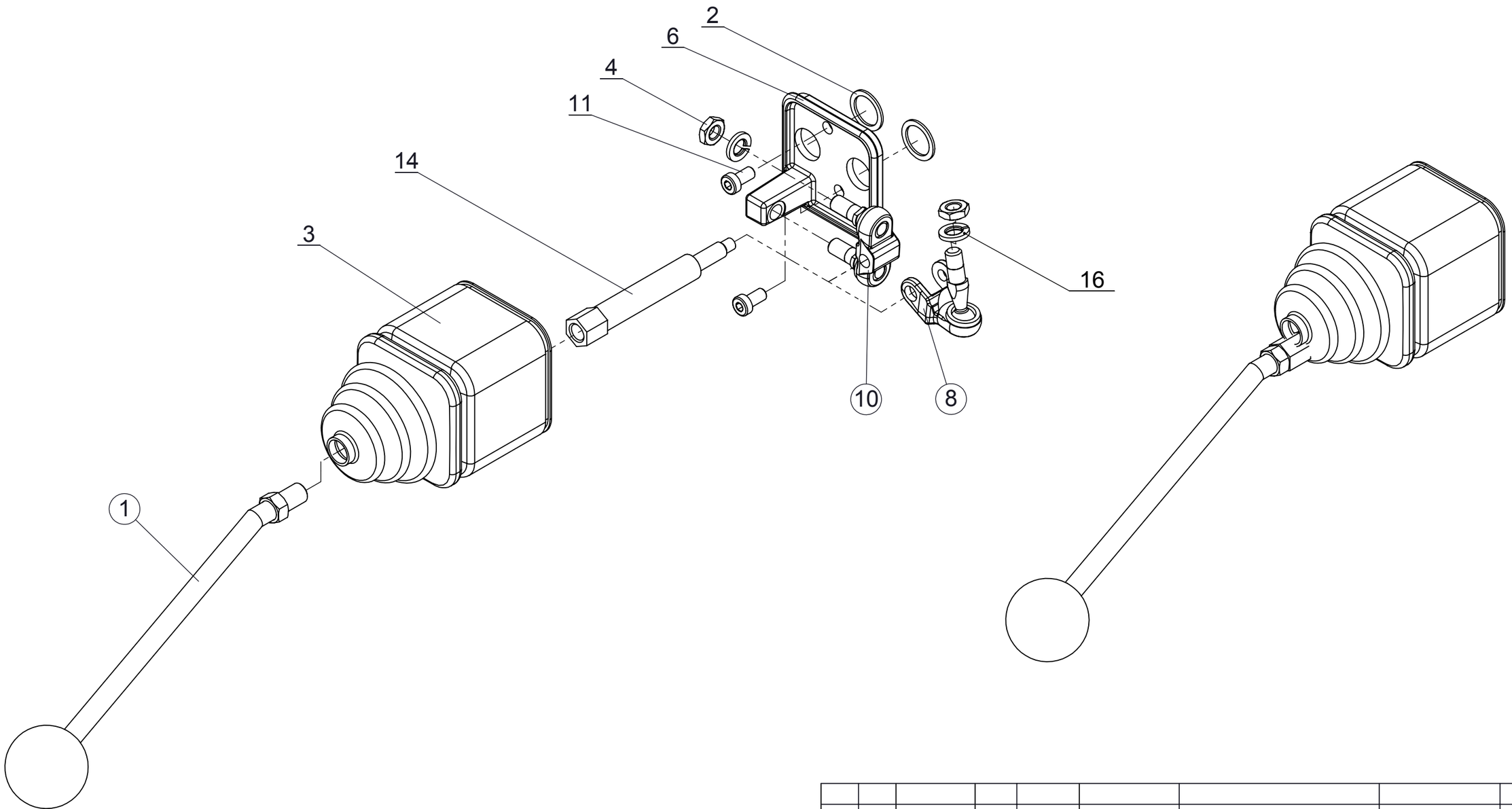




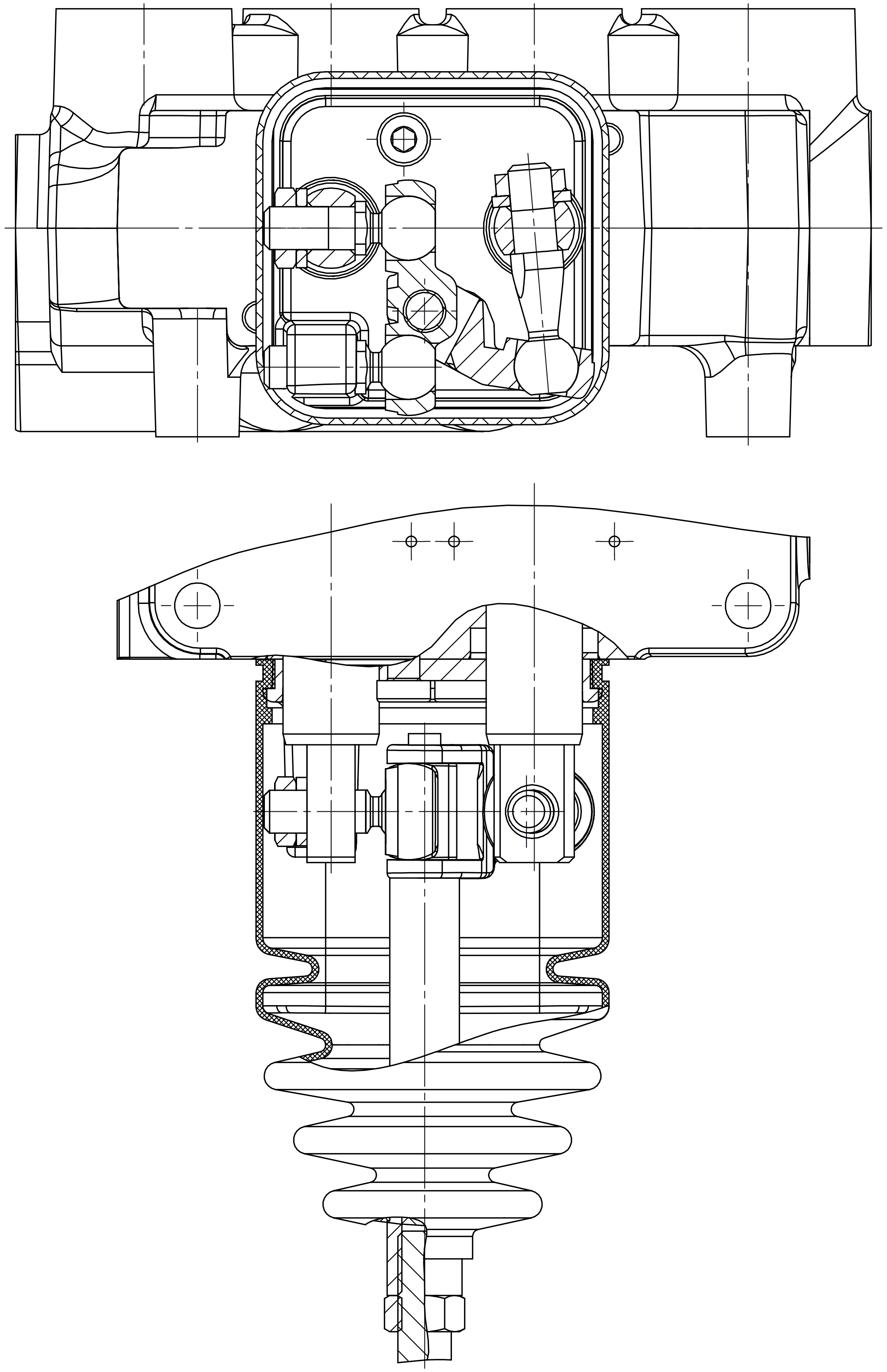
изм.	*бр.*	*фамилия*	*подп.*	*дата*	*заповед №*	*описание на изменението*	*проверил*	*подпис*
разработил		Димитров	*подп.*	06.10.2008	*лист sheet* 4/5	*материал material*	*стандарт*	
проверил		Тодоров	*подп.*		*мащаб scale* 1:2			
утвърдил						*наименование description* Джойстик за P40 Универсален Yes		*маса/weight kg* 0.971
					Badestnost AD	№ 436.00.00		

436.00.00

Вариант : 436.00.00-04
Джойстик за Р40



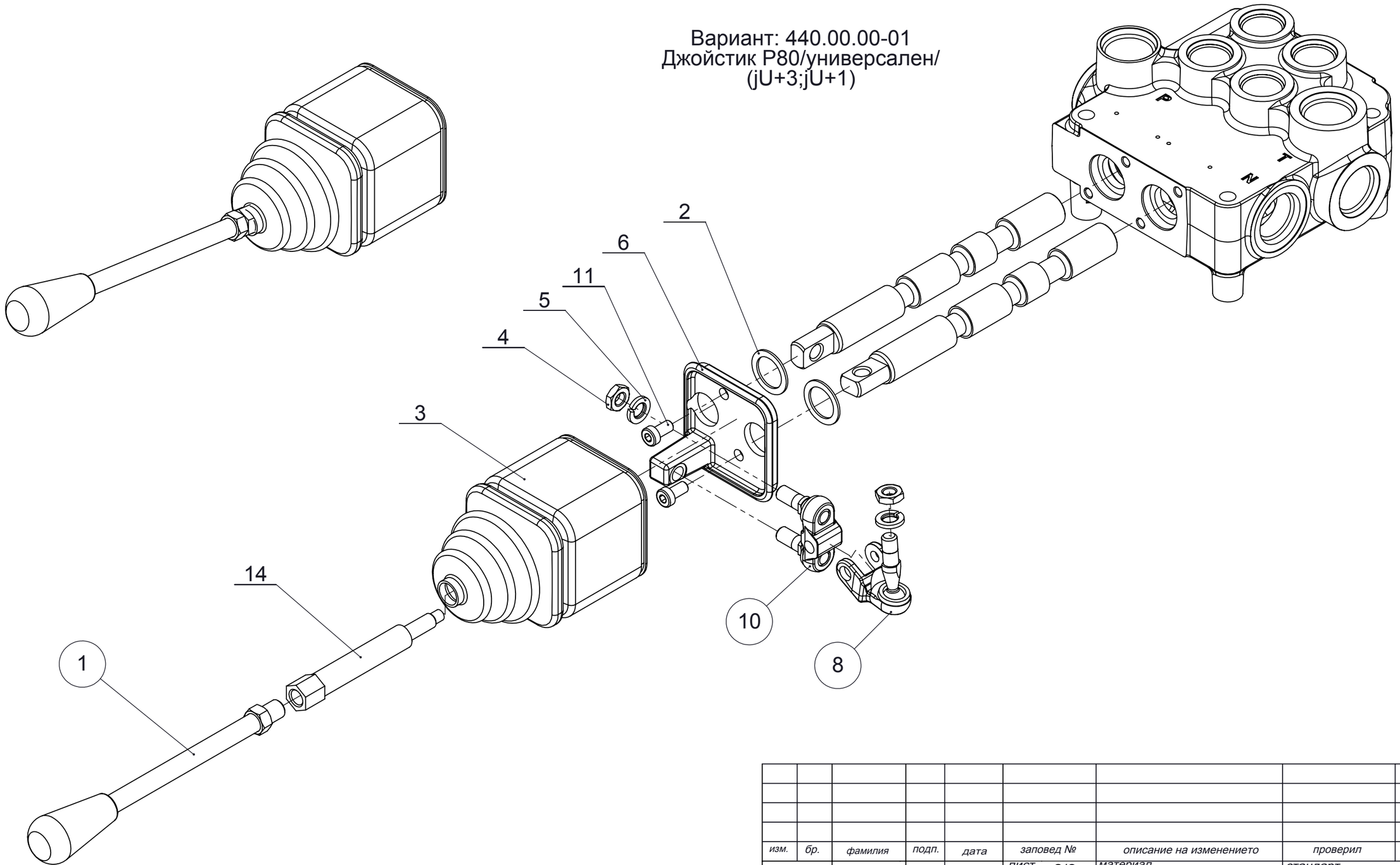
изм.	бр.	фамилия	подп.	дата	заповед №	описание на изменението	проверил	подпис
разработил		Димитров	подп.	06.10.2008	лист sheet 5/5	материал material	стандарт	
проверил		Тодоров	подп.		мащаб scale 1:2			
утвърдил						наименование description Джойстик за Р40 Универсален Yes		маса/weight kg 0.971
					Badestnost AD	№ 436.00.00		



1. При монтаж на детайл поз.14 за резбата да се използва лепило , а по ∅ 6 и по ∅ 8 антифрикционна смазка.

изм.	бр.	фамилия	подп.	дата	заповед №	описание на изменението	проверил	подпис
разработил		Стоев	подп.	06.10.2008	лист sheet 1/2	материал material	стандарт	
проверил		Тодоров	подп.		мащаб scale 1:1			
утвърдил						наименование description Джоистик за Р80 Унив. Yes	маса/weight kg 6.442	
					Badestnost AD	№ 440.00.00		

Вариант: 440.00.00-01
Джойстик P80/универсален/
(jU+3;jU+1)



изм.	*бр.*	*фамилия*	*подп.*	*дата*	*заповед №*	*описание на изменението*	*проверил*	*подпис*
разработил		Стоев	*подп.*	06.10.2008	*лист sheet* 2/2	*материал material*	*стандарт*	
проверил		Тодоров	*подп.*		*мащаб scale* 1:2			
утвърдил						*наименование description* Джоистик за P80 Унив. Yes		*маса/weight kg* 6.442
					Badestnost AD	*№* 440.00.00		

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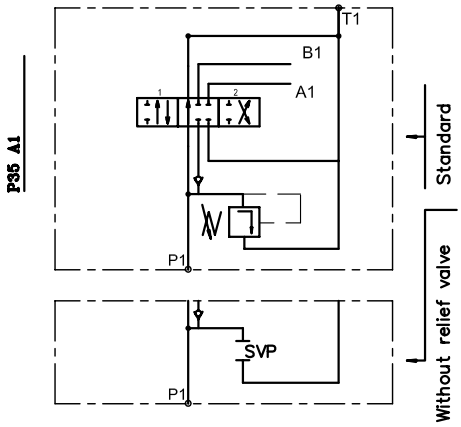
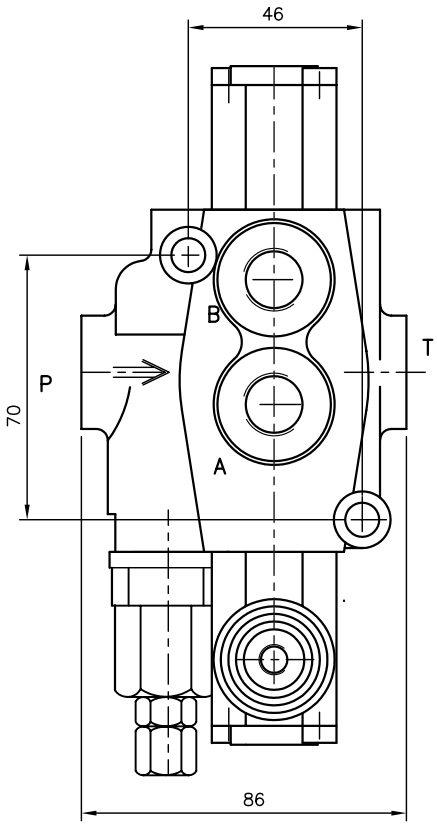
Type: P35

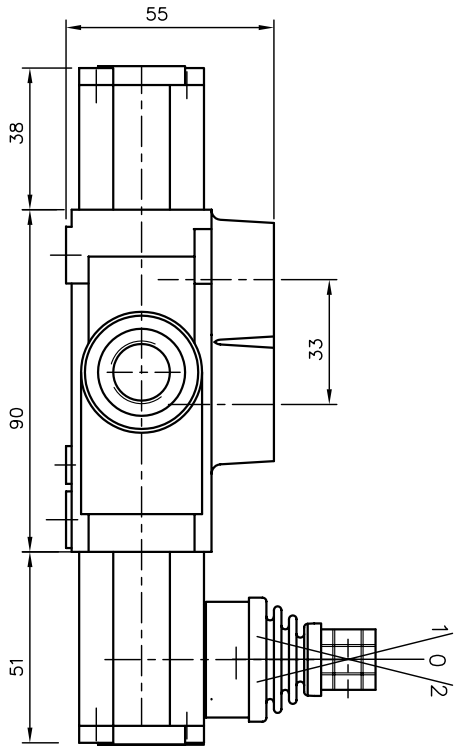
Description.
For starting, controling and stoping the working fluid between the generator of pressured flow, the consumers and the Tank.
Предназначен для изменения направления потока, ограничение давления рабочей жидкости в гидролиниях, разгрузки насоса в нейтральной позиции золотников.

Specifications: Основние показатели:

Max. operating pressure Давление max. bar	P=250 bar T=50 bar A, B=300 bar
Nominal flow Разход рабочей жидкости	35 l/min (See operating diagram)







P35	R	A	1	G	KZ1	T	E
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./ контрол золотника/фиксации и другие/	ports /treads/ резбовие отверстия	general operation feature вид ручного управления	with "Teton" выполнение ручного управления с "Тетон"	with electric switsh с електическим виключателем

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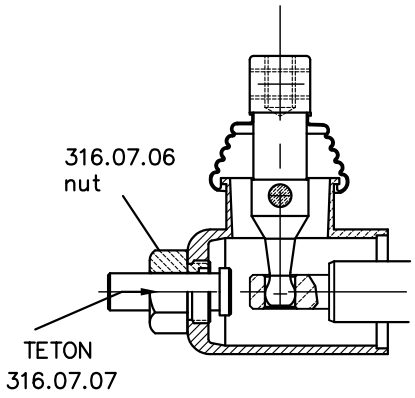
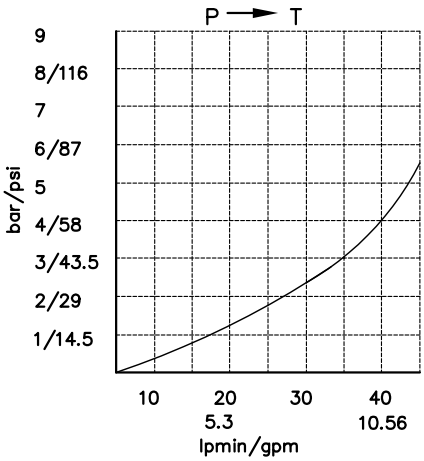
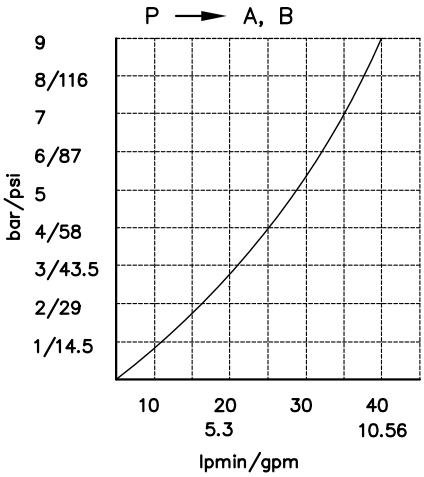
c lirectional control valve P35



P40 directional control valve





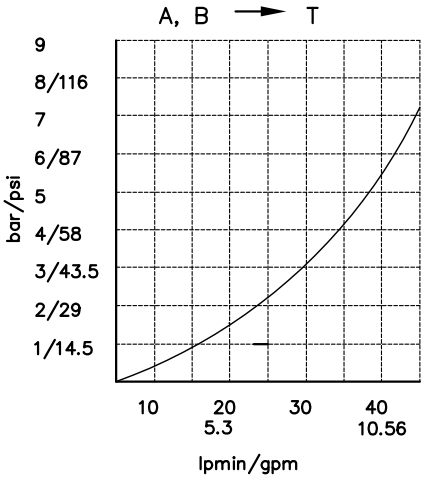


Table 5

code	spool type
A	
B	
C	
D	
E	
F	
M	
N	
O	
P	
Q	
R	

Table 6

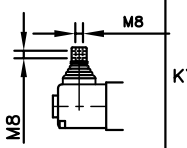
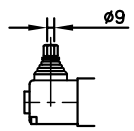
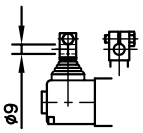
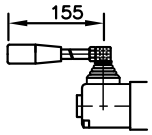
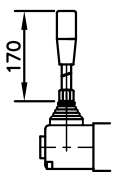
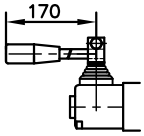
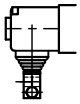
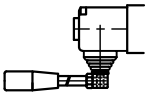
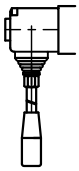
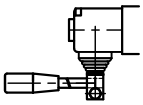
code	spool control
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Table 7

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

code	ports (treads) ; присоединительные отверстия		
	P	A ; B	T
M	M18x1.5	M18x1.5	M18x1.5
G	G3/8	G3/8	G3/8
S	3/4–16UNF	3/4–16UNF	3/4–16UNF

kind of hand control ; вид ручного управления

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 рукоятки управления				

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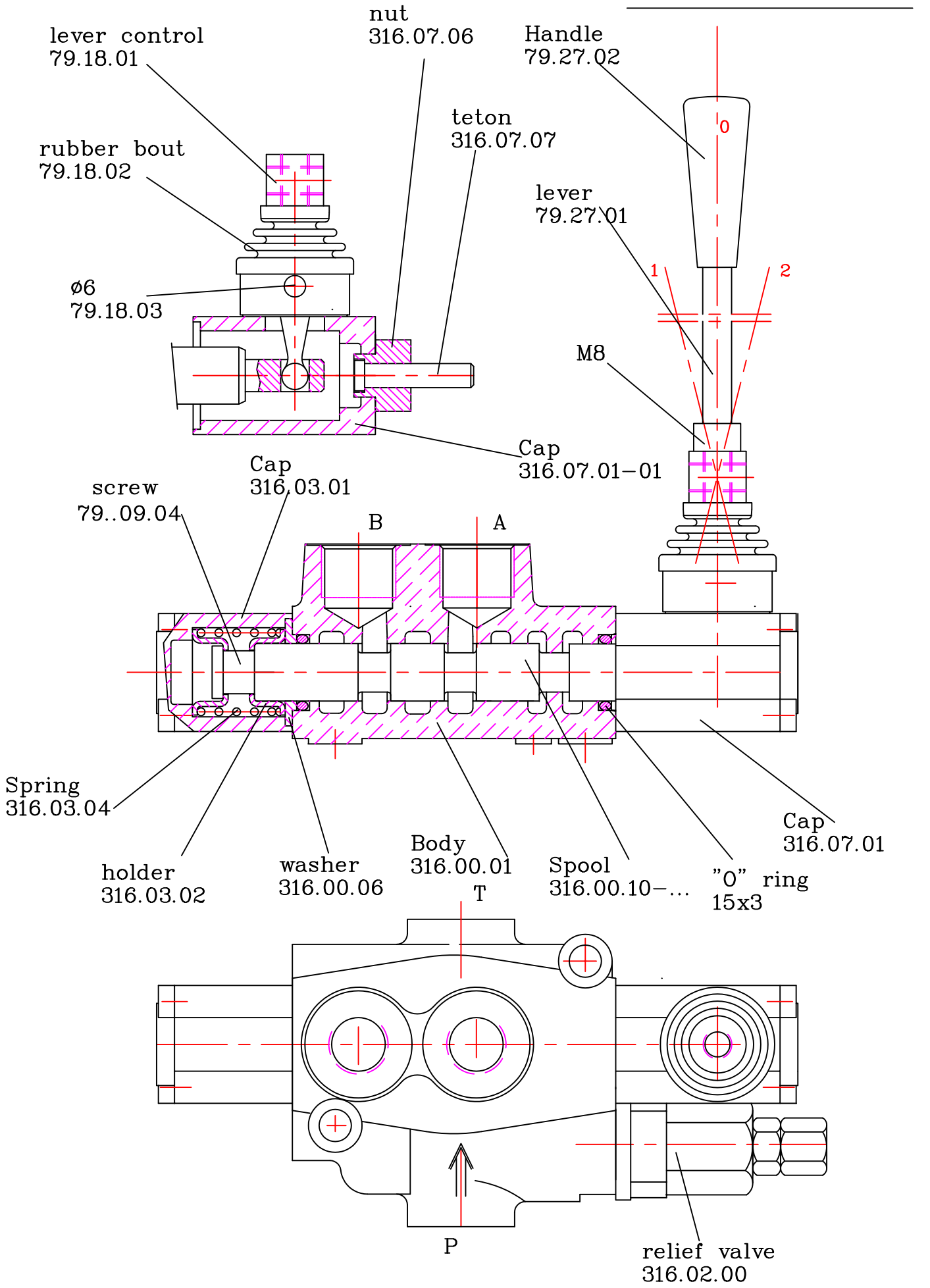
directional control valve P35



BADESTNOST AD 6200 Chirpan, Bulgaria, Tel: 00359 416 41 35, Fax: 00359 416 55 34
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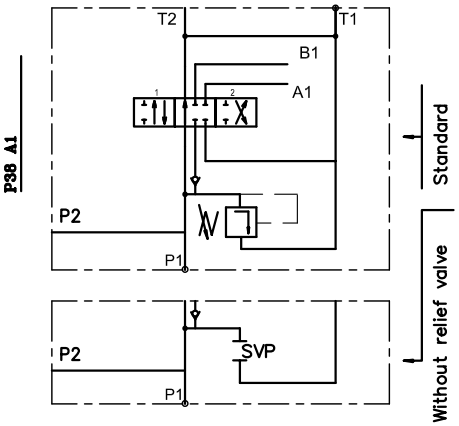
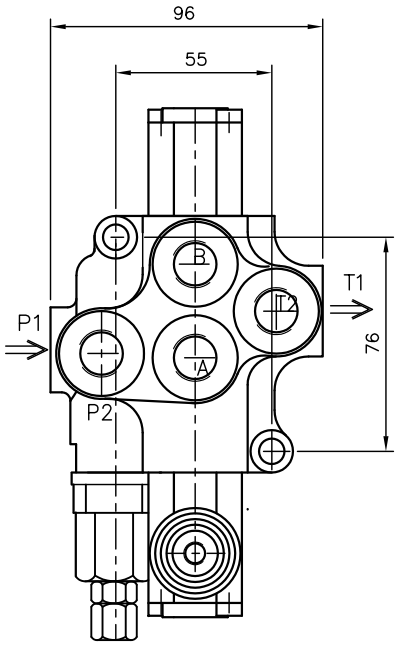
Type: P38

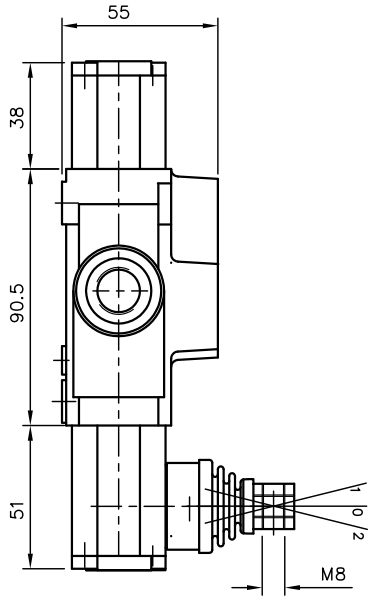
Description.
For starting, controling and stoping the working fluid between the generator of pressured flow, the consumers and the Tank.
Предназначен для изменения направления потока, ограничение давления рабочей жидкости в гидролиниях, разгрузки насоса в нейтральной позиции золотников.

Specifications: Основние показатели:

Max. operating pressure	P=250 bar
Давление max. bar	T=50 bar
	A, B=300 bar
Nominal flow	35 l/min
Разход рабочей жидкости	(See operating diagram)







P38 R A 1 G KZ1 T E

- 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./ контрол золотника/фиксации и другие/
- ports /treads/ резбовие отверстия
- general operation feature / вид ручного управления
- with "Teton" / выполнение ручного управления с "Темон"
- with electric switsh / с електическим виключателем

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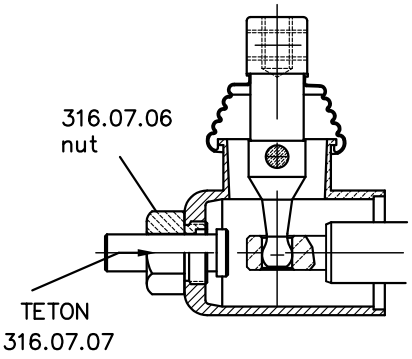
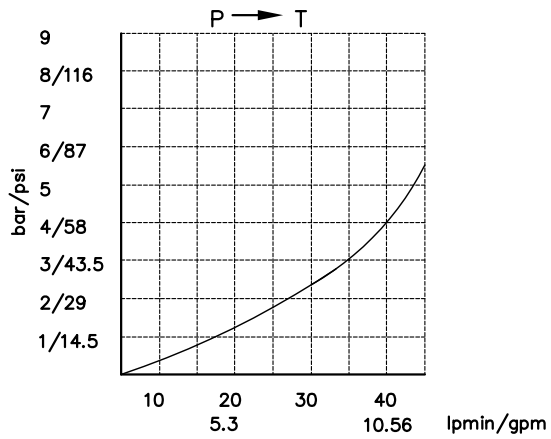
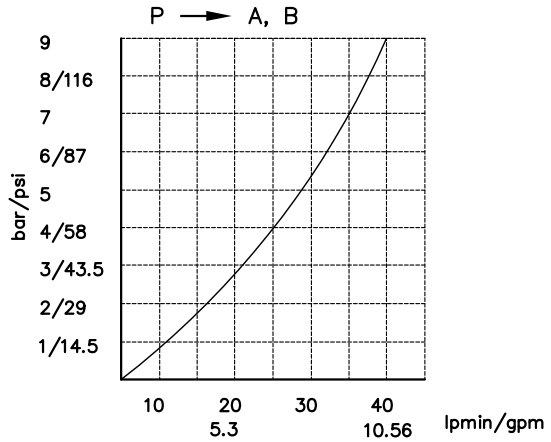
directional control valve P38



P40 directional control valve





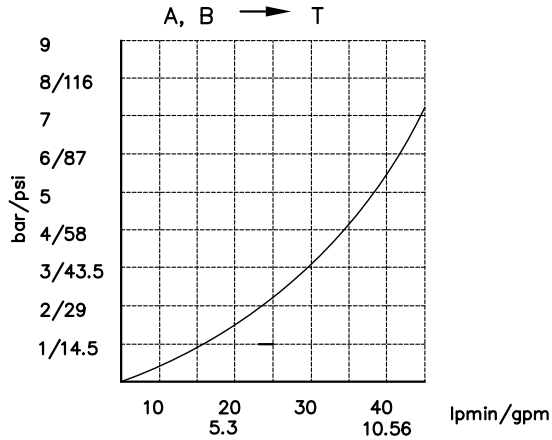


Table 5

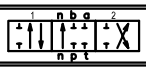
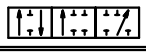
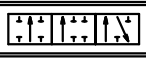
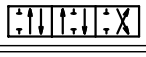
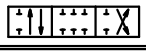
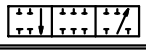
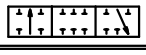
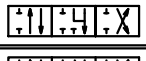
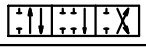
code	spool type
A	
B	
C	
D	
E	
F	
M	
N	
O	
P	
Q	
R	

Table 6

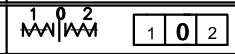
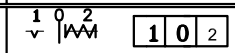
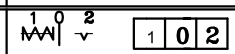
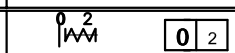
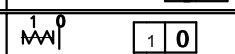
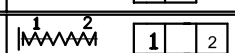
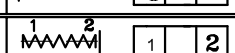
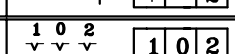
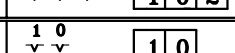
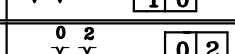
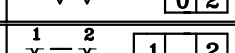
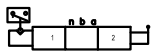
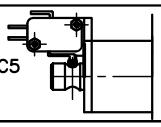
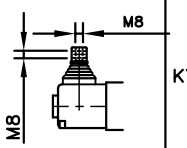
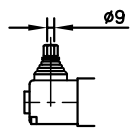
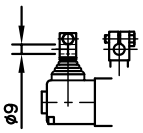
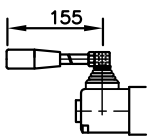
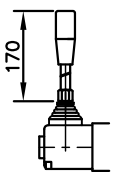
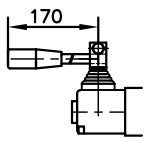
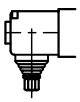
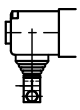
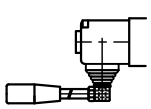
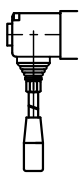
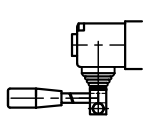
code	spool control
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Table 7

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

code	ports (treads) ; присоединительные отверстия		
	P	A ; B	T
M	M18x1.5	M18x1.5	M18x1.5
G	G3/8	G3/8	G3/8
S	3/4–16UNF	3/4–16UNF	3/4–16UNF

kind of hand control ; вид ръчного управления

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 рукоятки управления				

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

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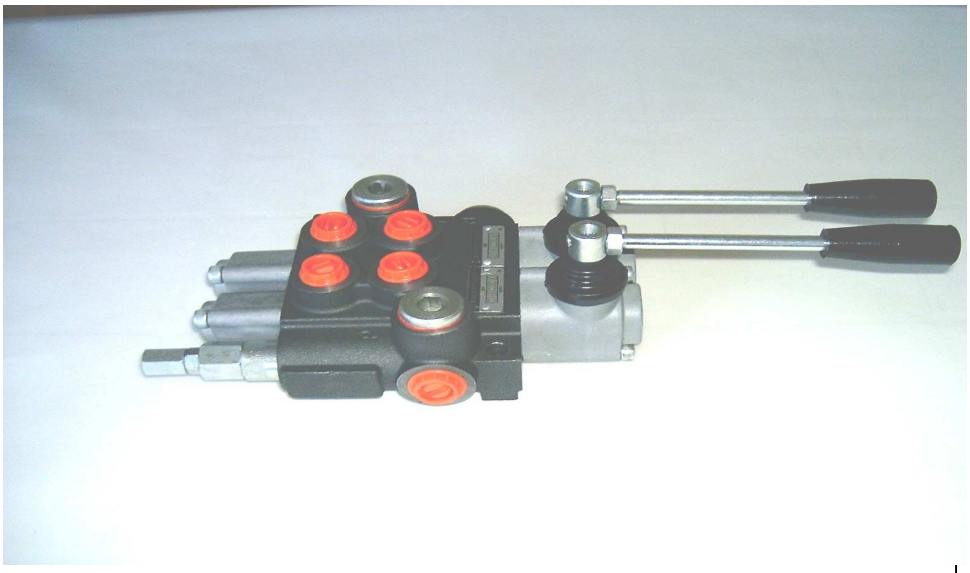
HYDRAULIC DIRECTIONAL CONTROL VALVES
РАСПРЕДЕЛИТЕЛИ ГИДРАВЛИЧЕСКИЕ

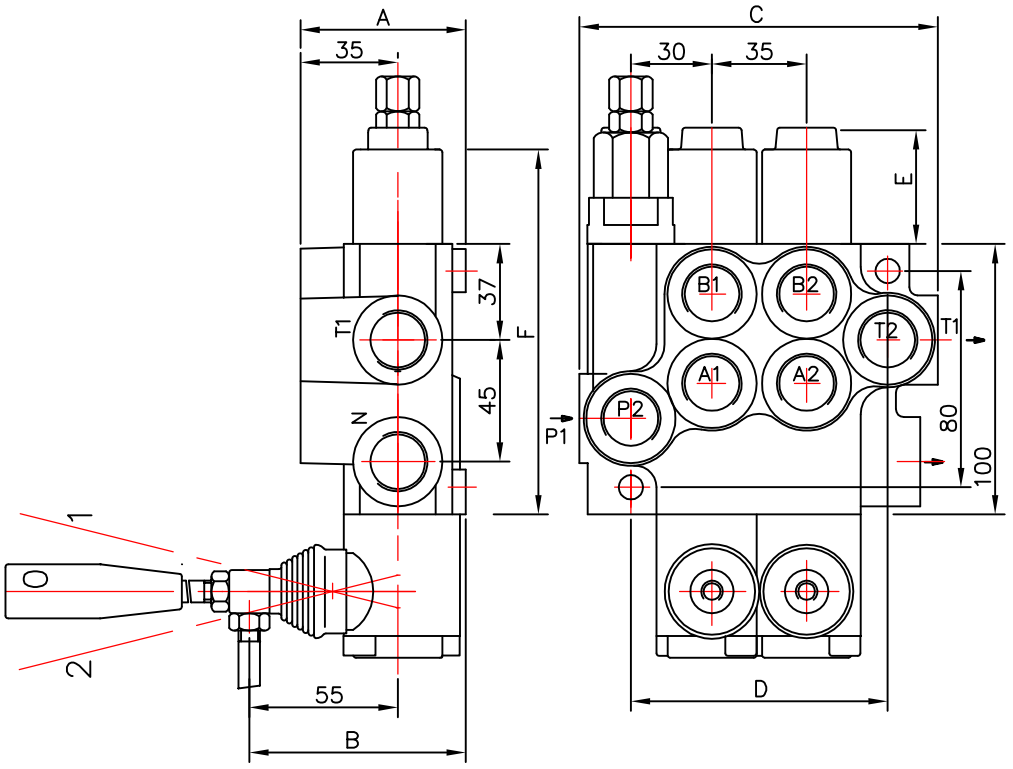


Description
Назначение и область применения
For starting, controlling and stopping the working fluid between the generator of pressured flow, the consumers and the Tank. Предназначен для изменения направления потока, ограничения давления рабочей жидкости в гидролиниях, разгрузки насоса в нейтральной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

Specifications
Основные показатели:

1. Valve monoblock Конструктивное выполнение	моноблок
2. Mounting Крепление	2 bolts M8
3. Pressure connections Присоединительные отверстия	internal thread внутренние резби
4. Ambient temperature Температура воздуха	-40C…+60C
5. Pressure medium Рабочая жидкость	mineral oil based hydraulic oil
6. Viskosity Кинематическая вязкость	12…800 mm²/s permissible range 20…100 mm²/s recommended range
7. Fluid temperature	-15C…+80C
8. Filtration	Oil contamination 10 to NAS1638
9. Max. operating pressure Давление max. bar	P = 250 bar T = 50 bar A, B = 300 bar
10. Internal (46 mm²/s) Leakage Внутренние потери (A, B – T)	5 cm³/min at 100 bar
11. Nominal flow Разход рабочей жидкости	40 l/min (see “operating” diagram)
12. Spool stroke Ход золотника	±6 mm
13. Actuating force Усилие на движения золотника	< 200 N in spool axis direction

Left hand configuration – standart



Right hand configuration

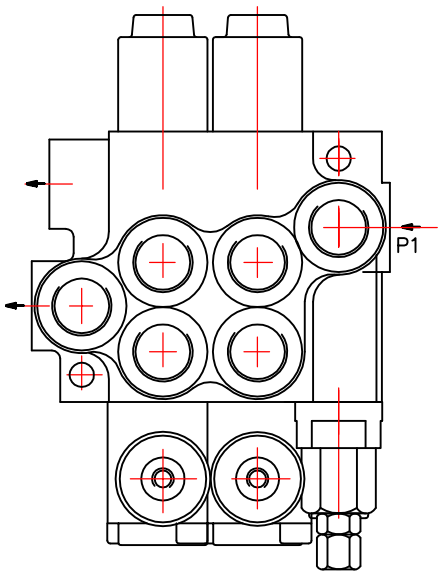


Table 1

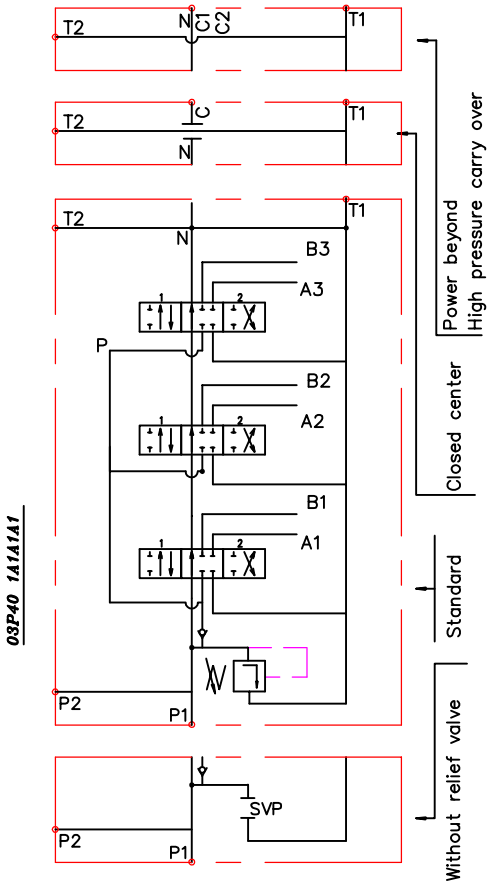
	A	B	C	D	P1	P2	T1	T2
P40	60	80	85	60	+	–	+	–
02P40	60	80	129	97	+	+	+	+
03P40	60	80	164	132	+	+	+	+
04P40	60	80	199	167	+	+	+	+
05P40	60	80	234	202	+	+	+	+
06P40	60	80	269	237	+	+	+	+
07P40	60	80	304	272	+	+	+	+
2P40	60	80	129	97	+	+	+	+
3P40	60	80	164	132	+	+	+	+
4P40	60	80	199	167	+	+	+	+

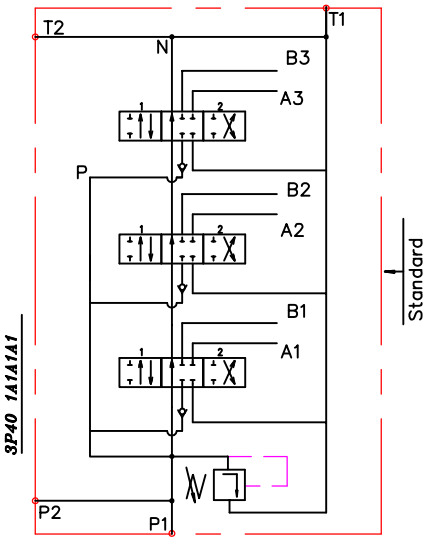
Table 2

spool control фиксации золотника	E	F
1; 4; 5; 6; 7; 8; 9; 10; 11;	40	193
2; 3;	72	225
16	+	+

0	2	P40	R	1	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	way of distribution/parallel or .../ способ распределения потока	first spool distribution type характеристика первого золотника	spool control/detend and ets./ контрол золотника/фиксации и другие/	second spool distribution type вид второго золотника	spool control/detend and estr./ контрол золотника/фиксации и другие/	ports /treads/ резбовые отверстия	general operation feature вид ручного управления	with "teton" исполнение ручного управления с "метон"	operation feature /pneumatic, .../ другое управление	with electric switsh с елекмическим виключателем	high pressure carry over продолжител потока високого давления	connection ports in use присоединительные отверстия

directional control valve P40





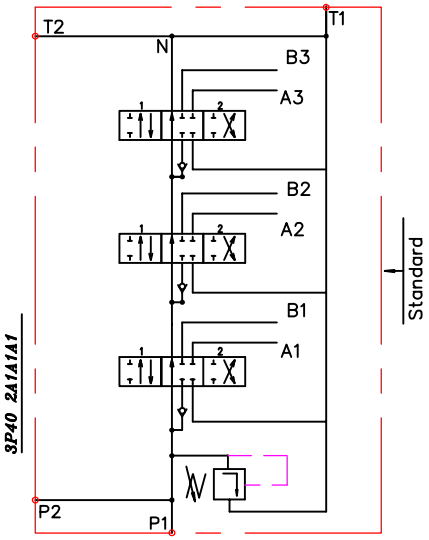


Table 3

code	Number of spools
	1
02, 2	2
03, 3	3

ets.

Table 4

code	way of distribution ; распределение потока
1	parallel ; паралельное
2	tandem(series parallel) ; серийно–паралельное

Table 5

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

* молько при вход слева (dy8)
only for left hand configuration

** L	

** молько при вход справо (dy8)
only for right hand configuration

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

* молько при вход слева
only for left hand configuration

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

** молько при вход справо
only for right hand configuration

Table 7

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

Table 8

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

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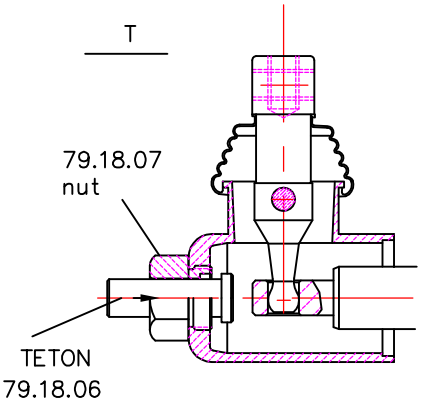
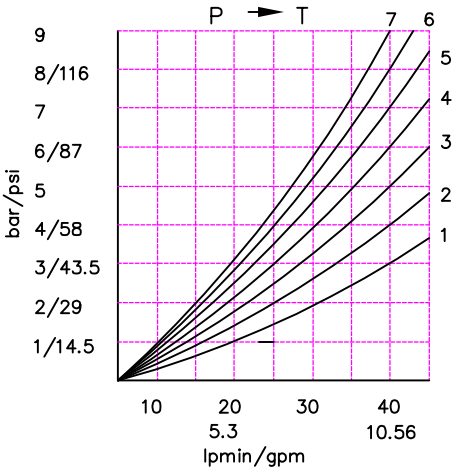
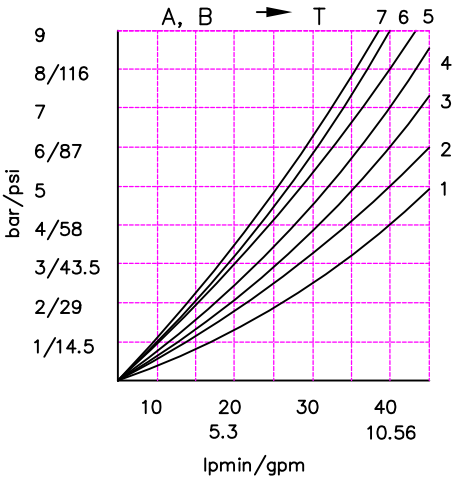
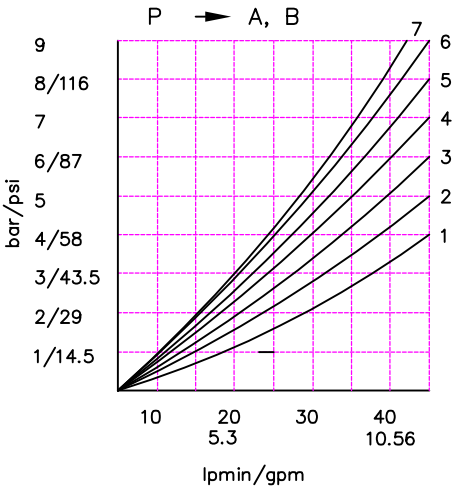


P40 directional control valve







P40 Table 9

code ports (treads) ; присоединителни отверстия

	P	A ; B	T	N
M	M22x1.5	M18x1.5	M22x1.5	M22x1.5
G	G1/2	G3/8	G1/2	G1/2
G1/2	G1/2	G1/2 on request	G1/2	G1/2
S	7/8–14UNF	3/4–16UNF	7/8–14UNF	7/8–14UNF

kind of hand control ; вид ръчного управления Table 10

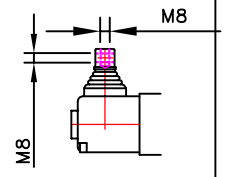
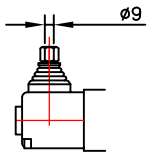
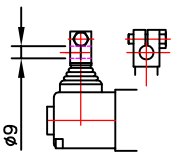
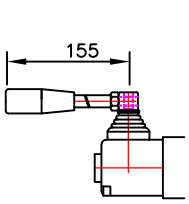
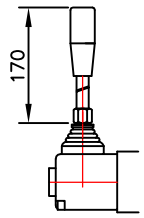
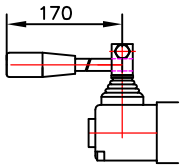
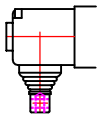
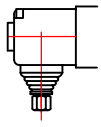
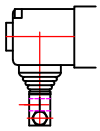
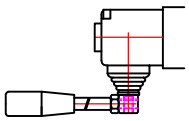
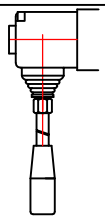
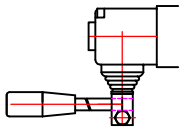
code	ескиз feature	code	ескиз feature	code	ескиз feature
KZ		KY		KI	
KZ1		KY1		KI1	
KZ0		KY0		KI0	
KZ01		KY01		KI01	
_	without hand control ; без лостова система за управление				

Table 11

code	вид продължение на дебита	
C	отвор "N" затворен closed center	
C1	отвор "N" продължава за следващ консуматор part for power beyond sleeve(carry over)	 ø14 mm M22x1.5
C2	отвор "N" продължава за следващ консуматор part for power beyond sleeve(carry over)	 G 1/2 M22x1.5
_	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 ; присоединителни отверстия
11	P1 ; T1
12	P1 ; T2
21	P2 ; T1
22	P2 ; T2

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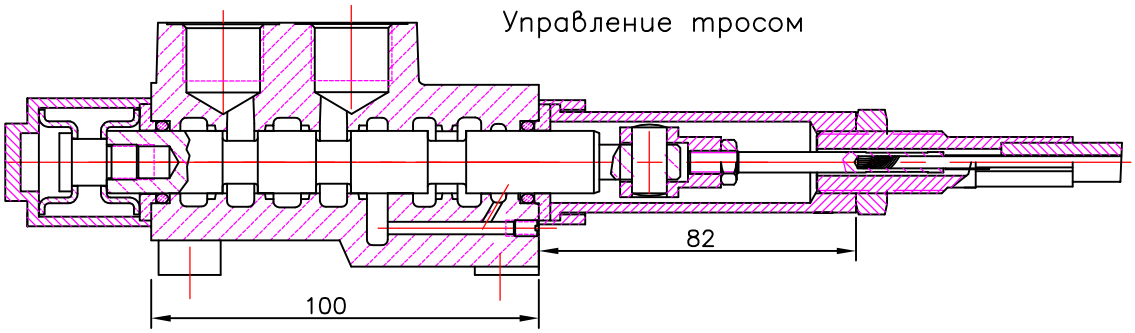
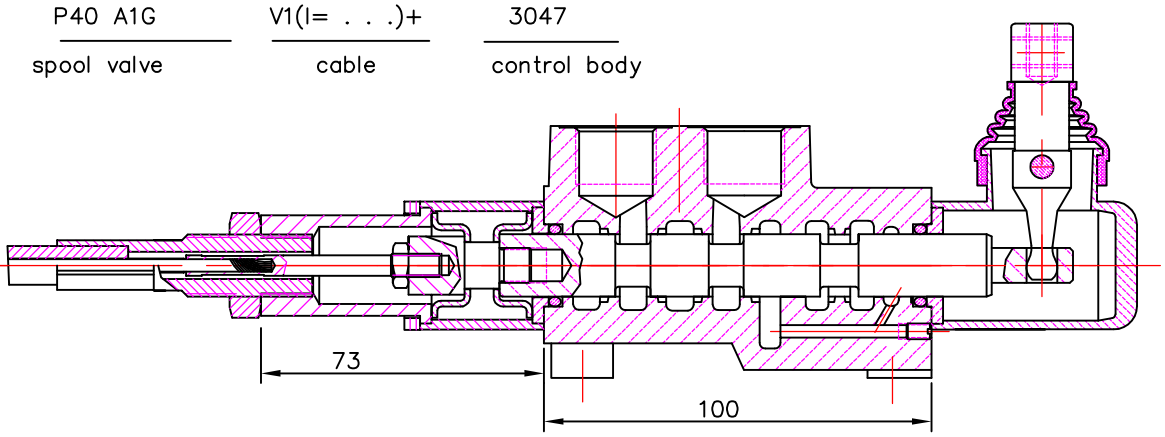
REMOTE CONTROLS
Управление тросом



P40 A1G — spool valve
V1(l= . . .)+ — cable
3047 — control body

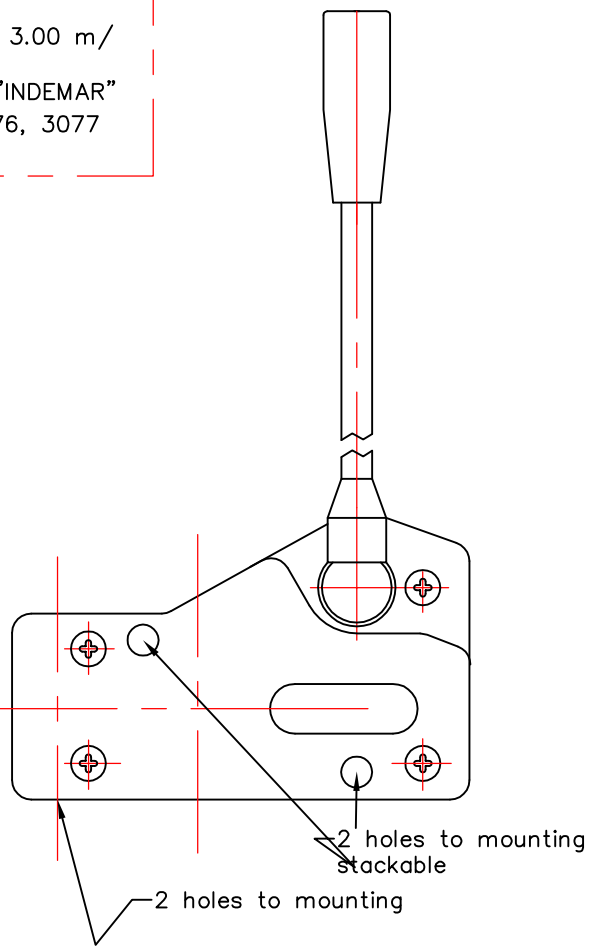


P40 A1GKZ — spool valve
V2(l= . . .)+ — cable
3047 — control body

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

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

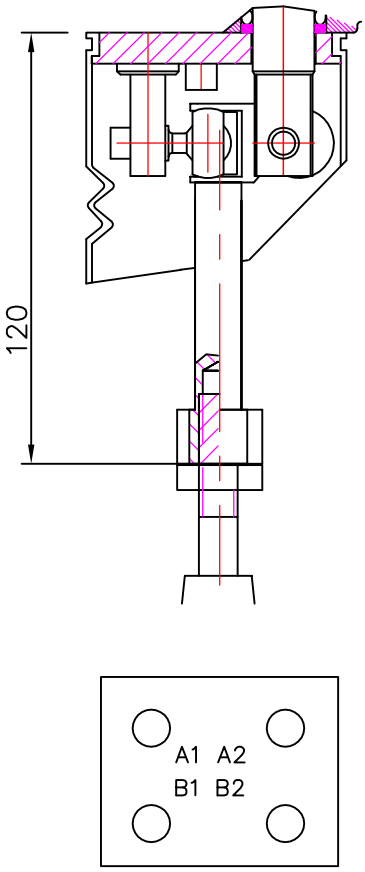
Technical specifications			
	3047	3076	3077
Stroke	13+13 mm	13+13 mm	13+13 mm
Max. load	45 kg	45 kg	45 kg
Level ratio	10:1	10:1	10:1
Lock in neutral	No	No	Yes
Antireverse lock	No	Yes	No
Body colour	Black	Black	Black
Cables type	Heavy Duty	Heavy Duty	Heavy Duty
Operating temperature	–40/+80C	–40/+80C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



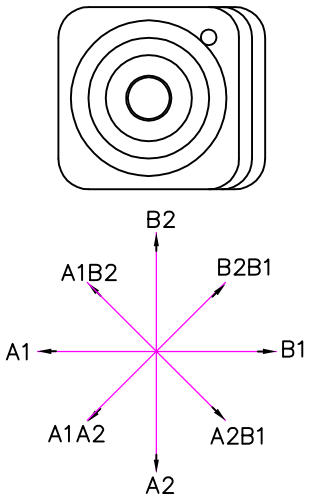
High solidity controls for easy mounting on every type of distributor.They can by mounted stand alone or packed together.
They use push–pull heavy duty cables that provide a positive smooth operating lever and are manifactured in a three differents models to meet different needs of Clients.

JOYSTICK "+"

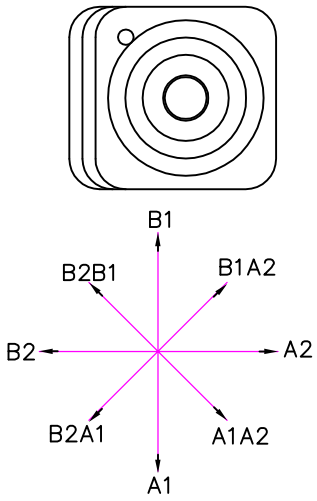
This control gives the possibility to operate, at the same time two spools with a"+"movement.



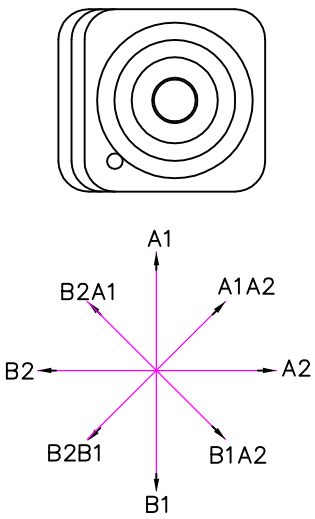
standard version 1



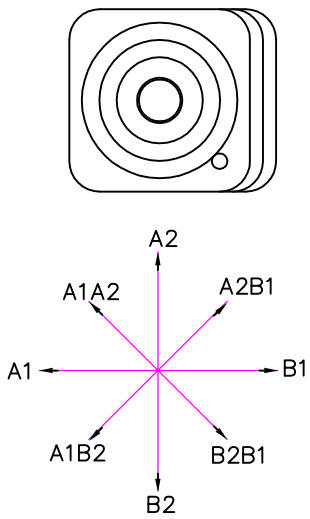
standard version 2

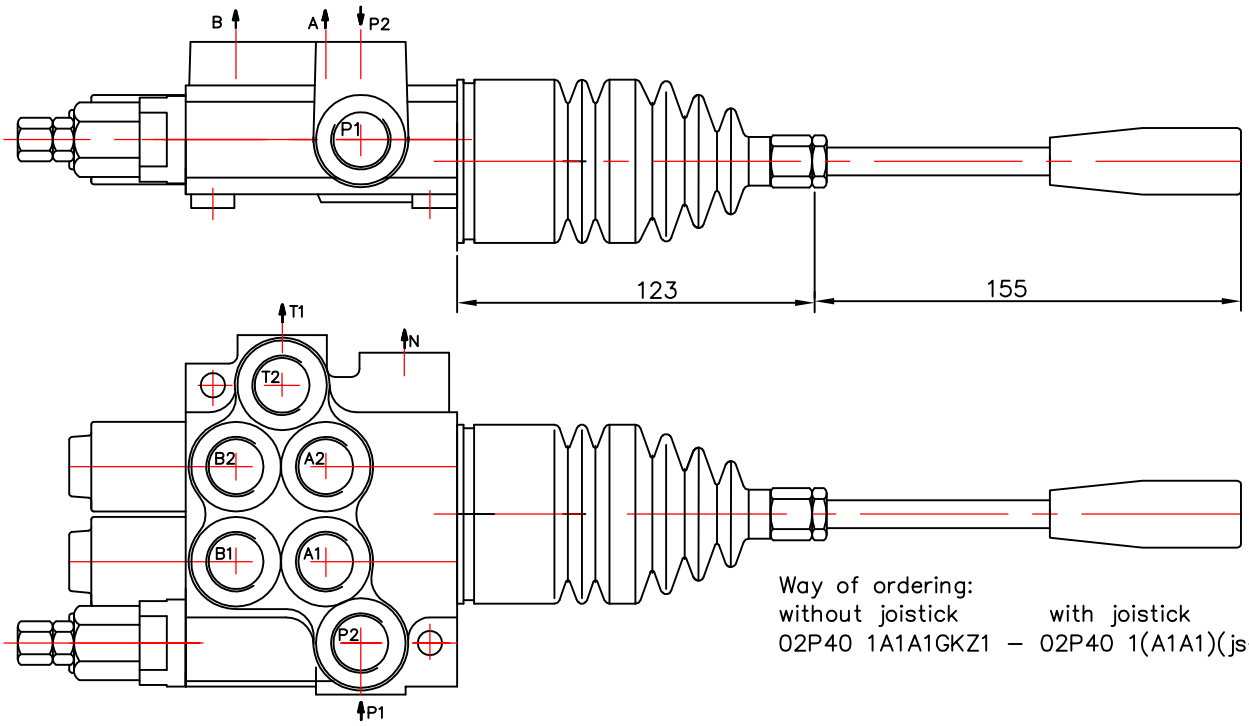


standard version 3



standard version 4

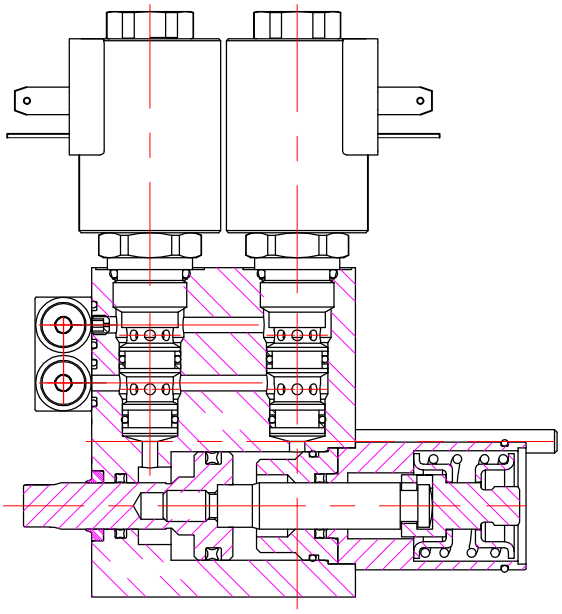


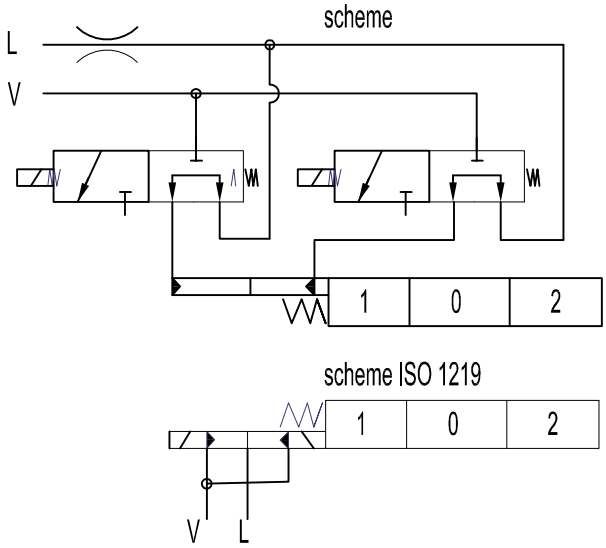


Way of ordering:
without joistick with joistick
02P40 1A1A1GKZ1 – 02P40 1(A1A1)(js+3)G

directional control valve P40

ED3 – electro–hydraulic control ON–OFF
Електрогидравлический контрол ON–OFF





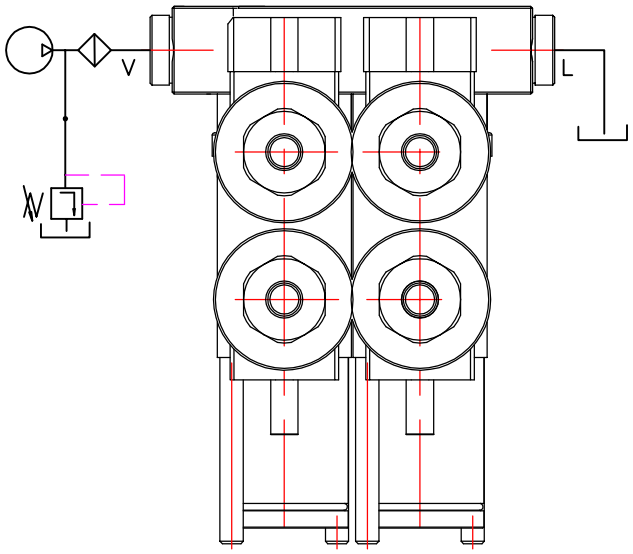
Operating pressure	min 10 bar(145 psi) max 50 bar(725 psi)
Max operating pressure in L (T line)	25 bar(360 psi)

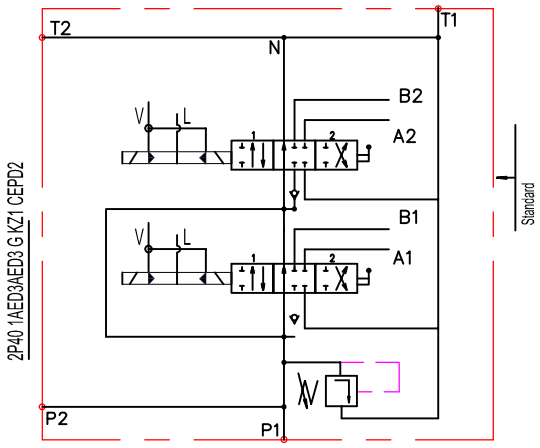
Ordering codes

3–wai 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 ...)
Колектор для внешнего питания управления и слив





Ordering example

2P40–1A1ED3A1ED3 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 sektion
. . . .	

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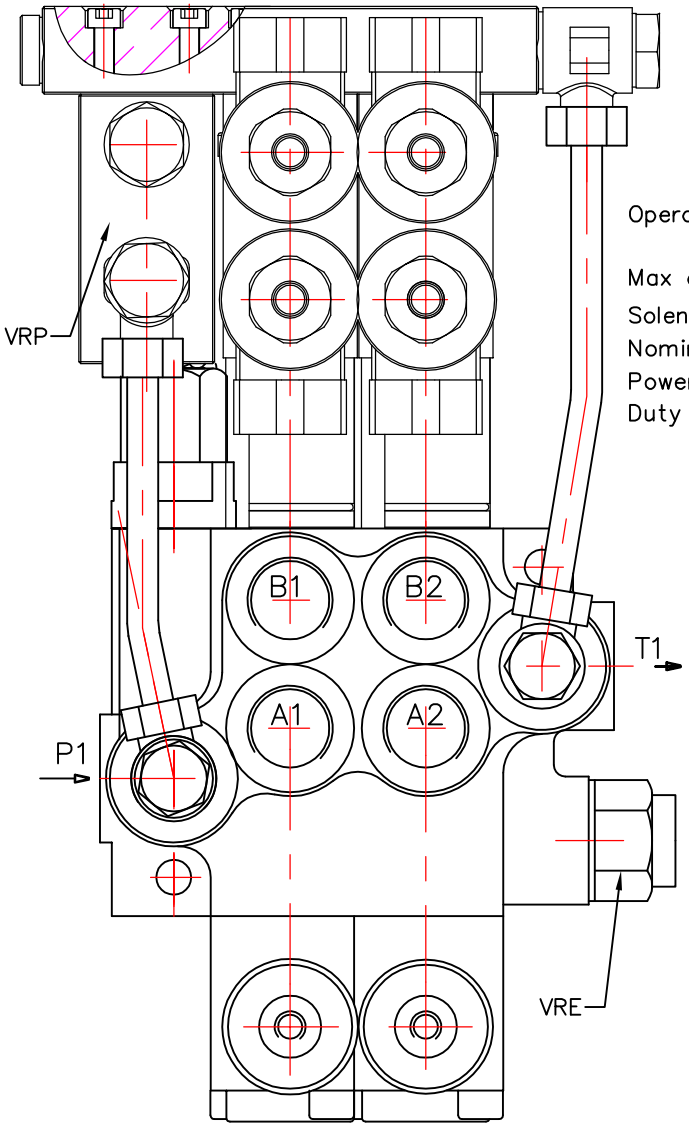
E –mail: badestnost@hydraulic–vlv.com www.hydraulic–vlv.com

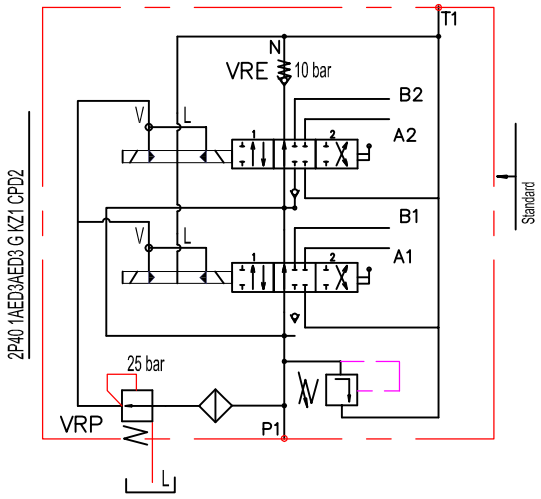
ED3 – electro–hydraulic control ON–OFF
Електрогидравлический контрол ON–OFF



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	±10%
Power rating	24W
Duty cycle	100 %



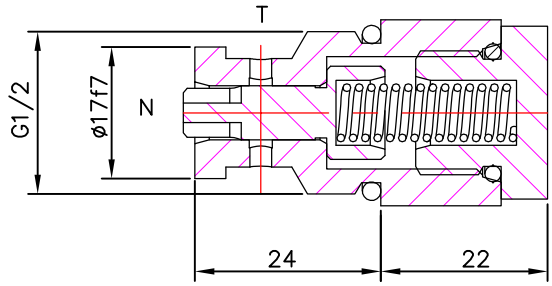
Ordering example

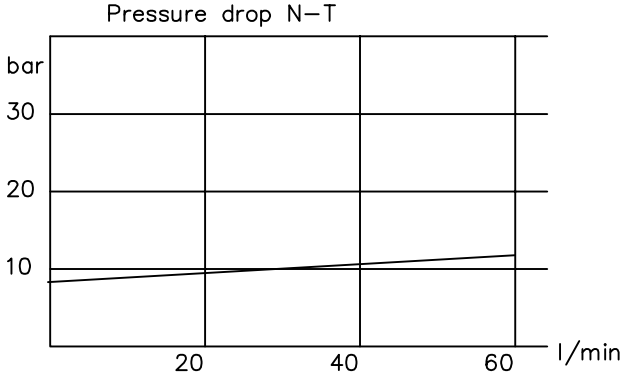
2P40–VRP– 1A1ED3A1ED3 G KZ1–CED2–VRE–12VDC

Colector kit – Ordering codes BSP threads

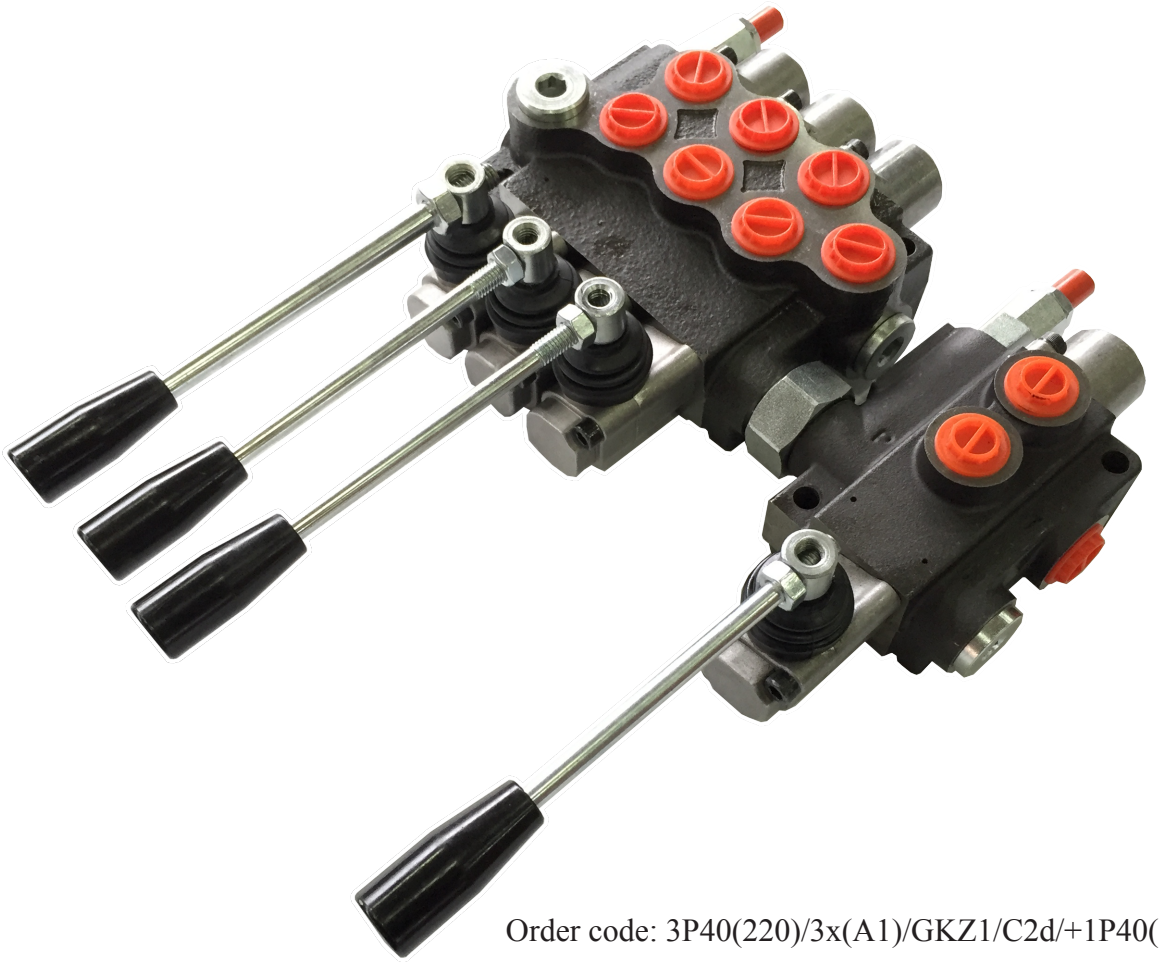
CED1	Kit for 1 section
CED2	Kit for 2 section
CED3	Kit for 3 section
CED4	Kit for 4 sektion
. . . .	

Back pressure valve VRE–P40
Клапан подпорний на слив



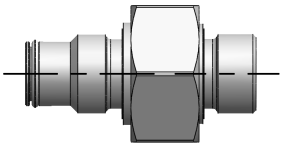


NEW HIGH PRESSURE CARRY-OVER (DIRECT) for P40*



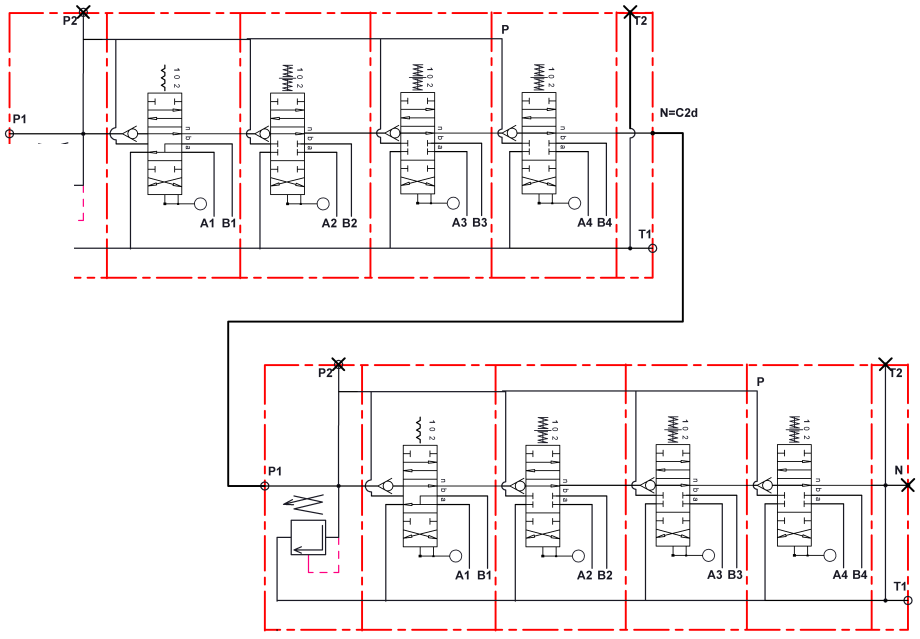
Order code: 3P40(220)/3x(A1)/GKZ1/C2d/+1P40(150)/A1/GKZ1

With this new high-pressure cary over connection you do not need any pipes and fittings, saves space and can now combine two 4P40 valves into single 8P40 which was not possible before.



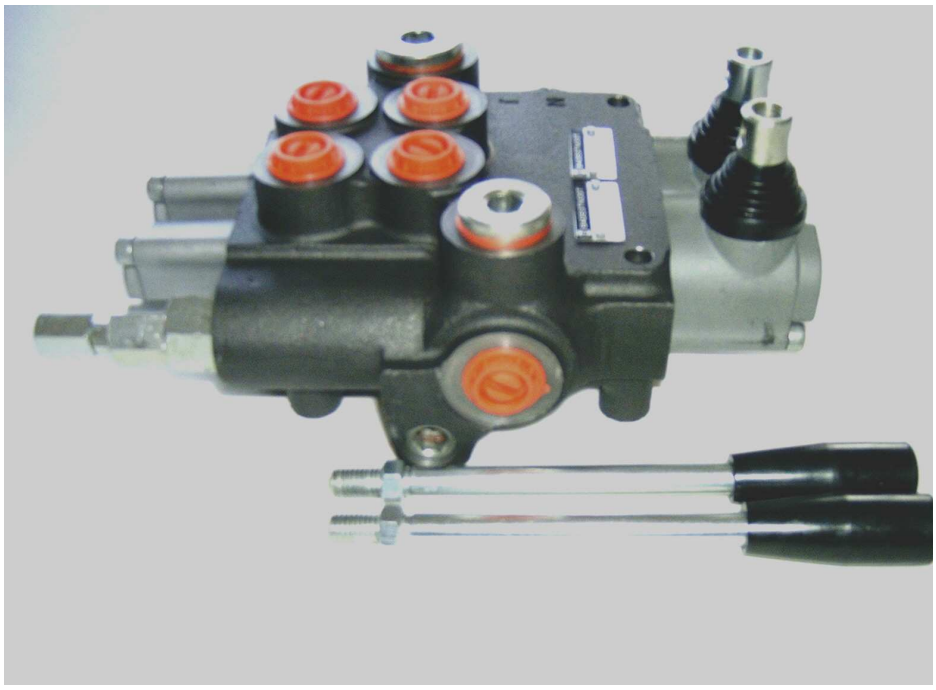
Order code: C2D

Sample order code and hydraulic scheme for 2 pcs 4P40:
4P40(220)/D8/A1/A1/A1/GKZ1/C2d/12+4P40(250)/D8/A1/A1/A1/GKZ1/11



* Any thread standard is available - ask sales dept.; For different valves such as P80, Z80 you have to ask sales dept.

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 and the Tank. Предназначен для изменения направления потока, ограничения давления рабочей жидкости в гидролиниях, разгрузки насоса в нейтральной позиции золотников.

Specifications
Основные показатели:

1. Valve monoblock Конструктивное выполнение	моноблок
2. Mounting Крепление	3 bolts M8
3. Pressure connections Присоединительные отверстия	internal thread внутренние резьби
4. Ambient temperature Температура воздуха	-40C…+60C
5. Pressure medium Рабочая жидкость	mineral oil based hydraulic oil
6. Viskosity Кинематическая вязкость	12…800 mm²/s permissible range 20…100 mm²/s recommended range
7. Fluid temperature	- 15C…+80C
8. Filtration	Oil contamination 10 to NAS1638
9. Max. operating pressure Давление max. bar	P = 250 bar T = 50 bar A, B = 300 bar
10. Internal (46 mm²/s)Leakage Внутренние потери (A, B – T)	6 cm³/min at 100 bar
11. Nominal flow Разход рабочей жидкости	80 l/min (see “operating” diagram)
12. Spool stroke Ход золотника	±7 mm
13. Actuating force Усилие на движения золотника	< 220 N in spool axis direction

directional control valve P80

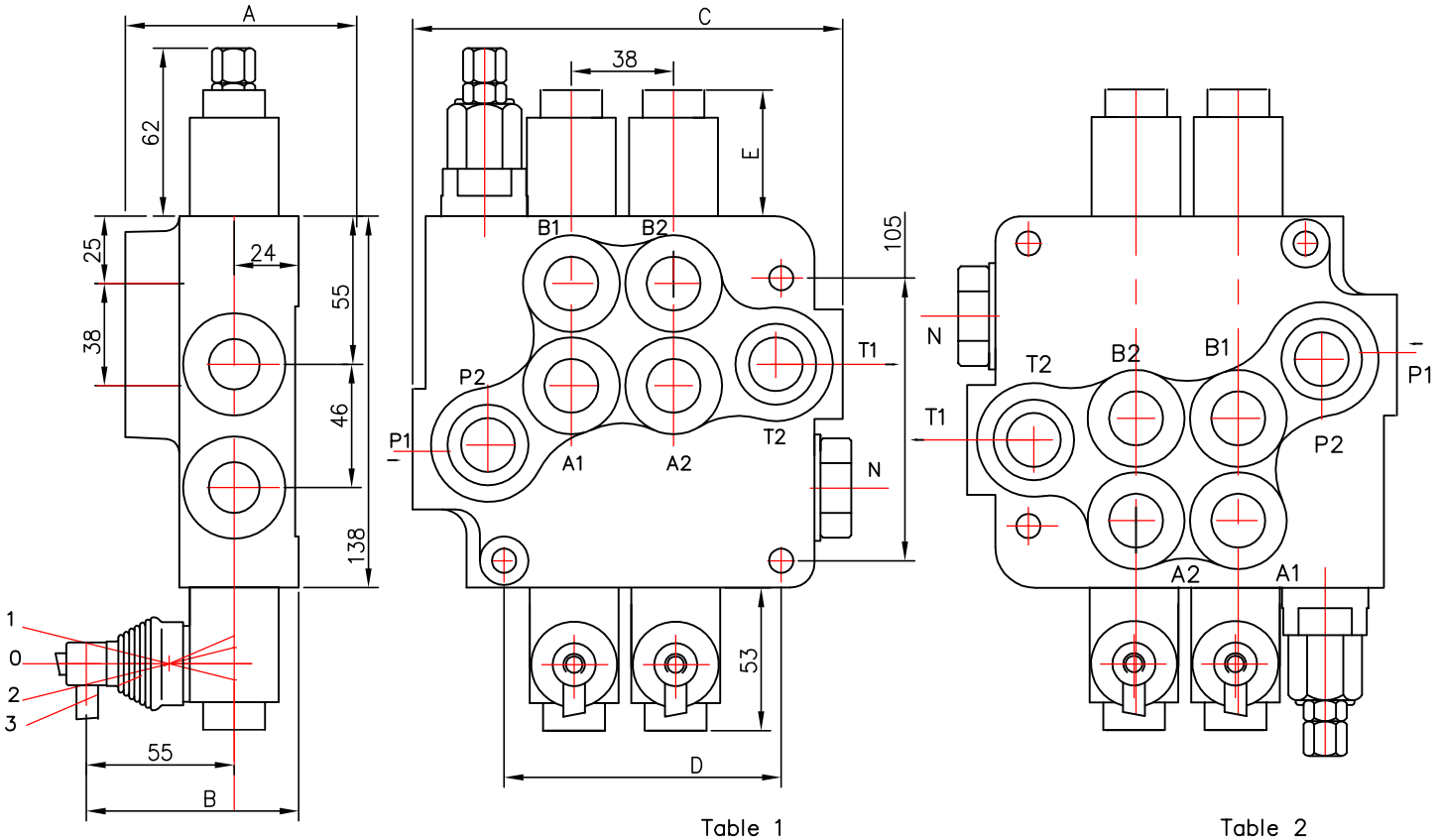


Table 1

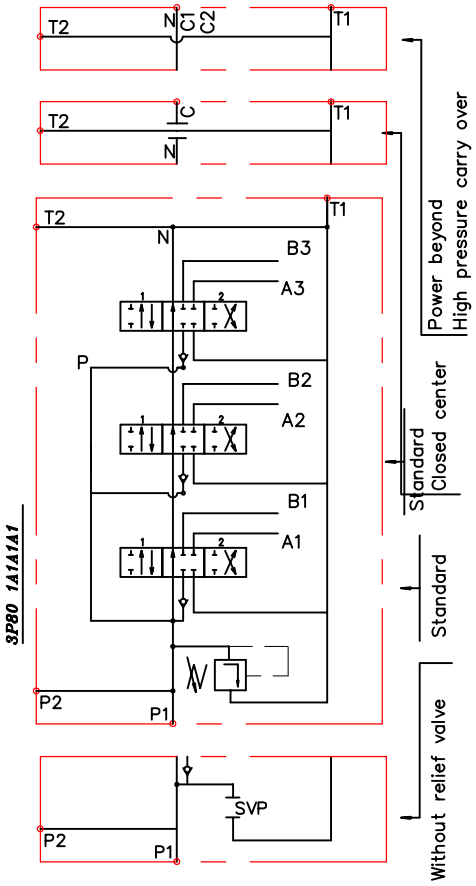
	A	B	C	D	P1	P2	T1	T2
P80	65	79	107	65	*	*	–	–
2P80	80	94	160	103	*	*	*	*
3P80	80	94	198	141	*	*	*	*
4P80	80	94	236	179	*	*	*	*
5P80	80	94	274	217	*	*	*	*
6P80	80	94	312	255	*	*	*	*

Table 2

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

0	2	P80	R	1	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	way of distribution/parallel or .../ способ распределения потока	first spool distribution type характеристика первого золотника	spool control/detend and ets./ контрол золотника/фиксации и другие/	second spool distribution type вид второго золотника	spool control/detend and estr./ контрол золотника/фиксации и другие/	ports /treads/ резбовые отверстия	general operation feature вид ручного управления	with "teton" исполнение ручного управления с "метон"	operation feature /pneumatic, .../ другое управление	with electric swith с елекмическим виключателем	high pressure carry over продолжител потока високого давления	connection ports in use присоединительные отверстия

directional control valve P80



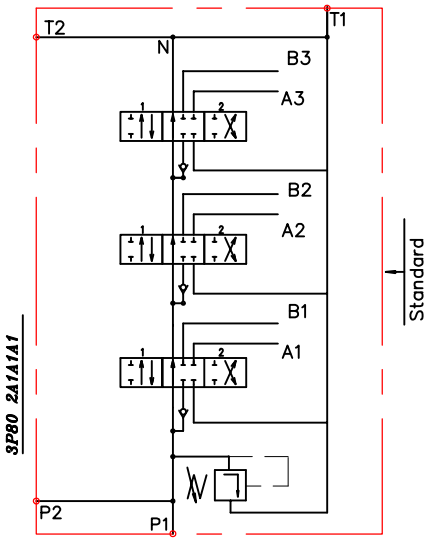


Table 3

code	Number of spools
	1
2	2
3	3

ets.

Table 4

code	way of distribution ; распределение потока
1	parallel ; паралельное
2	tandem(series parallel) ; серийно–паралельное

Table 5

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

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

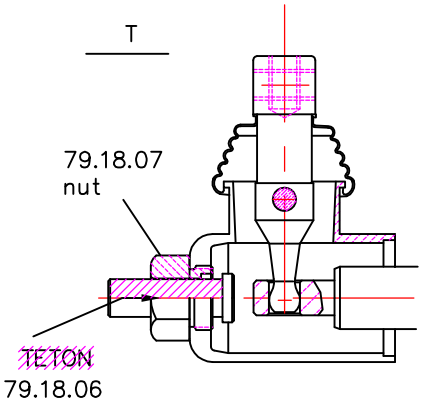
Table 7

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

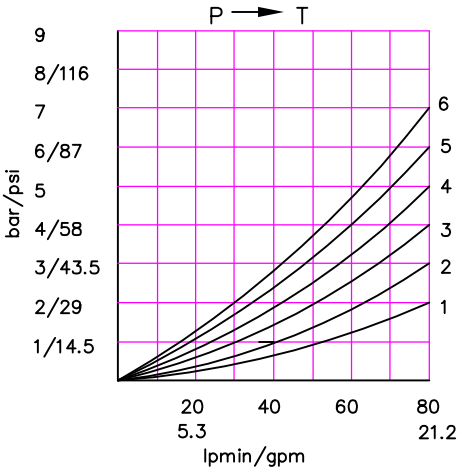
Table 8

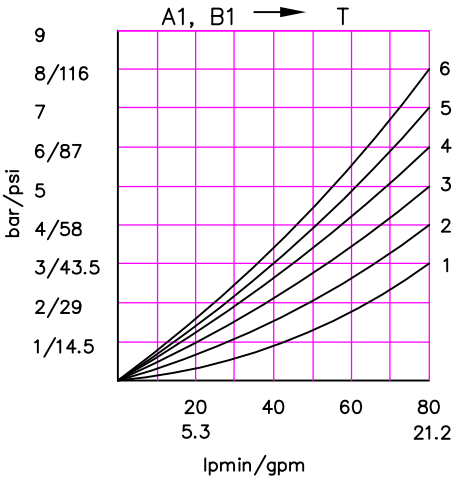
code	другое управление ; operation feature
P	пневматическое on–off pneumatic contol; 5–10 bar ; ports 1/8 NPTF
H	гидравлическое on–off hydraulic control ; pn = 5 – 20 bar ; ports G1/4

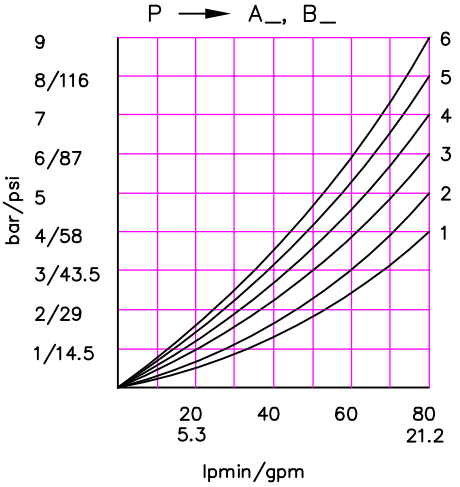
directional control valve P80



P80 directional control valve







P80

Table 9

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

kind of hand control ; вид ръчного управления

Table 10

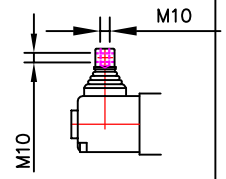
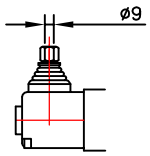
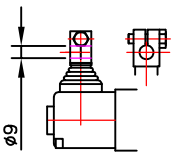
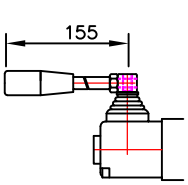
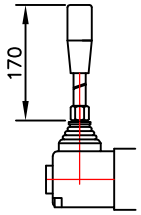
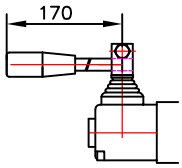
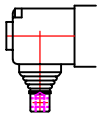
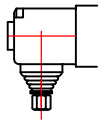
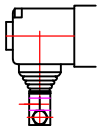
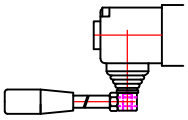
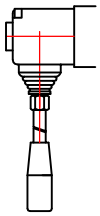
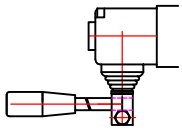
code	ескиз feature	code	ескиз feature	code	ескиз feature
KZ		KY		KI	
KZ1		KY1		KI1	
KZ0		KY0		KI0	
KZ01		KY01		KI01	
_	without hand control ; без лостова система за управление				

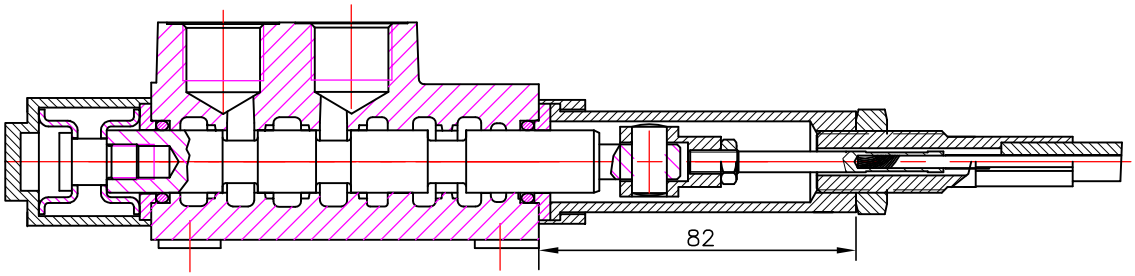
Table 11

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)	 G 1/2 M22x1.5
_	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	

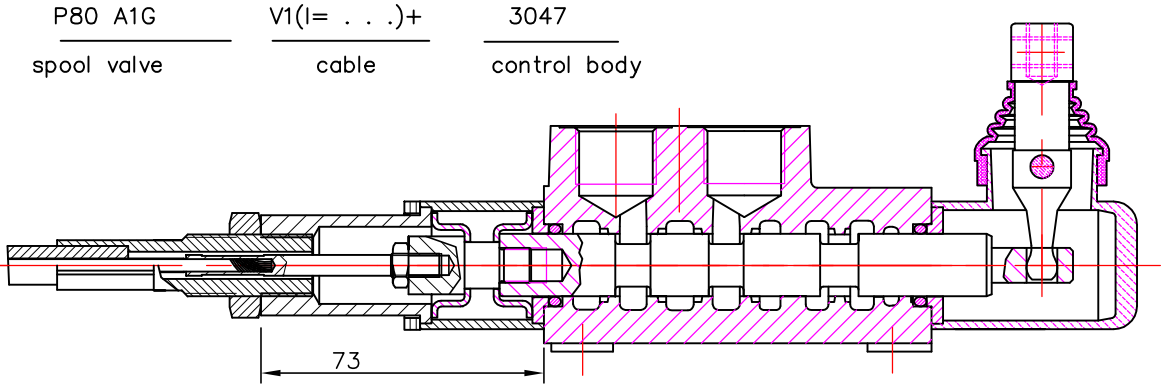
Table 12

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

REMOTE CONTROLS
Управление тросом



P80 A1G — spool valve
V1(l= . . .)+ — cable
3047 — control body

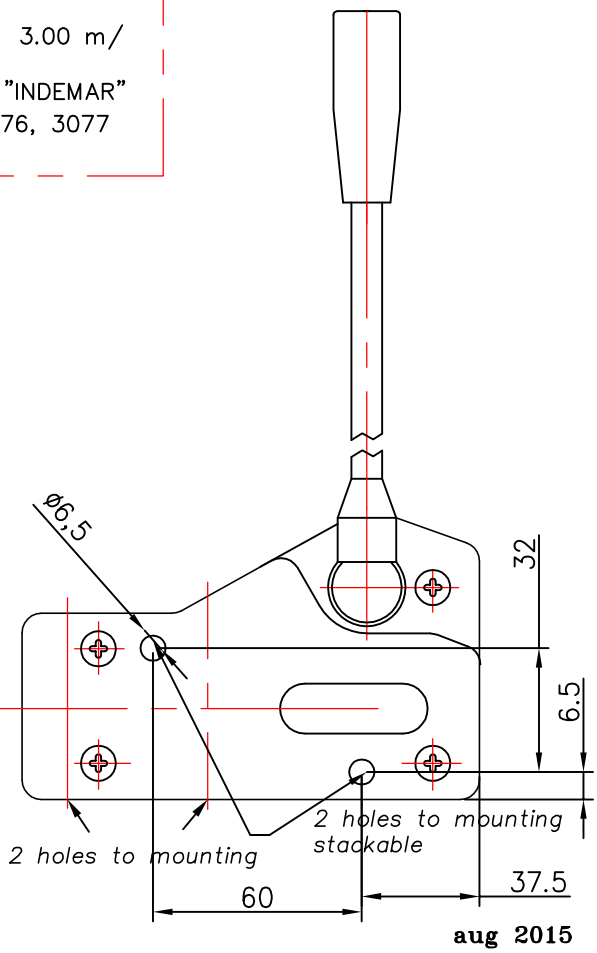


P80 A1G — spool valve
V2KZ1(l= . . .)+ — cable
3047 — control body

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

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

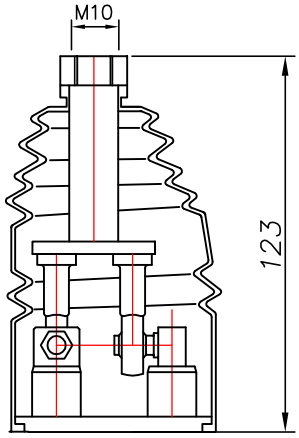
Technical specifications			
	3047	3076	3077
Stroke	13+13 mm	13+13 mm	13+13 mm
Max. load	45 kg	45 kg	45 kg
Level ratio	10:1	10:1	10:1
Lock in neutral	No	No	Yes
Antireverse lock	No	Yes	No
Body colour	Black	Black	Black
Cables type	Heavy Duty	Heavy Duty	Heavy Duty
Operating temperature	–40/+80C	–40/+80C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

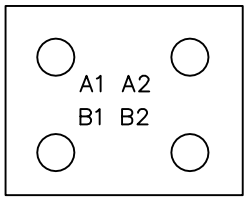


High solidity controls for easy mounting on every type of distributor.They can by mounted stand alone or packed together.
They use push–pull heavy duty cables that provide a positive smooth operating lever and are manifactured in a three differents models to meet different needs of Clients.

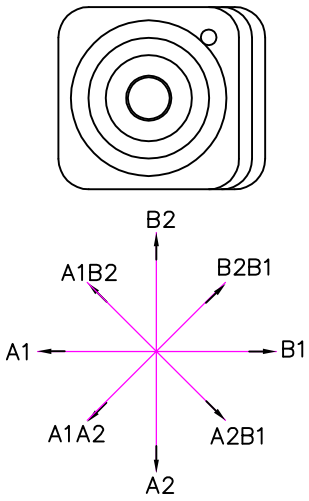
JOYSTICK "+"

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

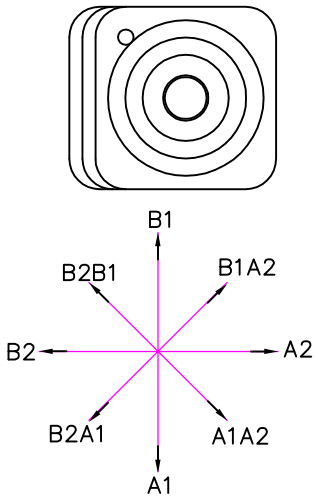




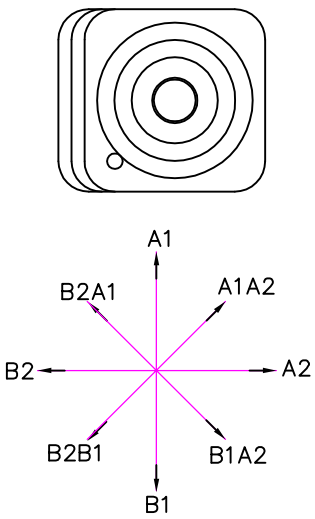
standard version 1



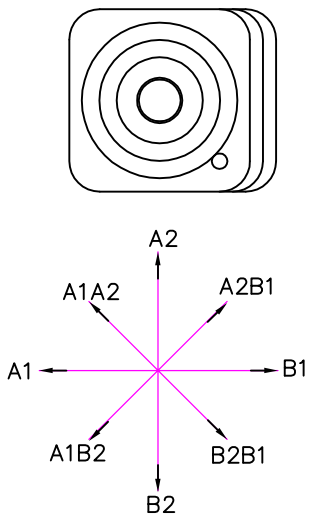
standard version 2

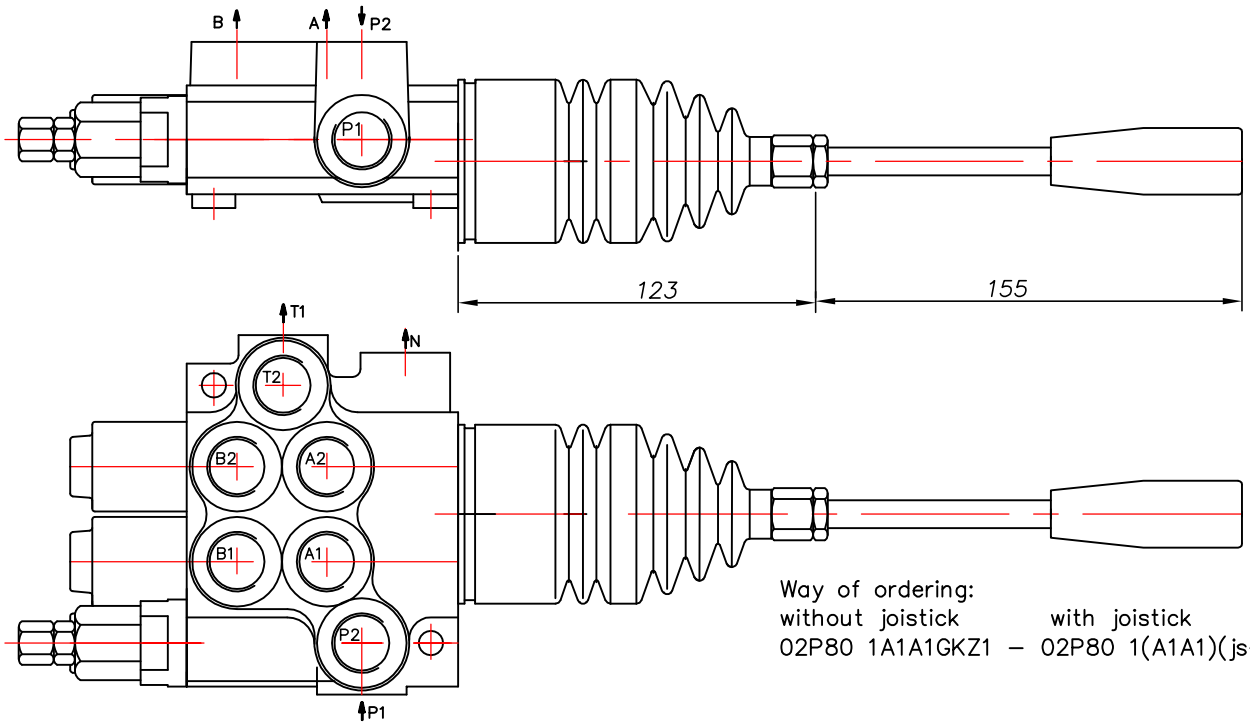


standard version 3



standard version 4

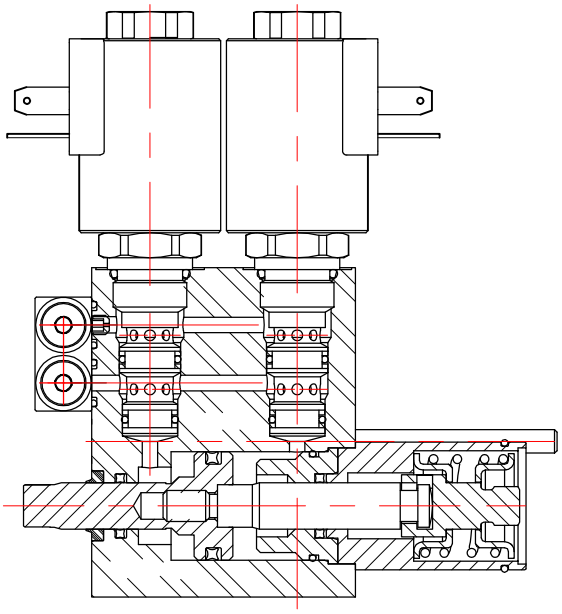


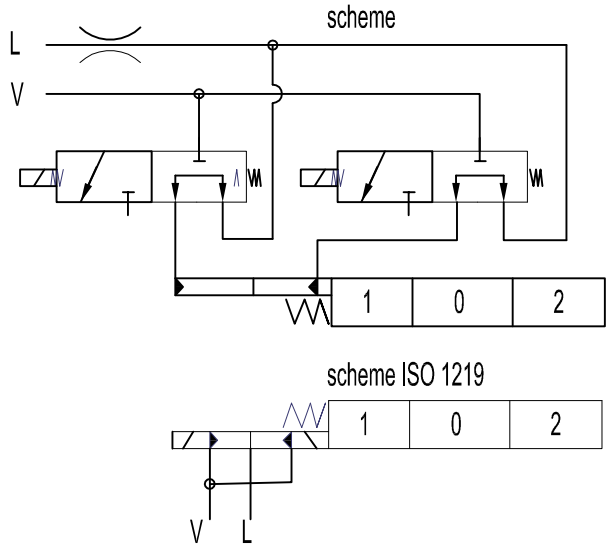


Way of ordering:
without joistick with joistick
02P80 1A1A1GKZ1 – 02P80 1(A1A1)(js+3)G

directional control valve P80

ED3 – electro–hydraulic control ON–OFF
Електрогидравлический контрол ON–OFF





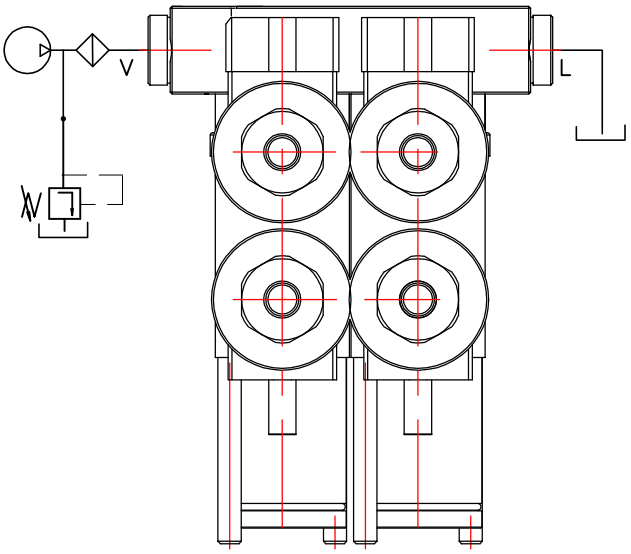
Operating pressure	min 10 bar(145 psi) max 50 bar(725 psi)
Max operating pressure in L (T line)	25 bar(360 psi)

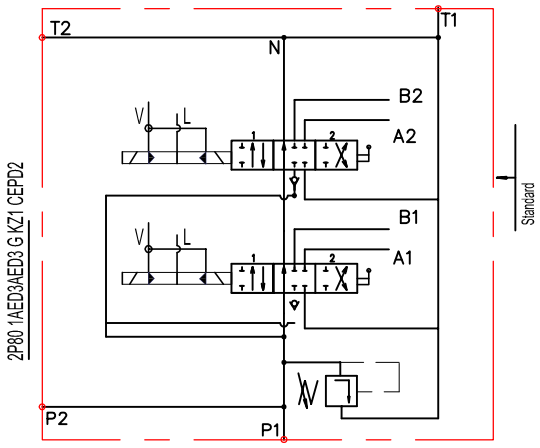
Ordering codes

3–wai solenoid valve–SV08–33
coil P80ED3–G–12VDC
coil P80ED3–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 ...)
Колектор для внешнего питания управления и слив





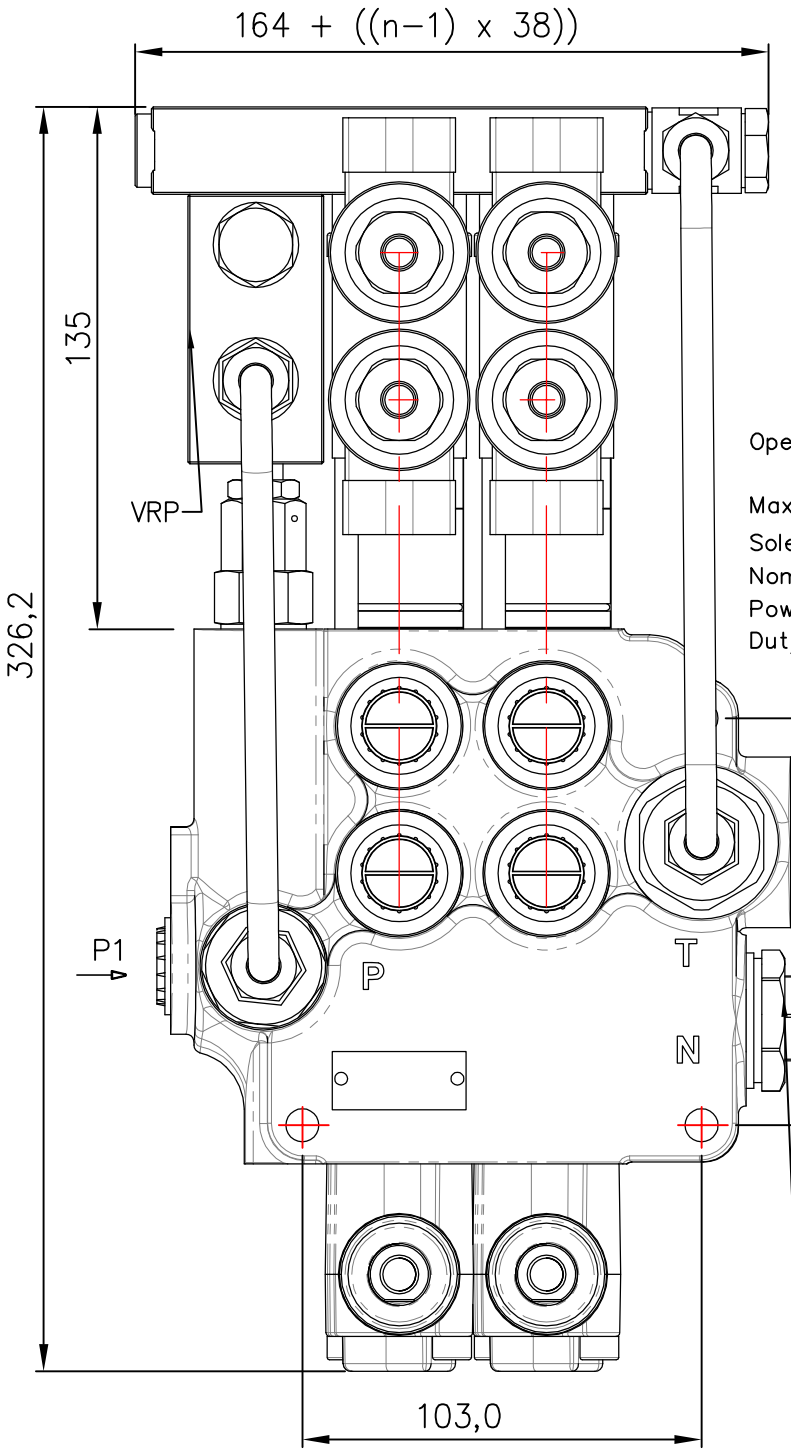
Ordering example

2P80 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
. . . .	

BADESTNOST AD 6200 Chirpan, Bulgaria, Tel: 00359 416 930 12, Fax: 00359 416 955 34
E –mail: badestnost@hydraulic–vlv.com www.hydraulic–vlv.com

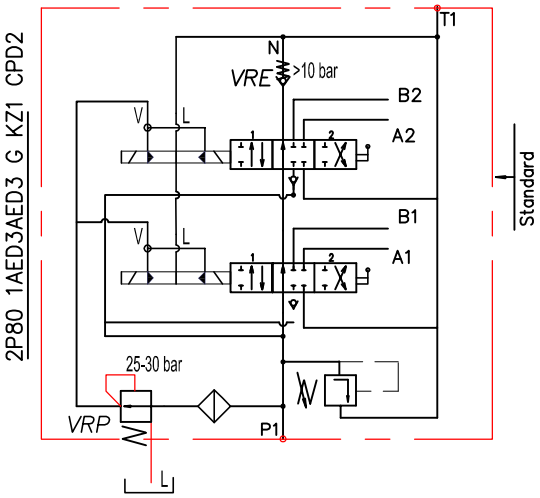


ED3 – electro–hydraulic control ON–OFF
Електрогидравлический контрол ON–OFF

Order codes

3–wai 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 %



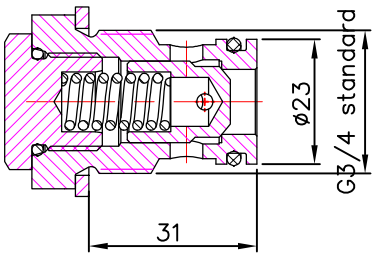
Colector kit – *Ordering codes BSP threads*

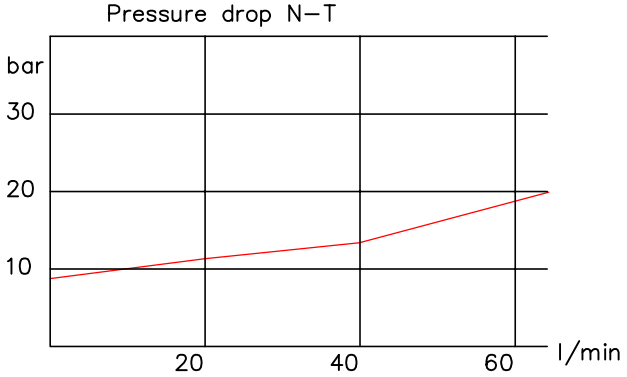
CED1Z80	*	Kit for 1 section
CED2P80		Kit for 2 section
CED3P80		Kit for 3 section
CED480		Kit for 4 sektion
. . . .		

Ordering example

2P80 VRP 1A1ED3A1ED3 G KZ1–CED2–VRE–12VDC

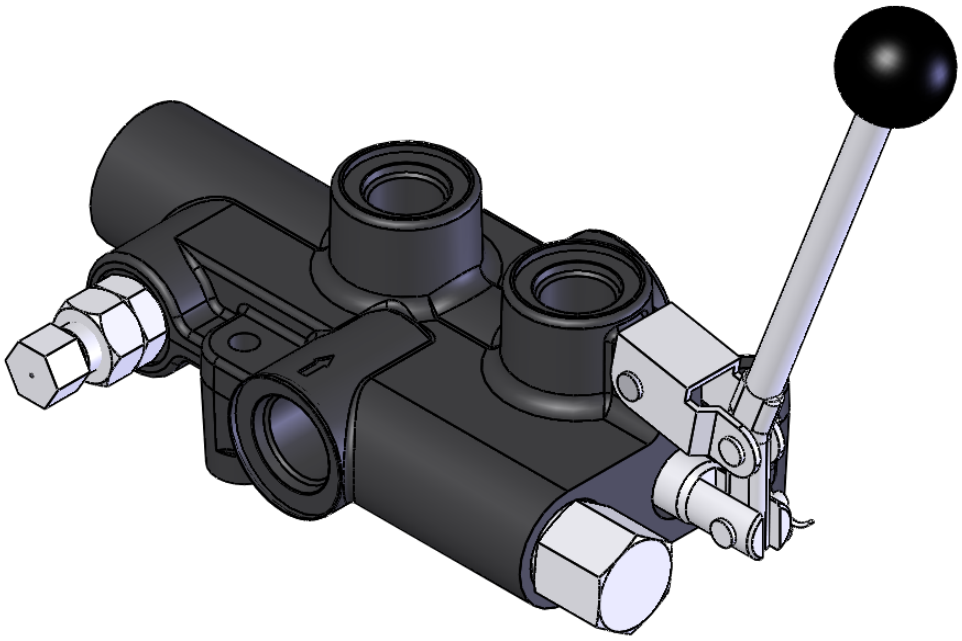
Back pressure valve VRE–P80
Клапан подпорний на слив





aug 2015

Directional control valve - Log splitter



Model P81
Single spool
Mono-block 80 l/min

Sep 2013

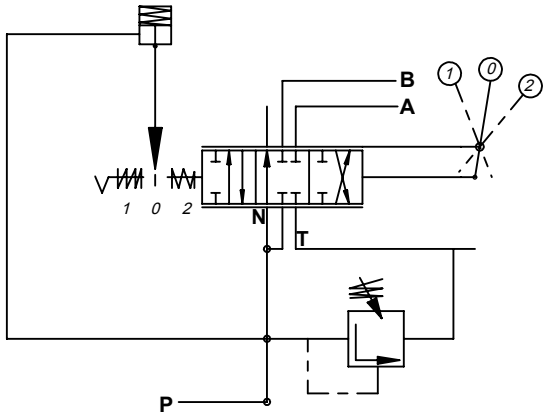
The P81 is an on/off directional control mono-block valve and is designed as a log splitter valve. It is directing the working fluid between hydraulic pumps and consumers (hydraulic cylinders, motors, etc.) and the tank. It has a spring centered in one direction, and pressure released detent in the other direction. Automatically kicks back to neutral when cylinder completes stroke. The P81 also includes built-in adjustable inlet relief valve.

Standard features

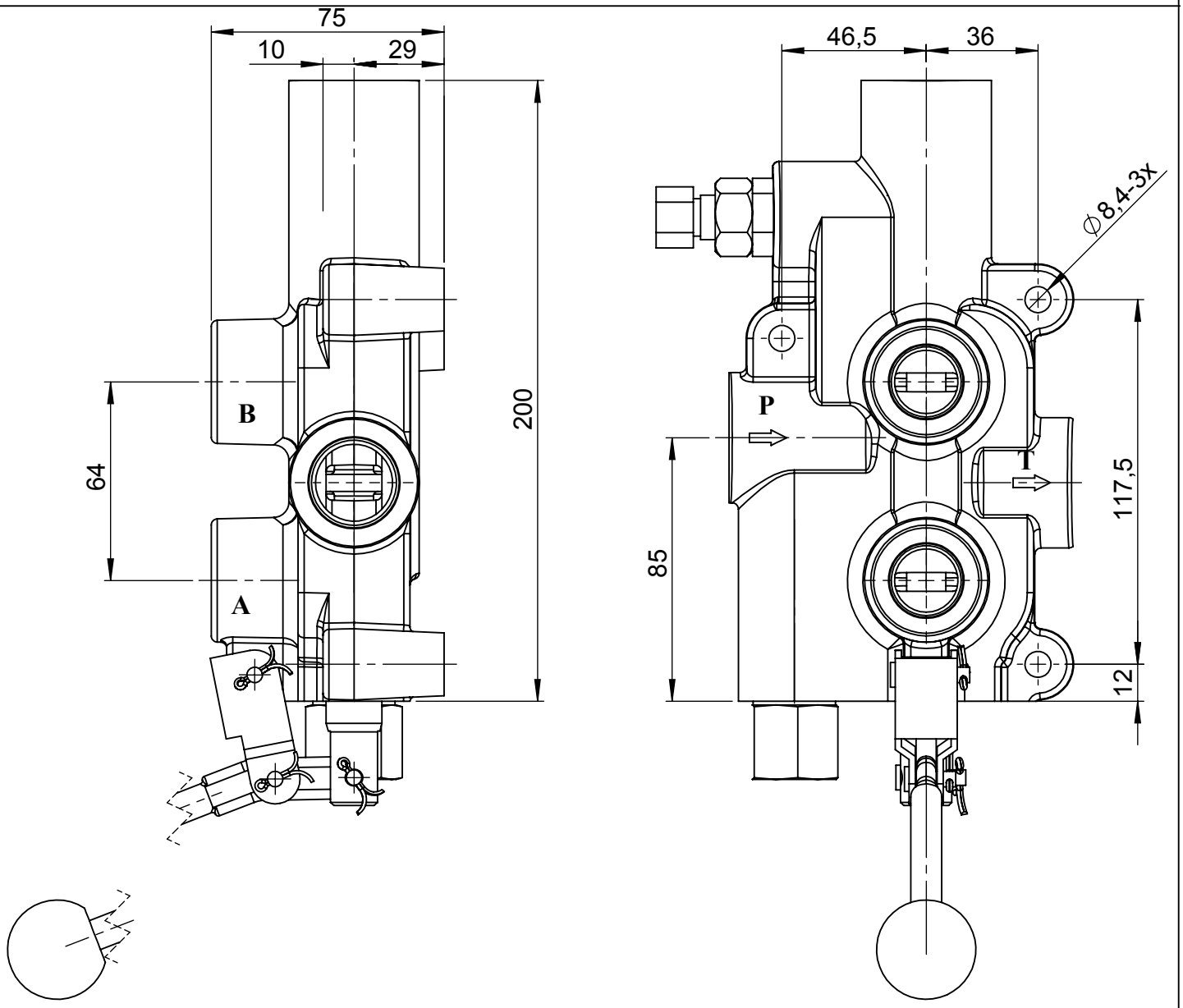
- Hydraulically balanced, hard chrome plated spool
- Lever system in which the handle can be installed in up or down position
- Detent release pressure adjustable from 70 to 140 bar
- Flow capacity of 80 l/min
- In neutral position both work ports are blocked and the pump unloads to tank

Nominal flow rating		80 l/min	*21 gpm*
Operating pressure (max.)	at port P at work ports A and B	250 bar 300 bar	*3600 psi* *4300 psi*
Back pressure (max.)	outlet port T	10 bar	*150 psi*
Internal leakage (standard) A(B)> T	p = 120 bar	20 cm^3 /min	*1,2 in^3/min*
Fluid		Mineral base oil	
Fluid temperature	with NRB (BUNA-N) seals	from -20°C to 80°C	*from -4°F to 176°F*
Viscosity	operating range	from 15 to 75 mm^2/s	*from 15 to 75cSt*
	min.	12 mm^2/s	*12 cSt*
	max.	400 mm^2/s	*400 cSt*
Max. contamination level		-/19/16 – ISO 4406	*NAS 1638 – class 10*
Ambient temperature for working conditions		from -40°C to 60°C	*from -40°F to 140°F*
Spool stroke		7.9 mm	*0,3 in*
Actuating force		<220 N	*<50 lbs*

Hydraulic scheme for P81 A2 S10



Sep 2013



Availabe threads for that valve:

UN-UNF (order code S10)		NPTF (order code N)		BSP (order code G12)	
Working ports A, B:	7/8-14UNF	Working ports A,B:	1/2-12 NPTF	Working ports A, B:	G 1/2
Inlet port P:	1-1/16-12UNF	Inlet port P:	3/4-14 NPTF	Inlet port P:	G 3/4
Outlet port T:	1-1/16-12UNF	Outlet port T:	3/4-14 NPTF	Outlet port T:	G 3/4

Order Code: P81 A 2 G

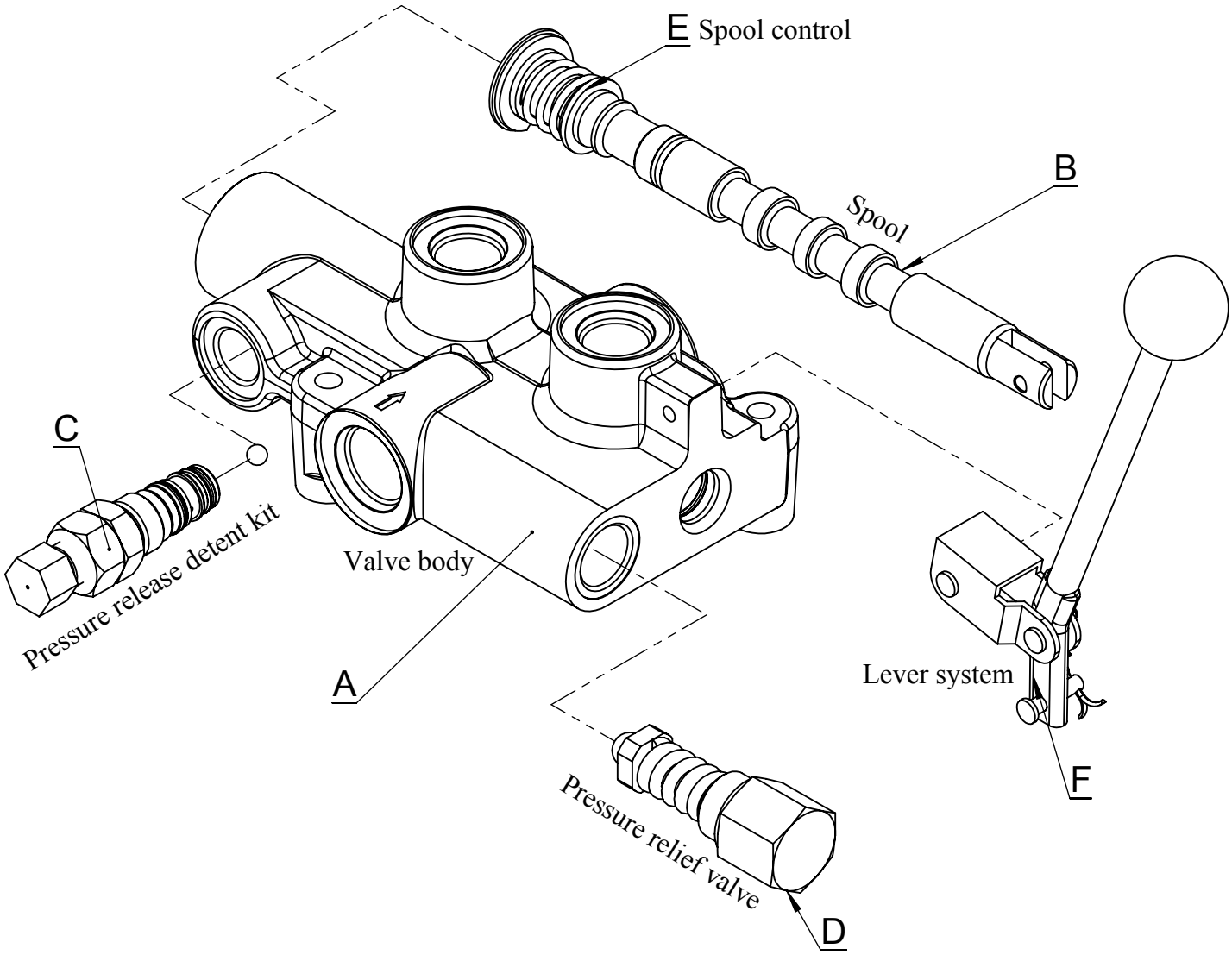
Port type (S - UN-UNF, G - BSP, N-NPTF)

Spool detent - detent with hydraulic release (70 to 140 bar)

Spool type (A)

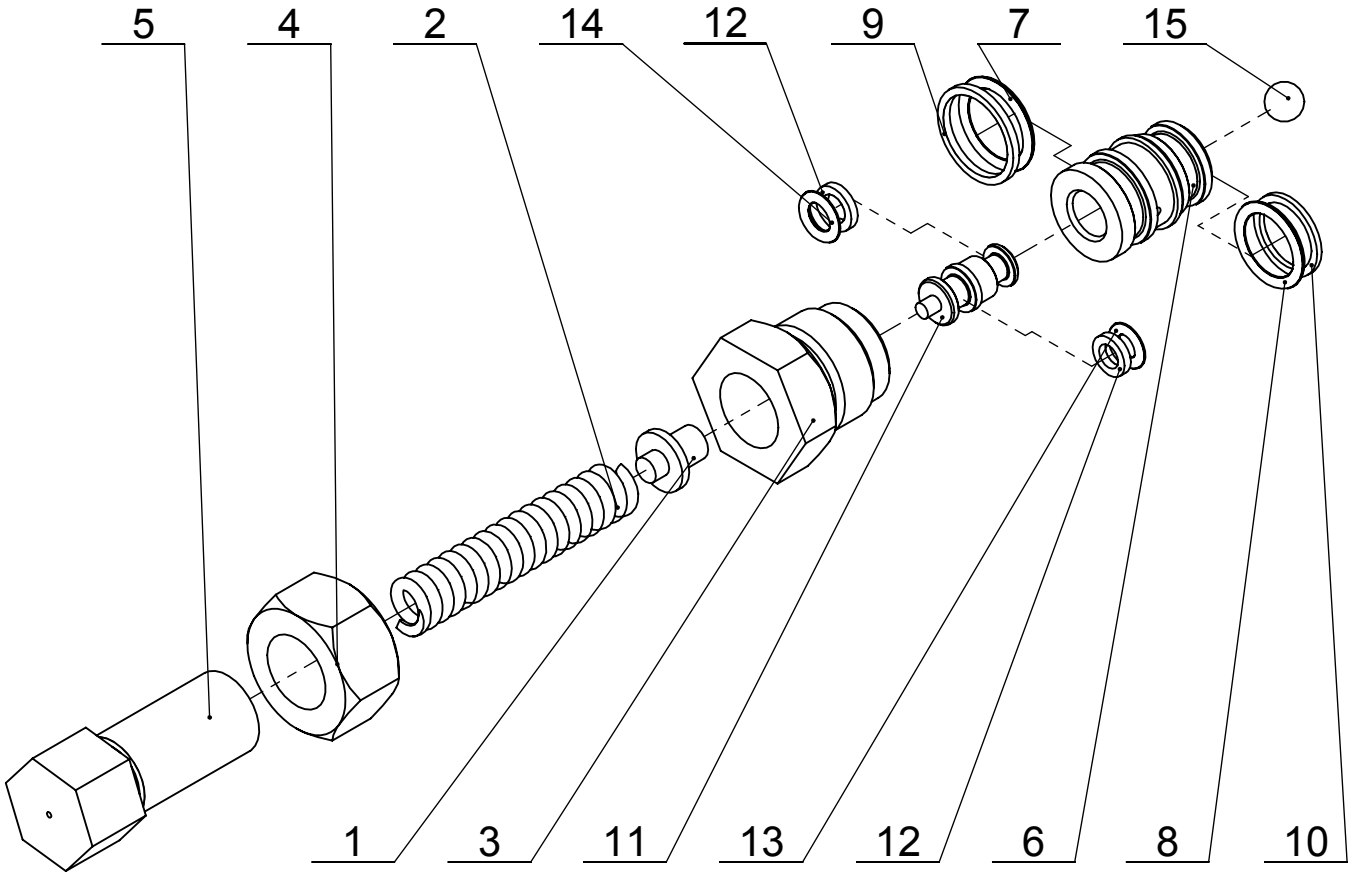
Directional control valve (80 l/min)

Sep 2013



Code	Part No.	Description
A	414.00.00.04	Valve body
B	414.01.00.08	Spool
C	414.04.00.00	Pressure release detent kit
D		Pressure relief valve
E		Spool control
F		Lever system

Pressure release detent



POS. #	PART #	DESCRIPTION	QTY.
1	414.02.00.01	SPRING ADAPTER	1
2	79.00.03	SPRING	1
3	414.02.00.03	PLUG	1
4	414.02.00.04	JAM NUT	1
5	414.02.00.05	ADJUSTING SCREW	1
6	414.03.01.01	PISTON SLEEVE	1
7	DIN 3771	O-RING 12.5x1.8	1
8	DIN 3771	O-RING 11.2x1.8	1
9	-	BACKUP RING 16x1,3x1,4	1
10	-	BACKUP RING 14.28x1x1.3	1
11	414.03.02.01	PISTON	1
12	-	BACK-UP WASHER 5.1x1.4	2
13	DIN 3771	O-RING 4x1.8	1
14	DIN 3771	O-RING 5x1.8	1
15	-	STEEL BALL	1

Pressure release detent

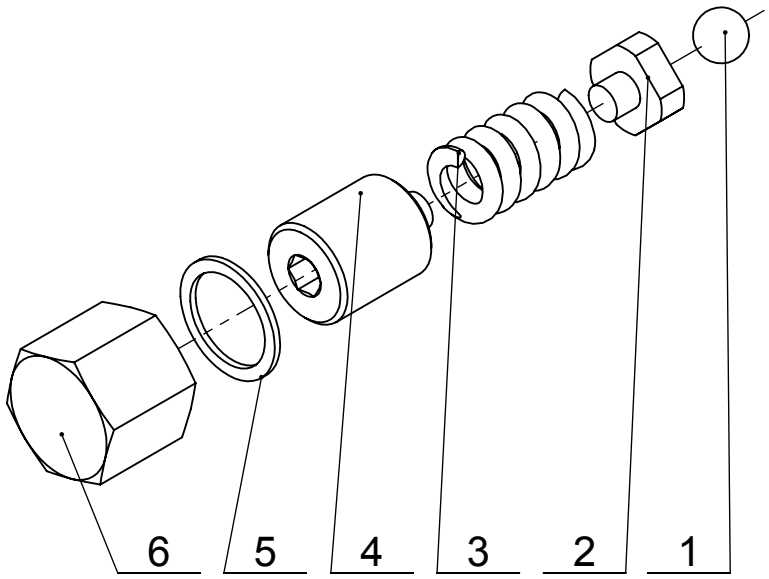
This feature provides a pressure release detent for the spool “out” (handle in) position. When the spool is manually placed in the detent position oil is directed to the “B” work port (the port away from the handle). When the pressure in the “B” port reaches a preset level the detent will release and the spool will center. The factory setting is 70 bar. The detent release pressure is adjustable by loosening the jam nut (15). Turning the adjusting screw (16) clockwise will increase the detent release pressure and counterclockwise will decrease the pressure.

NOTE: If the detent release pressure is adjusted too high the spool will not center, if the pressure is too low the detent will not hold.

Sep 2013

Relief Valve

POS. #	PART #	DESCRIPTION	QTY.
1	-	STEEL BALL	1
2	414.00.00.18	ADAPTER	1
3	79.00.03	SPRING	1
4	414.00.00.15	ADJUSTING SCREW	1
5	DIN7603	WASHER 21x1.5	1
6	414.00.00.14	ACORN NUT	1



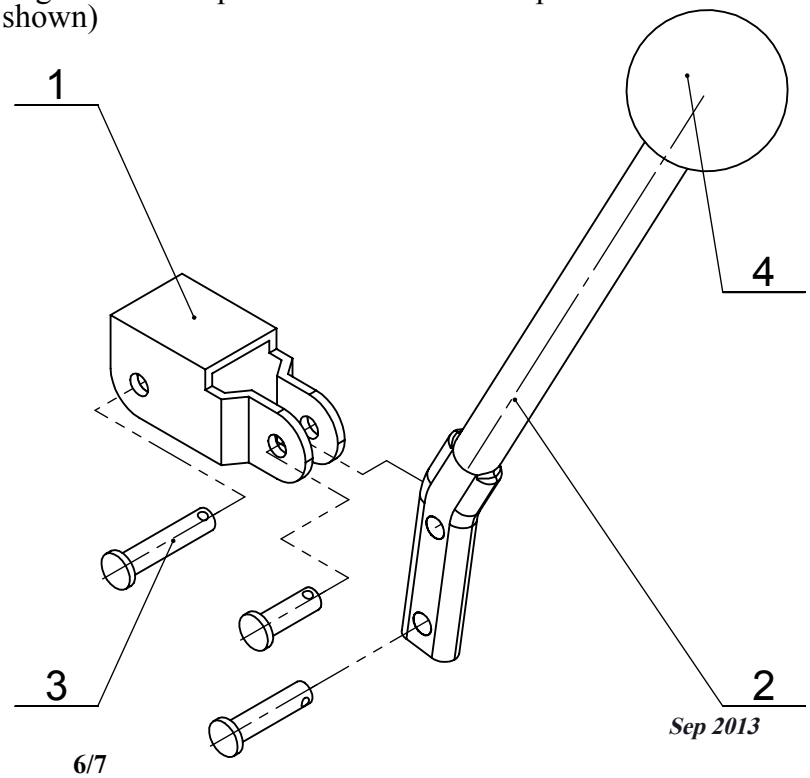
An adjustable ball spring relief valve

The standard factory setting is 150 bar. Other settings can be specified. The relief valve is adjusted by removing the acorn nut (6) and turning the adjusting screw (4). Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure.

Lever system

The lever system can be turned "up" or "down" depending on the location of the valve on the machine. It is done by simply rotating the lever on 180 degrees with respect to its own axis. All pins are locked to position by the use of cotter pins DIN94 (not shown)

POS. #	PART #	DESCRIPTION	QTY.
1	414.00.00.09	LINK	1
2	414.00.00.11	LEVER	1
3	414.00.00.07	CLEVIS PIN	3
4	-	KNOB	1
5	-	COTTER PIN	3



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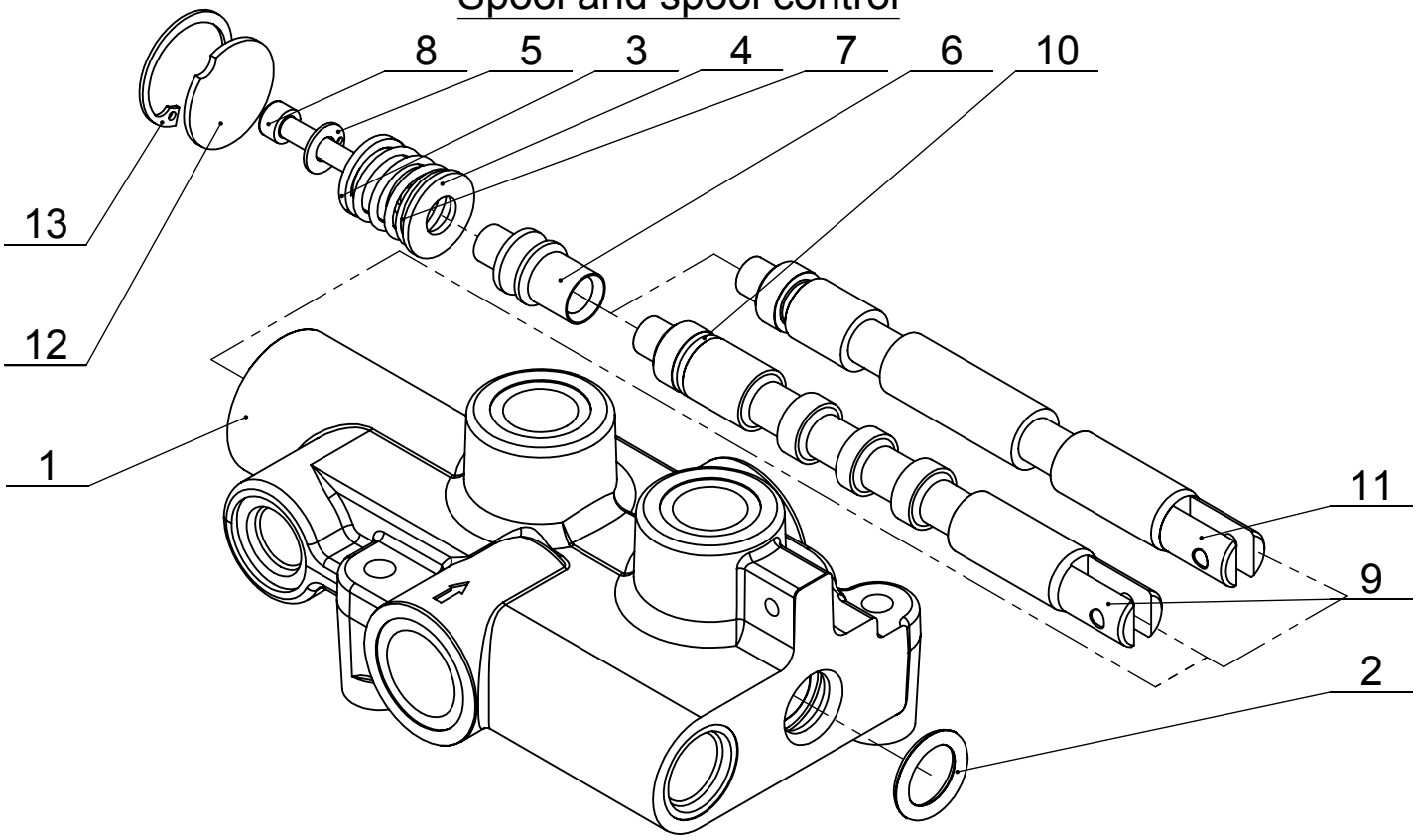
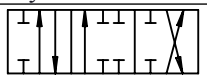
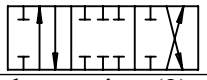
Spool and spool control



POS. #	PART #	DESCRIPTION	QTY.
1	414.00.00.04	VALVE BODY	1
2	DIN 3771	O-RING 18x4	1
3	414.01.00.01	STOP CUP	1
4	414.01.00.05	WASHER	1
5	12010.01.05	WASHER	1
6	414.01.00.06	DETENT SLEEVE	1
7	79.00.03	SPRING	1
8	-	HEX SOCKET HEAD CAP SCREW M6x40	1
9	414.01.00.08	VALVE SPOOL	1
10	DIN 3771	O-RING 12x3	1
11	414.01.00.10	SPOOL M	1
12	414.00.00.02	WASHER	1
13	DIN	CIRCLIP RING	1

Code	Part No.	Hydraulic scheme
A	414.01.00.08	
M	414.01.00.10	

How to replace a broken o-ring (2), (10)

To replace the o-ring (10) on the spool (9) or (11) the following procedure must be followed.

1. Remove the pressure release detent (it is not shown here, refer to page 4/7)

2. Use a needle nose pliers to reach into the cavity and to grip onto the small stem on the piston. Remove the piston.

3. Remove the steel ball at the bottom of the piston cavity (a magnet may help).

4. After removing the snap ring (13) and end plate (12) at the rear, remove the spool assembly by pushing the spool out the rear. Now you can change o-ring (2).

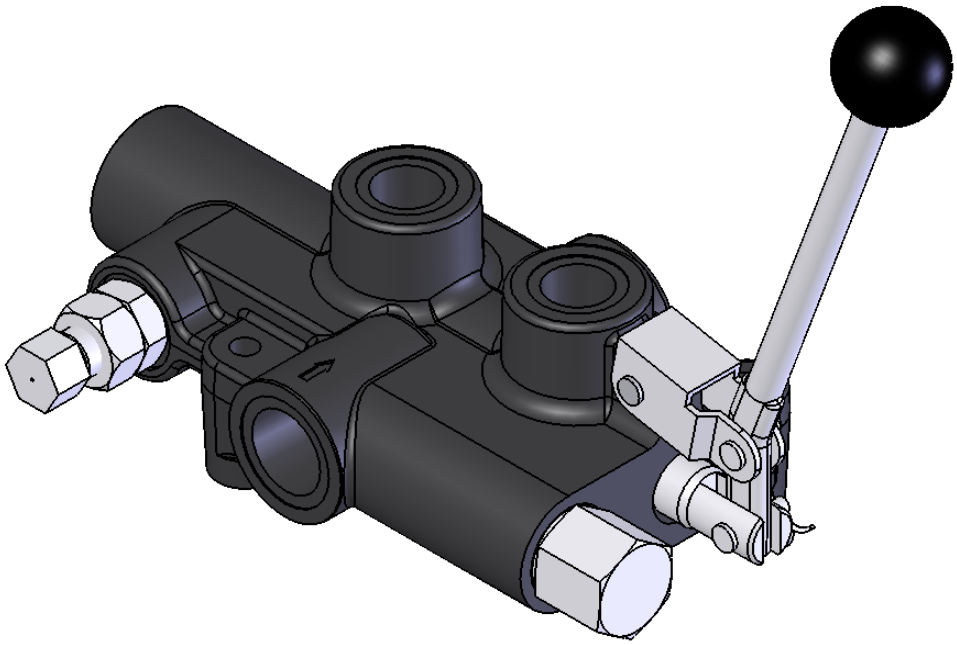
5. Secure the spool (9) or (11) and remove the head cap screw (8). The spool may be secured by using a vice to clamp over the handle end clevis slot (with the slot perpendicular to the jaws) or by placing the clevis slot over a rigid bar. Do not clamp on the outside surface of the spool. Remove the cap screw from the spring end of the spool. If the cap screw socket is rounded out, it can be removed by using a drill to remove the button head, then removing the attachment parts and then using a locking pliers to grasp and remove the screw shank. Finally remmove parts (3), (4), (7) from the spool (9) or (11).

6. The existing o-ring (10) can be cut off. The new o-ring is installed from the attachment end. After placing the new o-ring wait a few minutes so it can regain it is original shape, and then reinstall the spool.

7. The valve is reassembled by following the same directions in reverse. The o-ring and spool must be lubricated with oil before installation.

Badestnost
hydraulic components

Directional control valve - Rapid Extend Log Splitter



Model P81-Rs
Single spool
Mono-block

Sep 2013

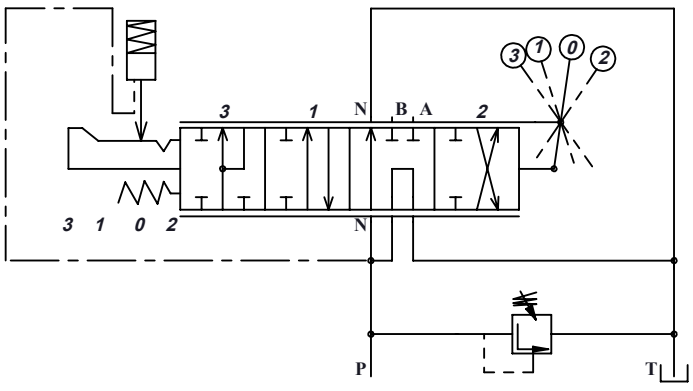
The P81 Rs is a log splitter valve like its earlier version P81 A2, but now it features an extremely fast “rapid extend” high speed mode. The P81 Rs has been specifically designed to reduce system cost by allowing a single stage pump to be used in systems currently using two stage (hi-low) pumps. When extra force is required the P81 Rs allows the user to manually shift from high speed mode to high force mode. A “soft stop” differentiates between high force and high speed modes.

Standard features

- Hydraulically balanced, hard chrome plated spool
- Lever system in which the handle can be installed in up or down position
- Pressure release detent on retract
- Nominal flow - 16 l/min, extends the flow up to 80 l/min
- Manual shift from high speed mode to high force mode
- Spring center 4 position spool with soft stop
- In exposed environments do NOT mount with spool in vertical position

Nominal flow rating		16 l/min	*4 gpm*
Operating pressure (max.)	at port P at work ports A and B	250 bar 300 bar	*3600 psi* *4300 psi*
Back pressure (max.)	outlet port T	10 bar	*150 psi*
Internal leakage (standard) A(B)> T	p = 120 bar	20 cm^3 /min	*1,2 in^3/min*
Fluid		Mineral base oil	
Fluid temperature	with NRB (BUNA-N) seals	from -20°C to 80°C	*from -4°F to 176°F*
Viscosity	operating range	from 15 to 75 mm^2/s	*from 15 to 75cSt*
	min.	12 mm^2/s	*12 cSt*
	max.	400 mm^2/s	*400 cSt*
Max. contamination level		-/19/16 – ISO 4406	*NAS 1638 – class 10*
Ambient temperature for working conditions		from -40°C to 60°C	*from -40°F to 140°F*
Spool stroke		8,5/10,5	*0,34/0,4 in*
Actuating force		<220 N	*<50 lbs*

Hydraulic scheme of P81-Rs-S10



Stroke to pos. 2 (pull) - 8,5 mm
Stroke to pos. 1 (push) - 5,5 mm "High force mode"
Stroke to pos. 3 (push) - 5,5 + 5 mm "High speed mode"

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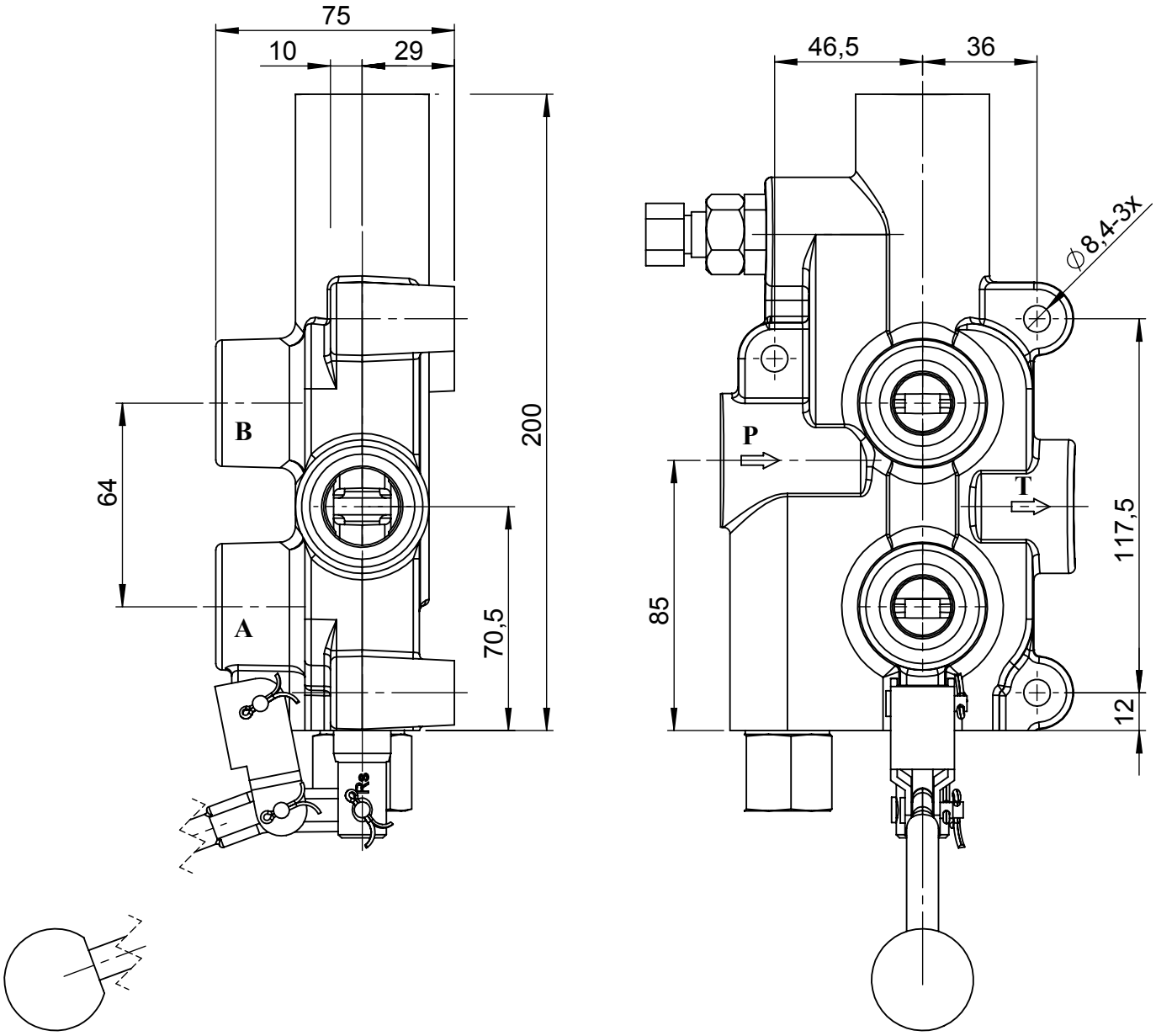

Availabe threads for that valve:

UN-UNF (order code S10)		NPT (order code NPTF)		BSP (order code G12)	
Working ports A, B:	7/8-14UNF	Working ports A,B:	1/2-12 NPTF	Working ports A, B:	G 1/2
Inlet port P:	1-1/16-12UNF	Inlet port P:	3/4-14 NPTF	Inlet port P:	G 3/4
Outlet port T:	1-1/16-12UNF	Outlet port T:	3/4-14 NPTF	Outlet port T:	G 3/4

Order Code: P81 Rs G

Port type (S - UN-UNF, G - BSP, NPT)

Spool type (Rs)

Directional control valve (80 l/min)

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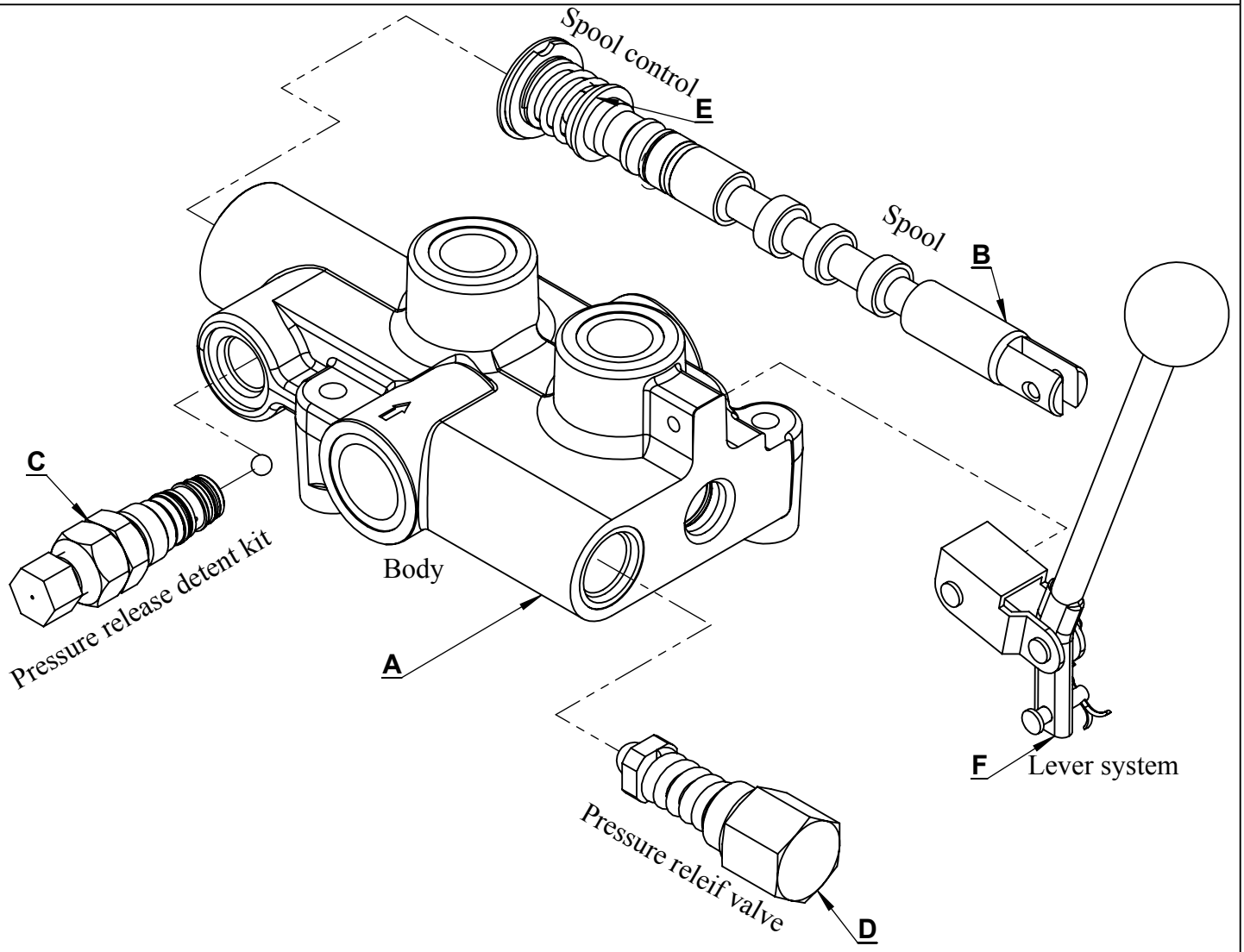
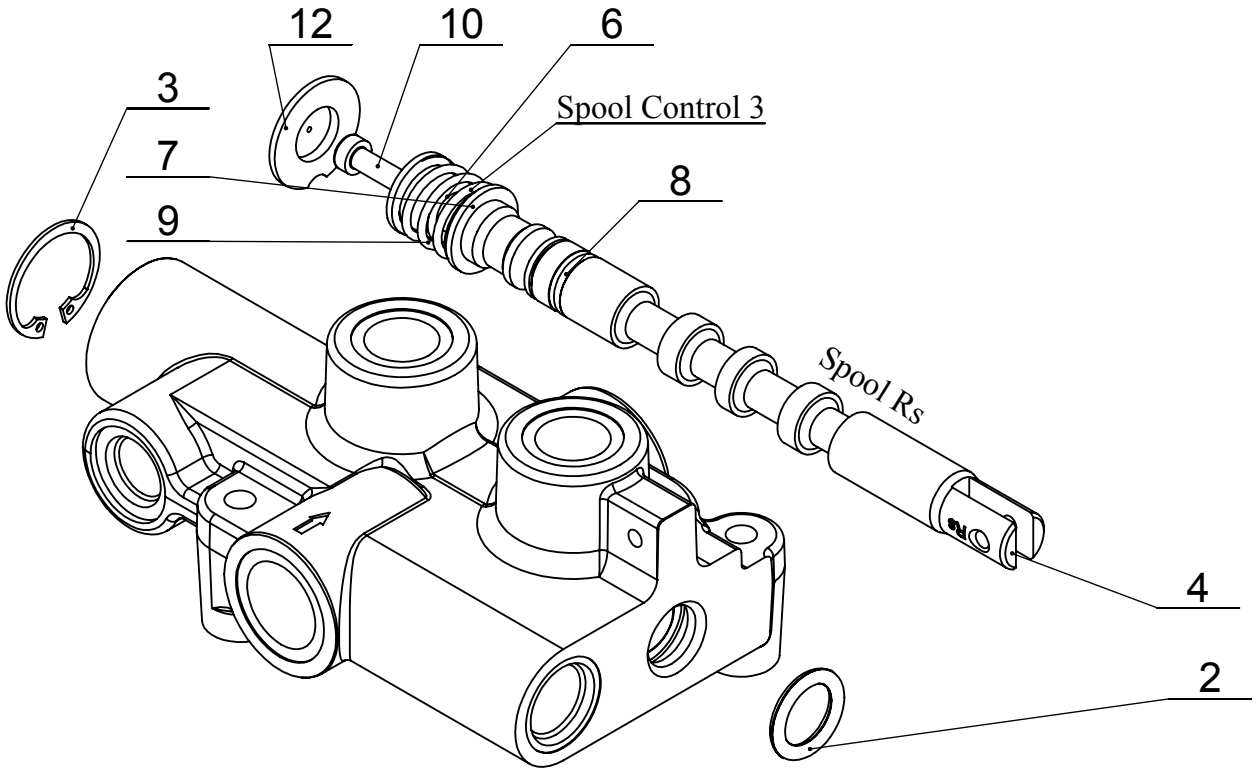
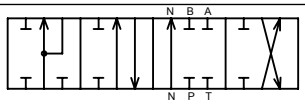


Code	Part No.	Description
A	414.00.00.04	Valve body
B	414.01.00.15	Spool
C		Pressure release detent kit
D		Pressure relief valve
E		Spool control
F		Lever system

Spool and spool control



Code	Part No.	Hydraulic scheme	Description
Rs	414.01.00.00-04		Spool Rs (Regenerative) with closed working ports and open bypass channel

How to replace a broken o-ring (2), (8)

To replace the o-ring (8) on the spool (4) the following procedure must be followed.

1. Remove the pressure release detent. (refer to page 4/7)

2. Use a needle nose pliers to reach into the cavity and to grip onto the small stem on the piston. Remove the piston.

3. Remove the steel ball at the bottom of the piston cavity (a magnet may help).

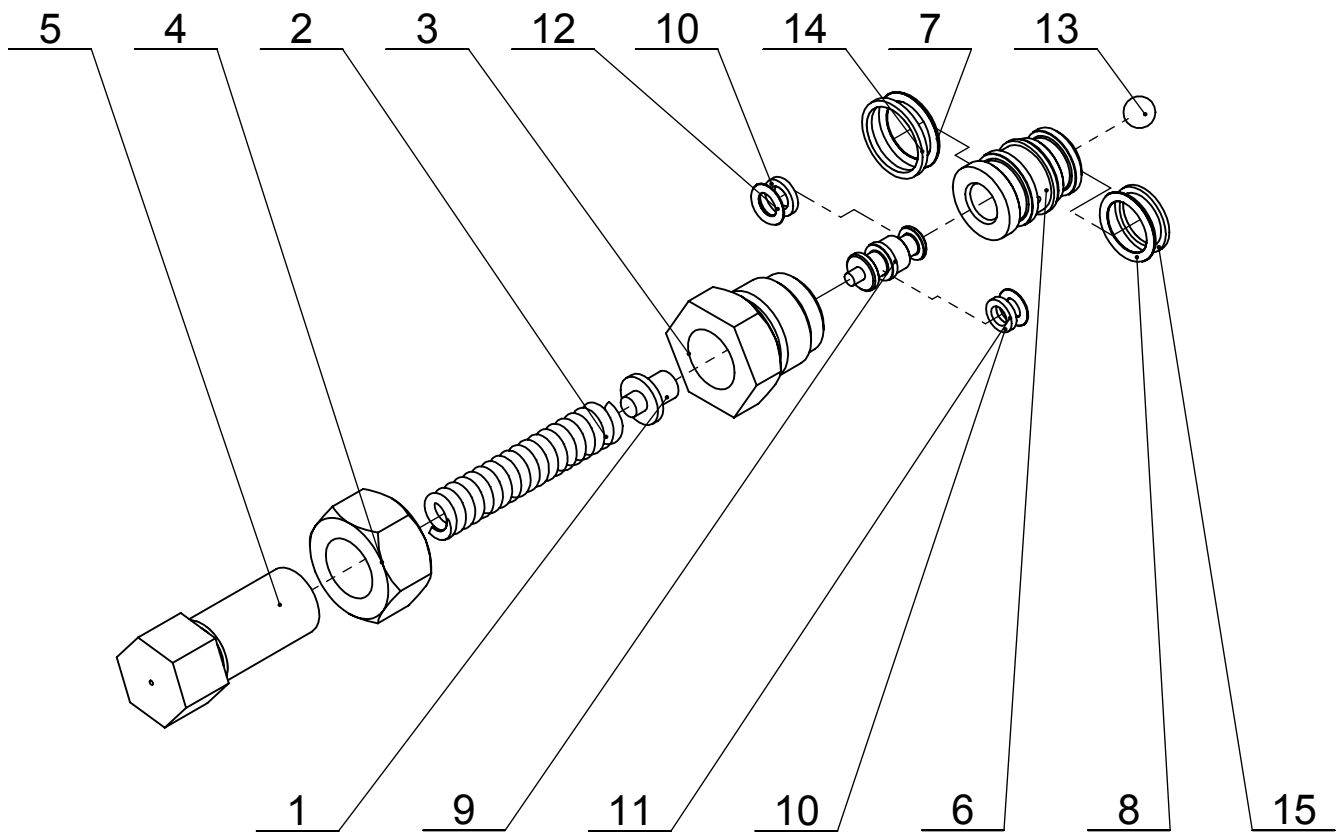
4. After removing the snap ring (3) and end plate (12) at the rear, remove the spool assembly by pushing the spool out the rear. Now you can replace o-ring (2).

5. Secure the spool and remove the button head cap screw (10). The spool may be secured by using a vice to clamp over the handle end clevis slot (with the slot perpendicular to the jaws) or by placing the clevis slot over a rigid bar. Do not clamp on the outside surface of the spool. Remove the cap screw from the spring end of the spool. If the cap screw socket is rounded out, it can be removed by using a drill to remove the button head, then removing the attachment parts and then using a locking pliers to grasp and remove the screw shank. Finally remmove parts (6), (12), (7) from the spool (4).

6. The existing o-ring (8) can be cut off. The new o-ring is installed from the attachment end. After placing the new o-ring wait a few minutes so it can regain it is original shape, and then reinstall the spool.

7. The valve is reassembled by following the same directions in reverse. The o-ring and spool must be lubricated with oil before installation.

Pressure release detent



POS. #	PART #	DESCRIPTION	QTY.
1	414.02.00.01	SPRING ADAPTER	1
2	79.00.03	SPRING	1
3	414.02.00.03	PLUG	1
4	414.02.00.04	JAM NUT	1
5	414.02.00.05	ADJUSTING SCREW	1
6	414.03.01.01	PISTON SLEEVE	1
7	DIN 3771	O-RING 12.5x1.8	1
8	DIN 3771	O-RING 11.2x1.8	1
9	414.03.02.01	PISTON	1
10	-	BACK-UP WASHER 5.1x1.4	2
11	DIN 3771	O-RING 4x1.8	1
12	DIN 3771	O-RING 5x1.8	1
13	-	STEEL BALL	1
14	-	BACKUP RING 16x1,3x1,4	1
15	-	BACKUP RING 14.28x1x1.3	1

Pressure release detent

This feature provides a pressure release detent for the spool “out” (handle in) position. When the spool is manually placed in the detent position oil is directed to the “B” work port (the port away from the handle). When the pressure in the “B” port reaches a preset level the detent will release and the spool will center. The factory setting is 70 bar. The detent release pressure is adjustable by loosening the jam nut (15). Turning the adjusting screw (16) clockwise will increase the detent release pressure and counterclockwise will decrease the pressure.

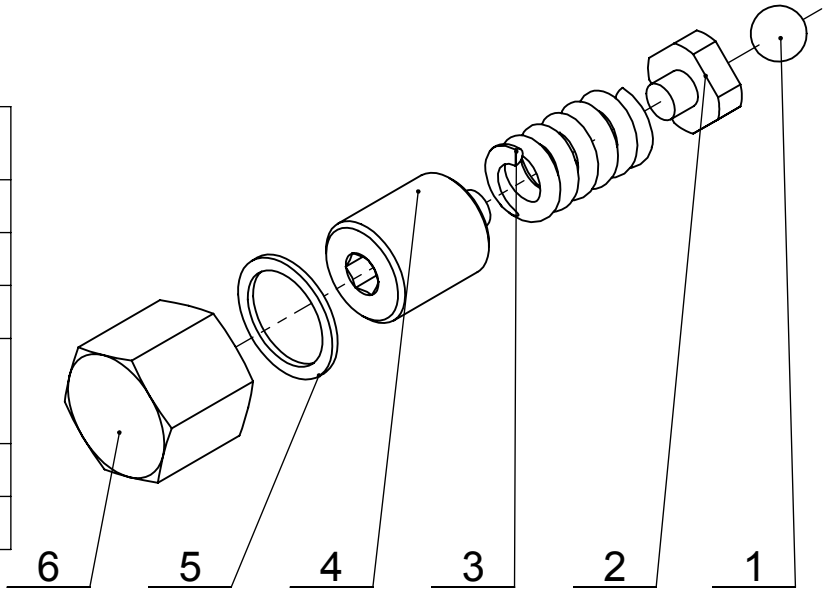
NOTE: If the detent release pressure is adjusted too high the spool will not center, if the pressure is too low the detent will not hold.

Sep 2013

Badestnost
hydraulic components

Relief Valve

POS. #	PART #	DESCRIPTION	QTY.
1	-	STEEL BALL	1
2	414.00.00.18	ADAPTER	1
3	79.00.03	SPRING	1
4	414.00.00.15	ADJUSTING SCREW	1
5	DIN7603	WASHER 21x1.5	1
6	414.00.00.14	ACORN NUT	1



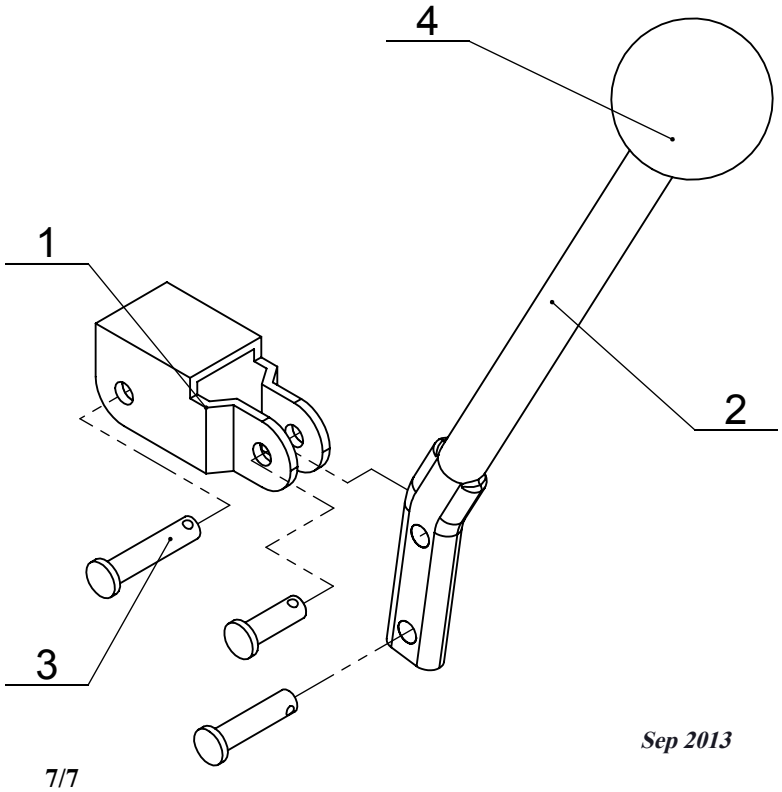
An adjustable ball spring relief valve

The standard factory setting is 150 bar. Other settings can be specified. The relief valve is adjusted by removing the acorn nut (6) and turning the adjusting screw (4). Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure.

Lever system

The lever system can be turned "up" or "down" depending on the location of the valve on the machine. It is done by simply rotating the lever on 180 degrees with respect to its own axis. All pins are locked in position by the use of the three cotter pins.

POS. #	PART #	DESCRIPTION	QTY.
1	414.00.00.09	LINK	1
2	414.00.00.11	LEVER	1
3	414.00.00.07	CLEVIS PIN	3
4	-	KNOB	1
5	-	COTTER PIN	3



Sep 2013

BADESTNOST AD 6200 Chirpan, Bulgaria, Tel: 00359 416 930 12, Fax: 00359 416 955 34
E –mail: badestnost@hydraulic_vlv.com www.hydraulic–vlv.com

directional control valves P120

Распределители гидравлические P120

Description
Назначение и область применения
For starting, controlling and stopping the working fluid between the generator of pressured flow, the consumers a 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 Крепление	3 bolts M10
3.Pressure connections Присоединительные отверстия	internal thread внутренние резби
4.Ambient temperature Температура воздуха	-40C…+60C
5.Pressure medium Рабочая жидкость	mineral oil based hydraulic oil
6.Viskosity Кинематическая вязкость	12…800 mm²/s permissible range 20…100 mm²/s recommended range
7.Fluid temperature	- 15C…+80C
8.Filtration	Oil contamination 10 to NAS1638
9. Max. operating pressure Давление max. bar	P = 250 bar T = 50 bar A, B = 300 bar
10.Leakage Внутренние потери (A, B – T)	30 cm³/min at 120 bar
11.Nominal flow Разход рабочей жидкости	120 l/min (see “operating” diagram)
12.Spool stroke Ход золотника	± 10 mm, L12 = ± 10 mm +6 mm
13.Actuating force	< 300 N in spool axis direction

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directional control valves P120

Распределители гидравлические P120

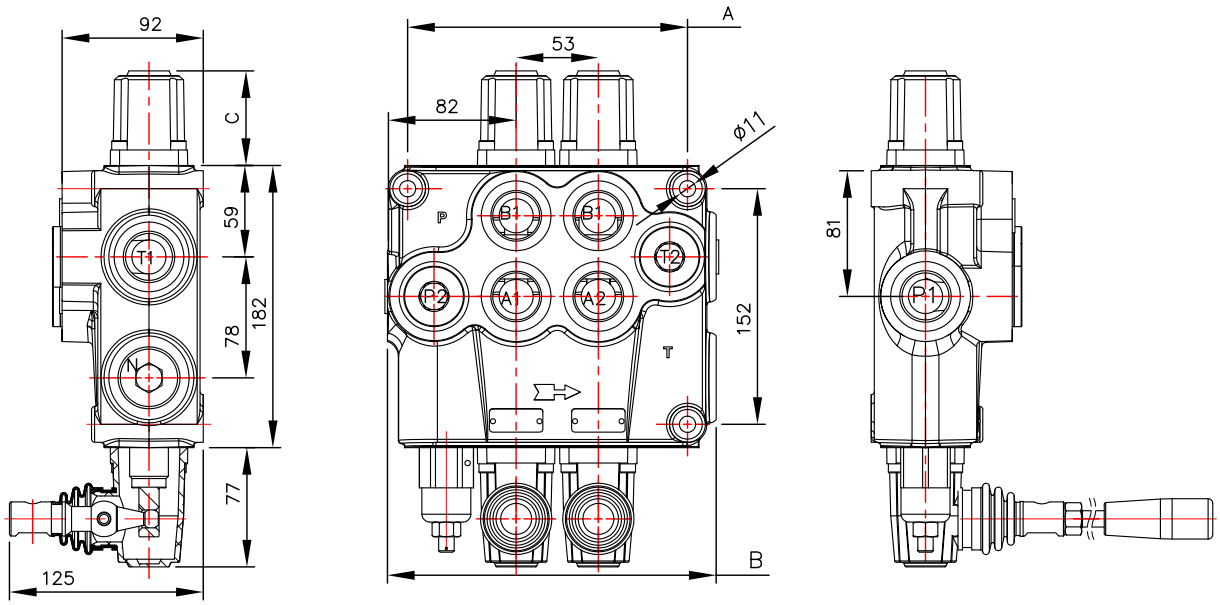


Table 1

	A	B		P1	P2	T1	T2
P120	129	160		+	+	+	+
02P120	182	213		+	+	+	+
03P120	235	266		+	+	+	+
04P120	288	319		+	+	+	+

Table 2

spool control фиксации золотника	C
1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11;	64
12	74

02	P120	1		A	1	A	1	G	KZ1	H	E	C2	11	...
number of spools (table 3)	hydraulic directional control valve P120	parallel distribution (table 4) (parallel)		spool type–distribution (table 5)	spool control (table 6)	second spool distribution (table 5)	second spool control (table 6)	ports threads (table 9)	lever options (table 10)	operation features (table 8)	electric microswitch (table 7)	cary over center (table 11)	conection ports in use (table 12)	there is something else

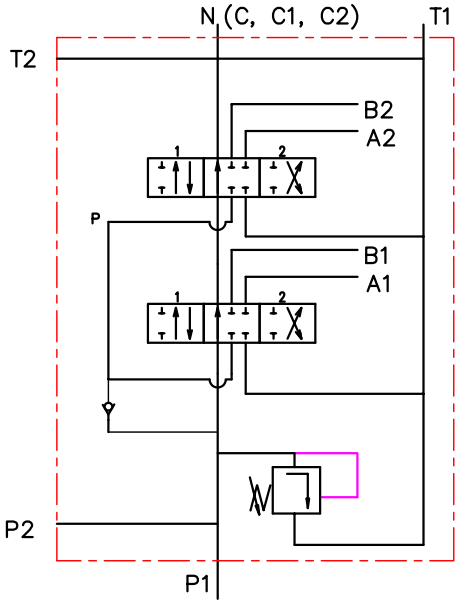
dec 2011

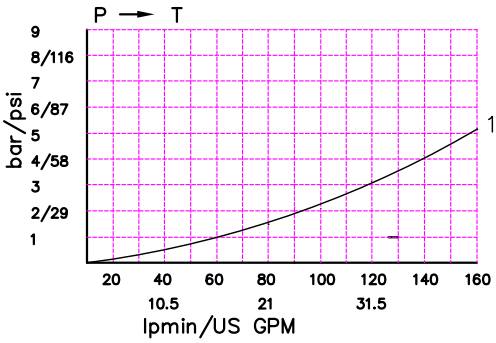
BADESTNOST AD 6200 Chirpan, Bulgaria, Tel: 00359 416 930 12, Fax: 00359 416 955 34
E –mail: badestnost@hydraulic_vlv.com www.hydraulic–vlv.com

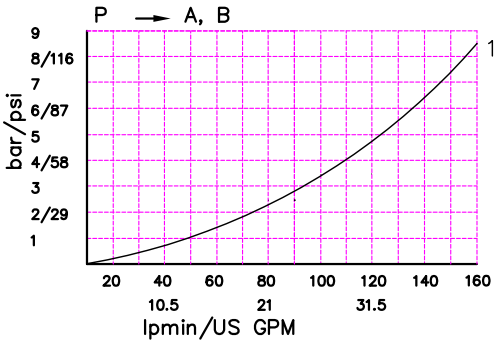
directional control valves P120

Распределители гидравлические P120

02P120 1A1A1







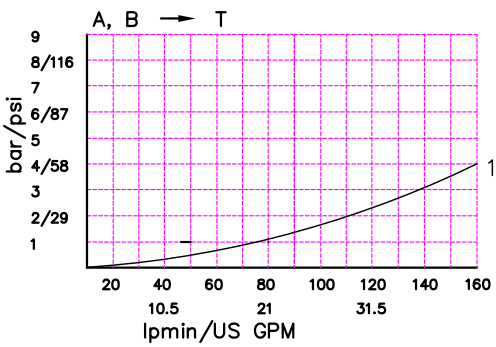


Table 3

code	Number of spools
P120	1
02P120	2

Table 4

code	way of distribution распределение потока
1	parallel ; паралельное

Table 5

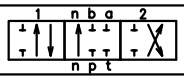
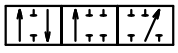
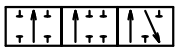
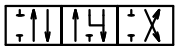
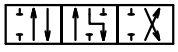
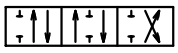
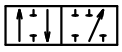
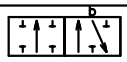
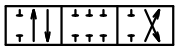
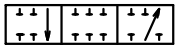
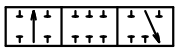
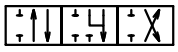
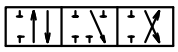
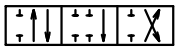
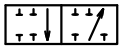
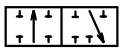
code	spool type
A	
B	
C	
D	
E	
F	
G	
H	
M	
N	
O	
P	
Q	
R	
S	
T	

Table 6

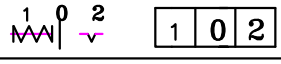
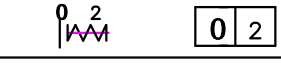
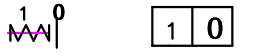
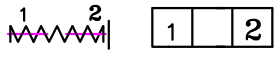
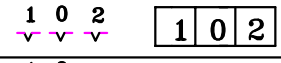
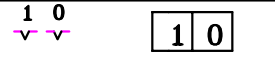
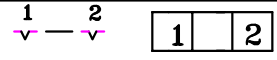
code	spool control
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Table 7

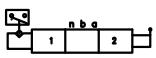
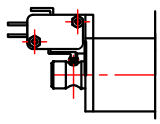
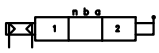
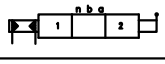
code	с микро шалтер ; incorporated microswitch	
E		mikroswitch type Omron–V 165 I C5 

Table 8

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

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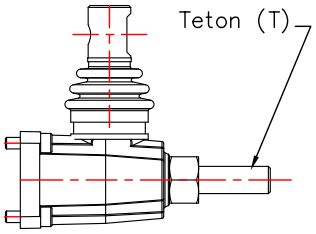
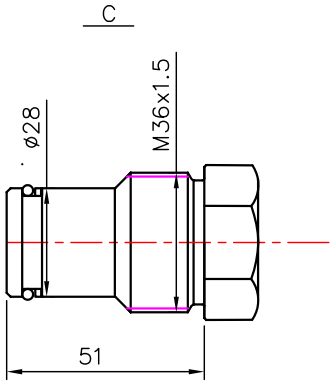
E –mail: badestnost@hydraulic_vlv.com www.hydraulic–vlv.com

treads for conection

Table 9

outlets/ports/	metric	BSP	SAE	
P, A, B, T	M33x2	G 1"	SAE 16	
N	M36x1.5	–	–	–





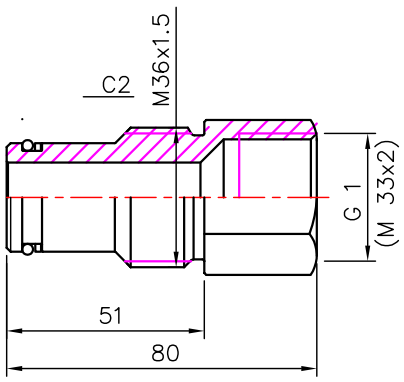


Table 10

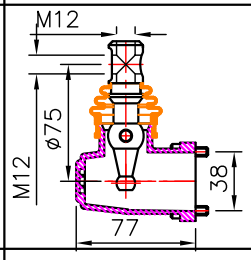
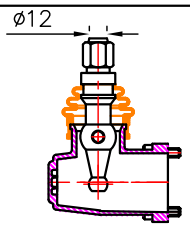
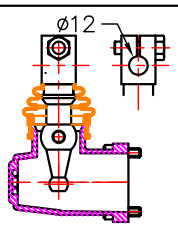
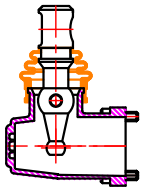
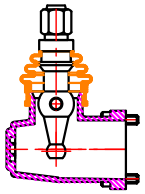
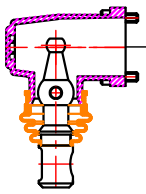
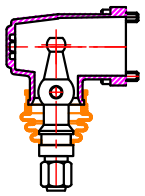
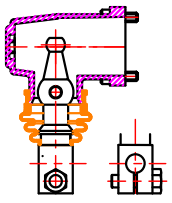
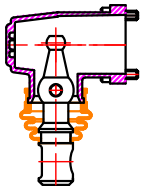
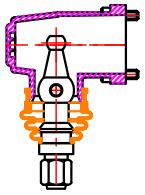
code	with thread M12	code	with zange ø12	code	with zange ø12
KZ		KY		KI	
KZ1	with lever L=200 mm 	KY1	with lever L=200 mm 		
KZ0	rotated 180° 	KY0	rotated 180° 	KI0	rotated 180° 
KZ01	with lever L=200 mm 	KY01	with lever L=200 mm 		

Table 11

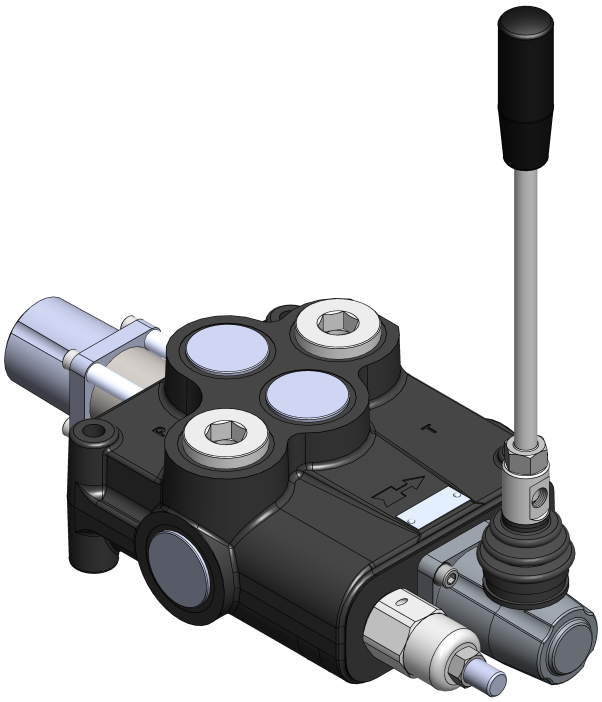
code	metric
X	without port N
–	with port N, closed
C	with port N and plug C – closed center
C1	port N – carry over for EO
C2	port N – carry over, internal thread

Table 12

code	ports for connection in uze
11	P1 ; T1
12	P1 ; T2
21	P2 ; T1
21	P2 ; T1

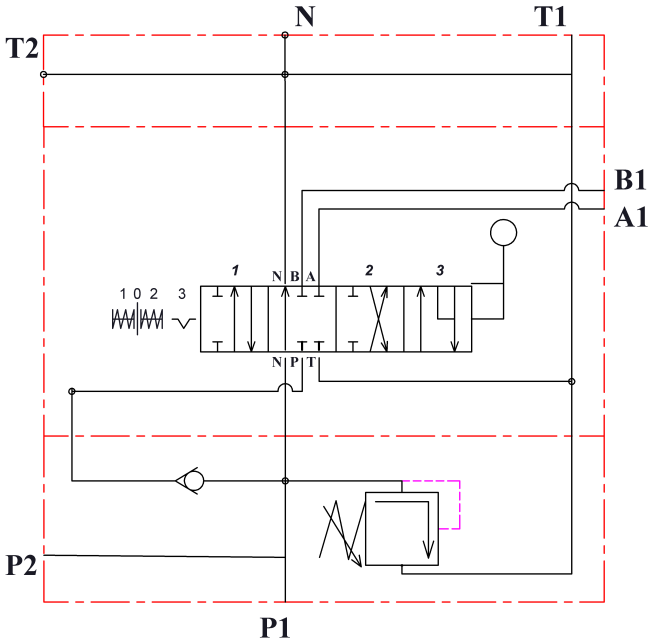
dec 2011

NEW FLOATING SPOOL AND SPOOL POSITIONER for P120



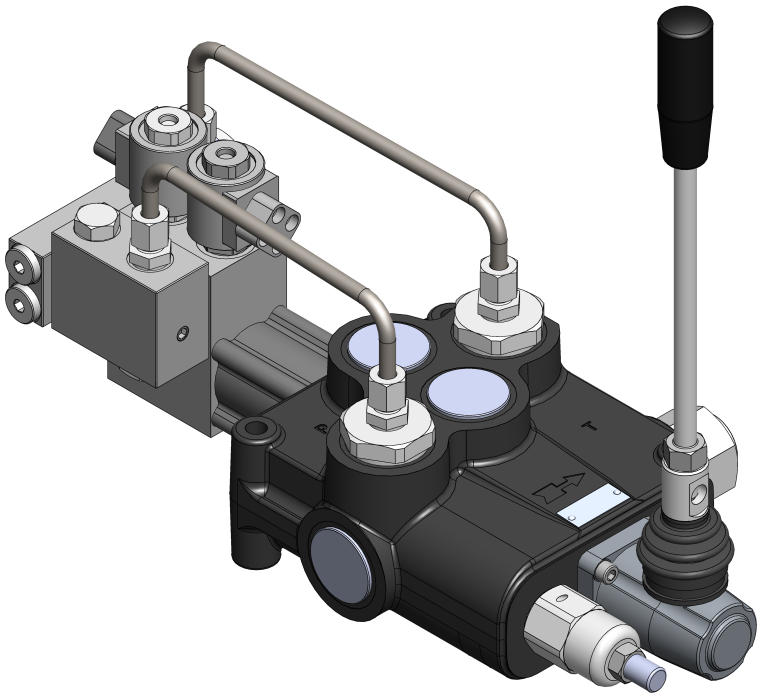
Technical specification		
Flow rate	l/min [gpm]	120 [32]
Max. pressure on A&B	bar [psi]	300 [4350]
Leakage (A,B to T) at 100 bar [1450 psi] and 46 cSt	cm^3/min [in^3/min]	6 [0.37]
Operating pressure	bar [psi]	10 to 50 [145 to 725]
Max. pressure in L	bar [psi]	25 [363]
Additionally machined body of P120		

Sample order code:
P120/L12/G/KZ1/*



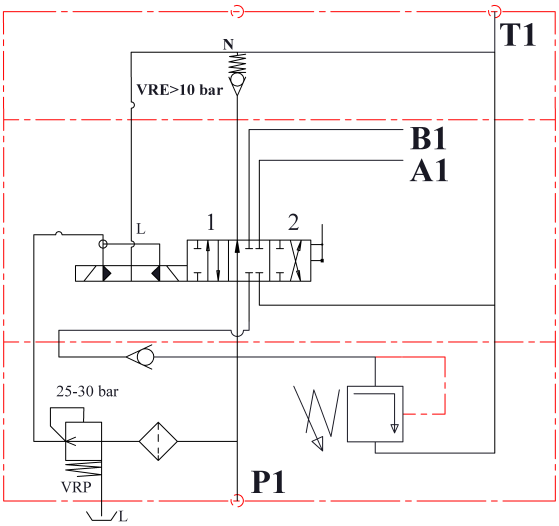
* The body is specially machined, therefore normal spools A, B, cannot be used!

NEW ELECTRO-HYDRAULIC CONTROL for P120



Technical specification		
Flow rate	l/min [gpm]	120 [32]
Max. pressure on A&B	bar [psi]	300 [4350]
Leakage (A,B to T) at 100 bar [1450 psi] and 46 cSt	cm^3/min $[in^3/min]$	6 [0.37]
Operating pressure	bar [psi]	10 to 50 [145 to 725]
Max. pressure in L	bar [psi]	25 [363]
Solenoid operating features		
Nominal voltage tolerance	%	±10
Power rating	W	24
Duty cycle	%	100

Sample order code:
P120/A1EH3/G/KZ1/CED1/24VDC*



* The order code is the same as for P40 and P80 with the difference that directional control valve P120 is up to 4 spools

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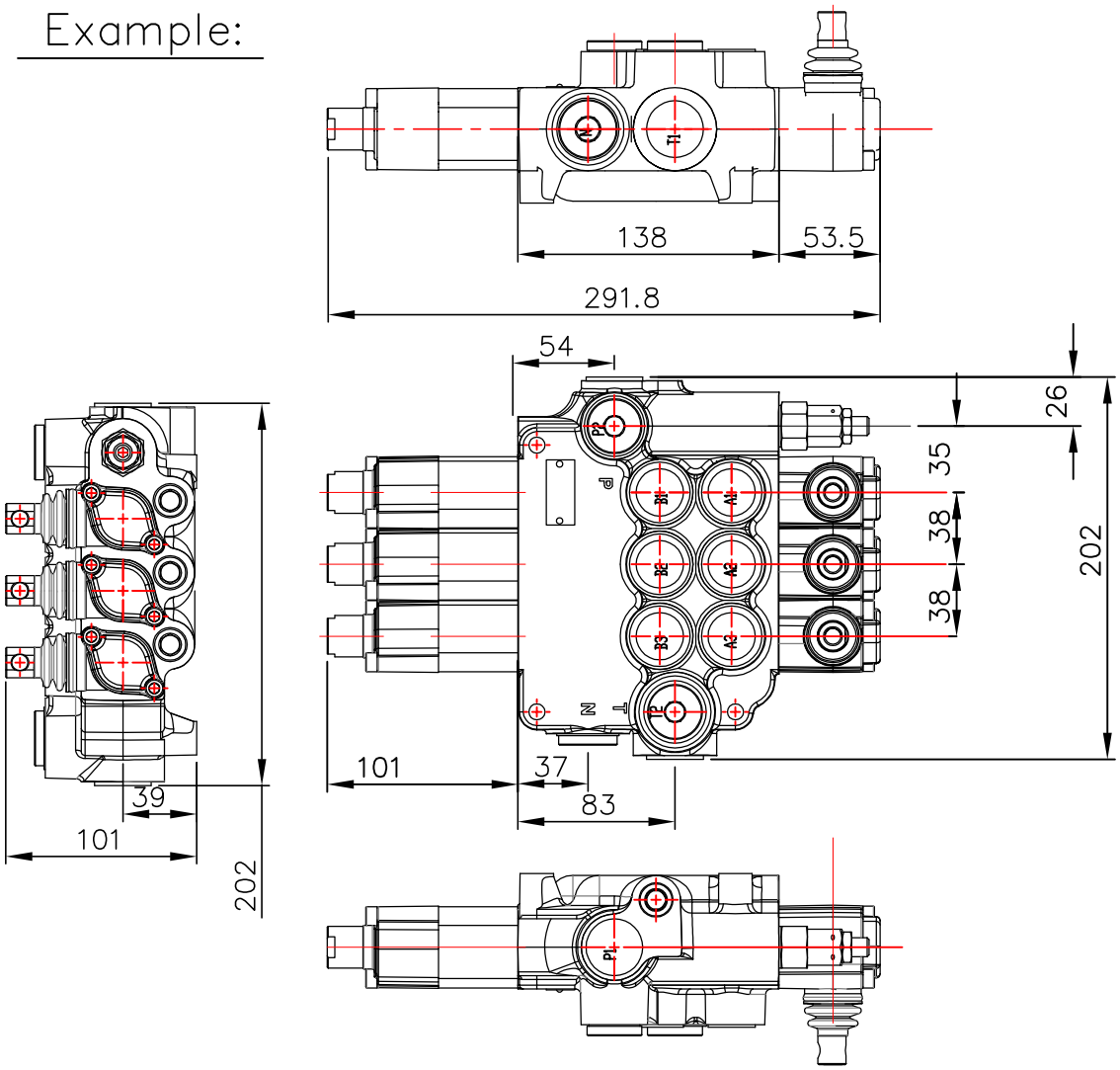
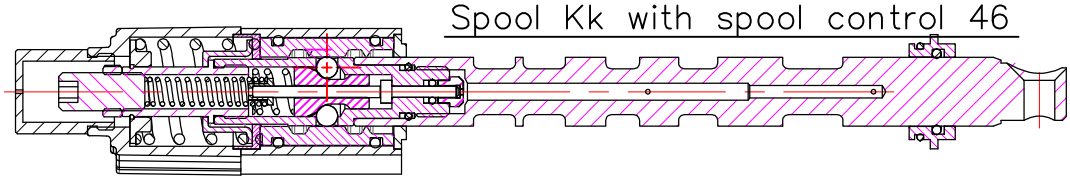
directional control valve P80

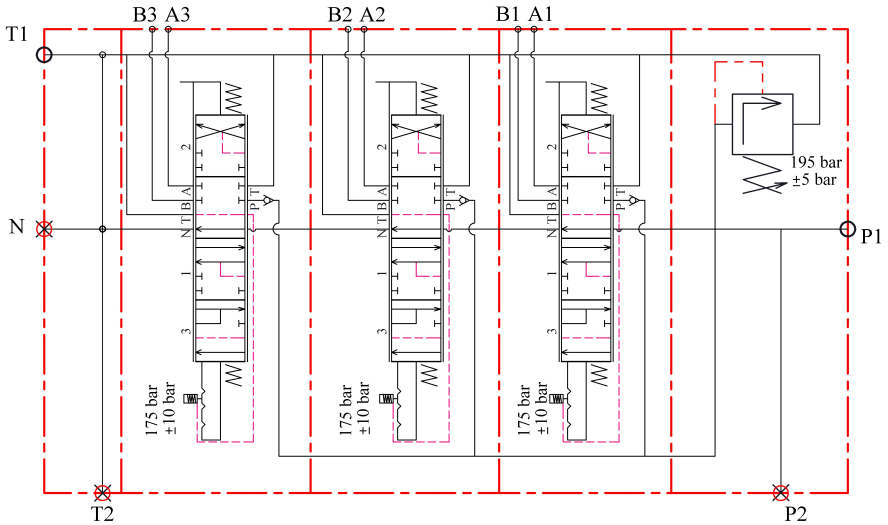
option PK80 (with kick out)

Example:



Spool Kk with spool control 46





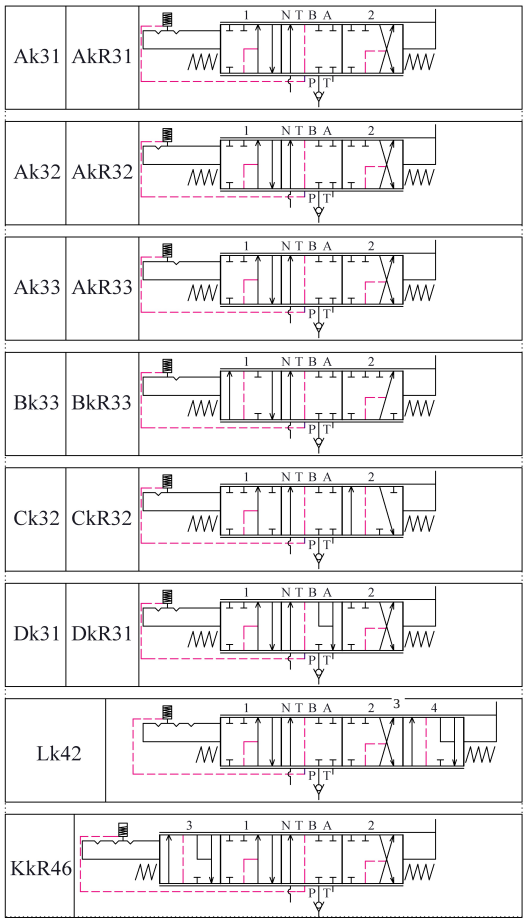
3PK80R195 /1(KkR46KkR46KkR46)175 - M3KZ1-22 (A, B = M20x1.5; P, T, = M24x1.5; N = M26x1.5-DIN3852)

march 2015

Updated May 2015

directional control valve P80

option PK80 (with kick out)



* with PK80 – left inlet

* with PK80R – right inlet

2 PK80 R 1 AkR 31 KkR 46 G KZ1 C2 11

- 2 — number of spools / количество золотников
- PK80 — directional control valve type ... / распределитель типа ...
- R — inlet high pressure – right / вход давления с правой стороны
- 1 — way of distribution/parallel or .../ способ распределения потока
- AkR — first spool distribution type / характеристика первого золотника
- 31 — spool control/detend and ets./ контрол золотника/фиксации и другие/
- KkR — second spool distribution type / вид второго золотника
- 46 — spool control/detend and estr./ контрол золотника/фиксации и другие/
- G — ports /treads/ / резбовие отверстия
- KZ1 — general operation feature / вид ручного управления
- C2 — high pressure carry over / продължител потока високого давления
- 11 — connection ports in use / присоединительные отверстия

*** PK80 body is P80's body with additional machining

*** All other options for PK80 are the same as for P80

Иновативният продукт е внедрен в производство в резултат от изпълнението на проект BG161PO003–1.1.07–0508–C001 "Внедряване на иновативен продукт–хидравличен разпределител с автоматично освобождаване от работна позиция", изпълняван с финансовата подкрепа на оперативна програма "Развитие на конкурентоспособността на българската икономика" 2007–2013, съфинансирана от ЕС чрез ЕФРР и от националния бюджет на Република България.

march 2015

Updated May 2015

HYDRAULIC DIRECTIONAL CONTROL VALVE TYPE PX 80

РАЗПРЕДЕЛИТЕЛ ХИДРАВЛИЧЕН С РЪЧНО УПРАВЛЕНИЕ, ТИП PX 80

TECHNICAL DATA
ТЕХНИЧЕСКИ ДАННИ

Rated flow Номинален дебит	80 l/min
Rated pressure Номинално налягане	
– in the outlets P, A, B and N в изводи P, A, B и N	25 MPa
– in outlet T в извод T	3 MPa
The control pressure range of the main relief valve Диапазон на регулиране на налягането	3÷25 MPa
Working liquid – hydraulic oils characteristics: Работна течност – хидравлични масла с показатели	
– kinematic viscosity кинематичен вискозитет	10÷400 mm^2/s
– degree of filtration степен на филтрация	25 μm
– temperature температура	-25÷60 °C

GENERAL DESCRIPTION
The directional control valve is designed for starting, stopping and handling the working liquid flow between the generators of pressurized flow (hydraulic pumps), the consumers of such a flow (hydraulic cyllinders and s. o.) and the tank, in the hydraulic systems of mobile machines.

ПРЕДНАЗНАЧЕНИЕ
Хидравличният разпределител PX 80 служи за пускане в ход, спиране и контролиране дебита на работната течност между генераторите на напорен поток (хидравличните помпи), потребителите на напорен поток (хидравлични цилиндри, мотори и др.) и резервоара.

CONSTRUCTION
The directional control valve is monoblock type, manually operated, allowing two variants of working liquid distribution – parallel and serial. The charging line of each spool is equipped with check valve, preventing against return of working liquid in case of pump or motor accidental stopping. The primary line of the directional control valve has a built-in main relief valve with indirect operation. The directional control valve can be equipped with end fitting of high pressure (CARRY OVER). The primary line is connected to the pump with pressure gauge socket.

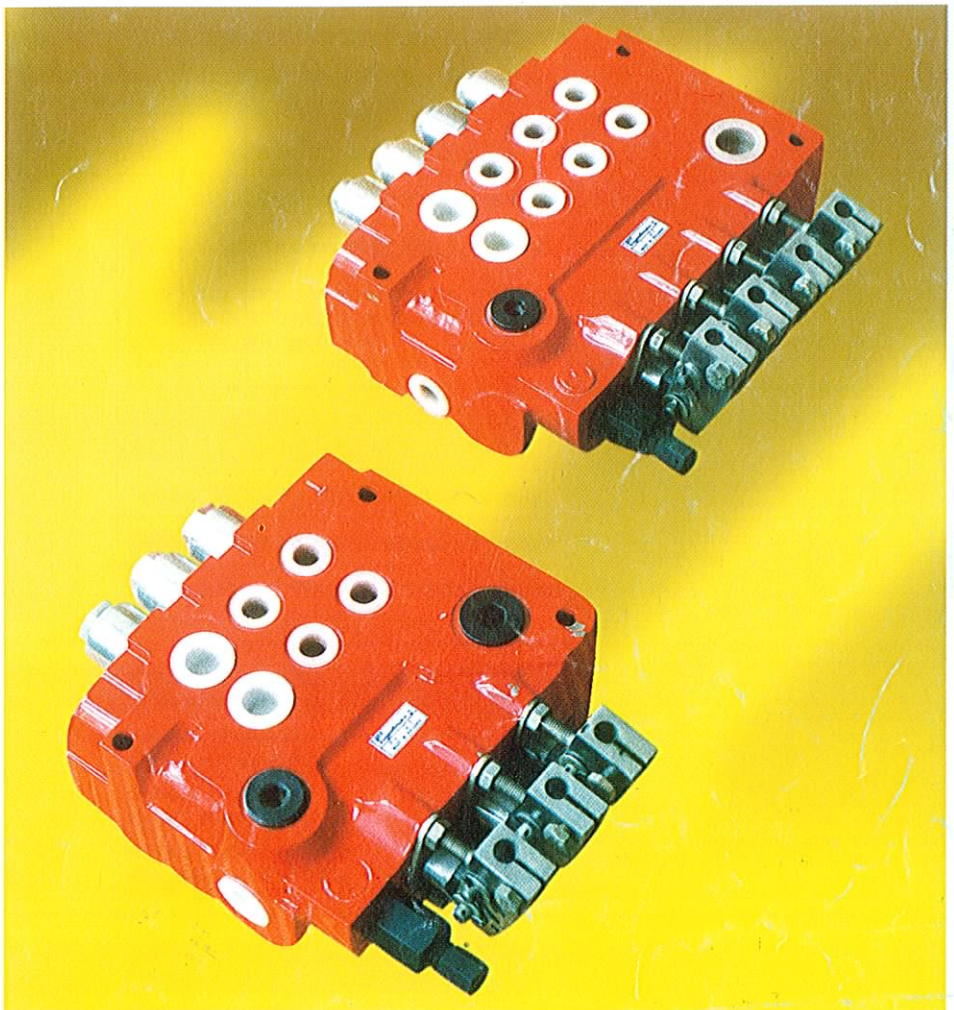
КОНСТРУКЦИЯ
Разпределителят е моноблочен тип с ръчно управление и позволява два вида разпределение на работната течност – паралелно и последователно. Линията, свързана с помпа на всеки плунжер е съоръжена с обратен клапан, предназващ връщането на работната течност при спиране на помпата или двигателя. Към първичната линия на разпределителя е вграден основен предназно-преливен клапан. Разпределителят може да бъде съоръжен с накрайник за високо налягане и накрайник за манометър.

MOUNTING
The directional control valve is mounted to its proper place by means of three securing bolts M10.

ЗАКРЕПВАНЕ
Закрепването към мястото на монтаж се осъществява с три болта M 10.

CONNECTION
The connection is performed by threaded outlets P, A, B, T and N.

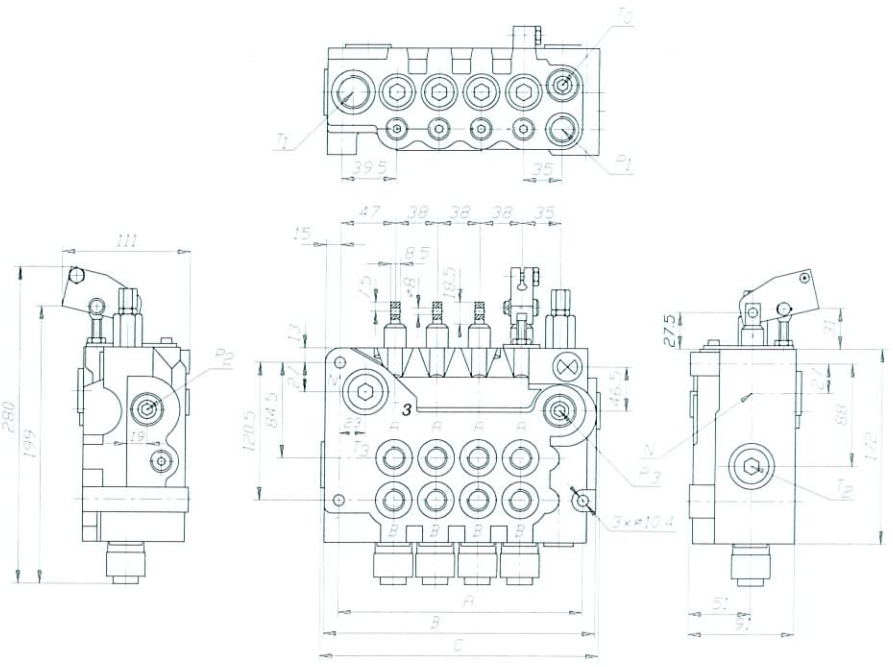
ПРИСЪЕДИНЯВАНЕ
За присъединяване към хидравличната система служат резбовите отвори P, A, B, T и N.



EXAMPLE: PX 80-1BAAA/2T/1/1111M /11 designates a hydraulic directional control valve, type 80, parallel distribution of the working liquid /1/; 4-spools with first spool distribution scheme B; second, third, fourth spool with distribution scheme A; with possibility for incorporating an electric microswitch to each spool /2/; tropical version /T/; manual operation /1/; spring centering of the first, second, third, and fourth spools /1111/ with built-in pressure gauge socket /M/; open center / /; with outlet for pump P_1 and outlet to the tank T_1 /11/.

ПРИМЕР: PX 80-1BAAA/2T/1/1111M /11 означава: разпределител хидравличен, тип PX 80, с паралелно разпределение на работната течност код „1" /Табл.1/, четириплунжерен с първи плунжер със схема на разпределение код „B" /Табл.2/, втори, трети и четвърти плунжери със схема на разпределение код „A" /Табл.2/, с възможност за вграждане на електрически микропревключвател към всеки плунжер код „2" /Табл.3/, тропическо изпълнение код „T" /Табл.4/, ръчно управление код „1" /Табл.5/ пружинно центриране на I, II, III, и IV плунжери код „1" /Табл.6/, с вграден накрайник за манометър код „M" /Табл.7/, отворен център код „ " /Табл.8/, използвани изводи за помпа P1 и извод за резервоар T1 код „11" /Табл.9/

Spool's number Номер на плунжера	3	4
A (mm)	177	215
B (mm)	204	242
C (mm)	212	250
Mass (Kg)	17.2	20.2



HOW TO ORDER
НАЧИН НА ЗАЯВКА

PX 80 1 B A A A / 2 T / 1 / 1111 M /11

- Hydraulic directional control valve
  Разпределител хидравличен
- type 80 тип 80
- Way of distribution – Table 1
  Вид на разпределение – Табл. 1
- First spool distribution scheme – Table 2
  Схема на разпределение на 1ви плунжер – Табл.2
- Second spool distribution scheme – Table 2
  Схема на разпределение на 2ри плунжер – Табл.2
- Third spool distribution scheme – Table 2
  Схема на разпределение на 3ти плунжер – Табл.2
- Fourth spool distribution scheme – Table 2
  Схема на разпределение на 4ти плунжер – Табл.2
- Possibility of incorporating an electric microswitch – Table 3
  Възможност за вграждане на електрически микропревключвател – Табл. 3
- Climatic version – Table 4
  Климатично изпълнение – Табл.4
- General features of operation – Table 5
  Особености на управлението – Табл.5
- The way of centering, fixing and spool stroke restriction corresponding on the 1st, 2nd, 3rd, 4th spool – Table 6
  Вид на центрирането и фиксирането на плунжерите и последователност на включване на общия микропревключвател съответно на 1, 2, 3 и 4 плунжер – Табл.6
- Availability of pressure gauge socket – Table 7
  Наличие на накрайник за манометър – Табл.7
- General feature of working liquid return – Table 8
  Особености на връщане на работната течност – Табл.8
- Connection ports in use – Table 9
  Използувани присъединителни отвори – Табл.9
- Additional features – have to be written after the designation
  Допълнителни особености – изписват се след основното означение

TABLE 1
ТАБЛИЦА 1

CODE КОД	WAY OF WORKING LIQID DISTRIBUTION ВИД НА РАЗПРЕДЕЛ. НА РАБ. ТЕЧНОСТ
1	PARALLEL DISTRIBUTION ПАРАЛЕЛНО РАЗПРЕДЕЛЕНИЕ
2	SERIAL – PARALLEL ПОСЛЕДОВАТЕЛНО – ПАРАЛЕЛНО

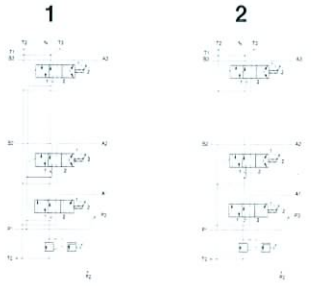
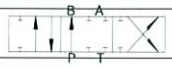
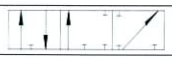
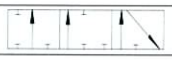
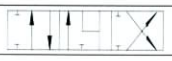
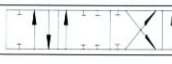


TABLE 2
ТАБЛИЦА 2

CODE КОД	SPOOLS DISTRIBUTION SCHEMES СХЕМА НА РАЗПРЕДЕЛЕНИЕ
A	
B	
C	
E	
H	
K	

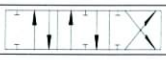
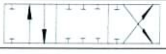
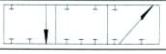
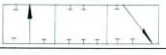
CODE КОД	SPOOLS DISTRIBUTION SCHEMES СХЕМА НА РАЗПРЕДЕЛЕНИЕ
M	
T	
X	
Y	
Z	

TABLE 3
ТАБЛИЦА 3

CODE КОД	POSSIBILITY OF INCORPORATING AN ELECTRIC MICROSWITCH ВЪЗМОЖНОСТ ЗА ВГРАЖДАНЕ НА ЕЛЕКТРИЧЕСКИ МИКРОПРЕВКЛЮЧВАТЕЛ
1	WITHOUT POSSIBILITY / БЕЗ ВЪЗМОЖНОСТ
2	ELECTRIC MICROSWITCH / ЕЛЕКТРИЧЕСКИ МИКРОПРЕВКЛЮЧВАТЕЛ КЪМ ВСЕКИ ПЛУНЖЕР
3	GENERAL ELECTRIC MICROSWITCH / ОБЩ ЕЛЕКТРИЧЕСКИ МИКРОПРЕВКЛЮЧВАТЕЛ
4	ELECTRICAL MICROSWITCH TO EACH SPOOL AND GENERAL ELECTRIC MICROSWITCH ЕЛЕКТРИЧЕСКИ МИКРОПРЕВКЛЮЧВАТЕЛ КЪМ ВСЕКИ ПЛУНЖЕР И ОБЩ ЕЛЕКТРИЧЕСКИ МИКРОПРЕВКЛЮЧВАТЕЛ

TABLE 4
ТАБЛИЦА 4

CODE КОД	CLIMATIC VERSION КЛИМАТИЧНО ИЗПЪЛНЕНИЕ
	NORMAL VERSION / НОРМАЛНО ИЗПЪЛНЕНИЕ
T	TROPICAL VERSION / ТРОПИЧЕСКО ИЗПЪЛНЕНИЕ
N	COLD RESISTANT VERSION / СТУДОУСТОЙЧИВО ИЗПЪЛНЕНИЕ

TABLE 5
ТАБЛИЦА 5

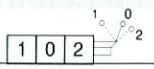
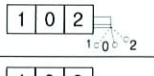
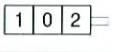
CODE КОД	OPERATION FEATURES ОСОБЕНОСТИ НА УПРАВЛЕНИЕТО	
1	MANUAL OPERATION РЪЧНО УПРАВЛЕНИЕ	
2	MANUAL OPERATION РЪЧНО УПРАВЛЕНИЕ	
3	WITHOUT LEVER SYSTEM БЕЗ ЛОСТОВА СИСТЕМА	

TABLE 6
ТАБЛИЦА 6

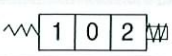
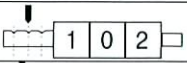
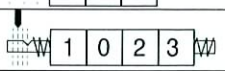
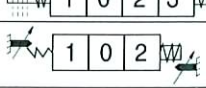
CODE КОД	THE WAY OF SPOOL CENTERING, FIXING AND STROKE RESTRICTION ОСОБЕНОСТИ НА УПРАВЛЕНИЕТО	
1	SPRING CENTERING ПРУЖИННО ЦЕНТРИРАНЕ	
2	FIXING IN POSITIONS 1, 0 AND 2 ФИКСИРАНЕ В ПОЗИЦИЯ 1, 0 И 2	
3	SPRING CENTERING AND FIXING IN POSITION 3 ПРУЖИННО ЦЕНТРИРАНЕ И ФИКСИРАНЕ В ПОЗ. 3	
4	SPRING CENTERING AND VARIABLE STROKE RESTRICTION ПРУЖИННО ЦЕНТРИРАНЕ И ОГРАНИЧАВАНЕ НА ХОДА	

TABLE 7
ТАБЛИЦА 7

CODE КОД	AVAILABILITY OF PRESSURE GAUGE SOCKET НАЛИЧИЕ НА НАКРАЙНИК ЗА МАНОМЕТЪР
	WITHOUT PRESSURE GAUGE SOCKET БЕЗ НАКРАЙНИК ЗА МАНОМЕТЪР
M	WITH PRESSURE GAUGE SOCKET С НАКРАЙНИК ЗА МАНОМЕТЪР

TABLE 8
ТАБЛИЦА 8

CODE КОД	GENERAL FEATURES OF WORKING LIQUID RETURN ОСОБЕНОСТИ НА ВРЪЩАНЕТО НА РАБОТНАТА ТЕЧНОСТ
	OPEN CENTER / ОТВОРЕН ЦЕНТЪР
C	CLOSED CENTER / ЗАТВОРЕН ЦЕНТЪР
C1	WITH BUILT-IN END FITTING TYPE 1 С ВГРАДЕН НАКРАЙНИК ТИП 1
C2	WITH BUILT-IN END FITTING TYPE 2 С ВГРАДЕН НАКРАЙНИК ТИП 2

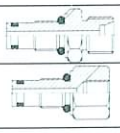


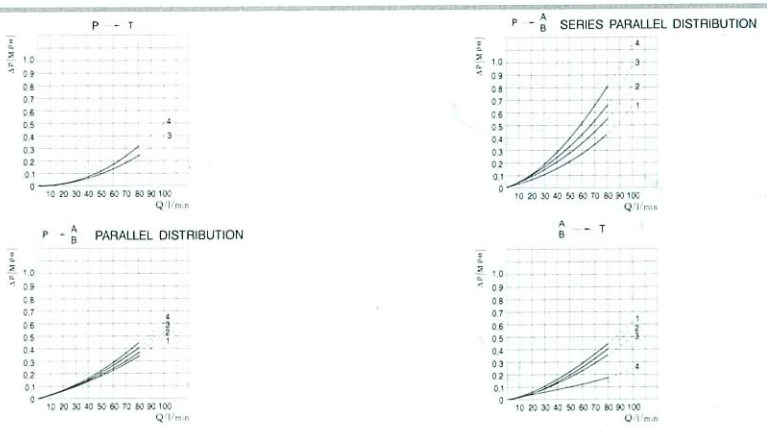
TABLE9
ТАБЛИЦА 9

CODE КОД	CONNECTION PORTS IN USE ИЗПОЛЗУВАНИ ПРИСЪЕДИНИТЕЛНИ ОТВОРИ
11	P_1T_1
12	P_1T_2
13	P_1T_3
21	P_2T_1
22	P_2T_2
23	P_2T_3
31	P_3T_1
32	P_3T_2
33	P_3T_3
1	P_1T_2N
2	P_2T_2N
3	P_3T_2N

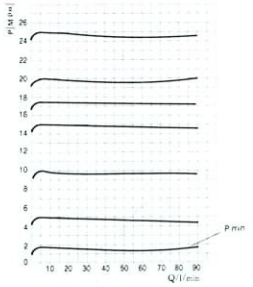
TABLE 10
ТАБЛИЦА 10

CODE КОД	THREAD VERSIONS OF THE PORTS РЕЗБОВИ ИЗПЪЛНЕНИЯ НА ОТВОРИТЕ		DESCRIPTION ЗАБЕЛЕЖКА
P	M22x1,5; (M24x1,5)		The concrete version or variants on specific requests have to be written after the designation. Други варианти на резбови изпълнения на отворите се договарят допълнително.
A,B	M22x1,5; M18x1,5; (M20x1,5)		
T	M27x2; M26x1,5; (M24x1,5)		
N	VERSION / ВАРИАНТ C1	M27x2	
	VERSION / ВАРИАНТ C2	M22x1,5	

The characteristics of $\Delta p=f(Q)$ at working liquid of kinematic viscosity 35 mm²/s and temperature of 50°C.
Характеристики $\Delta p=f(Q)$ при работна течност с кинематичен вискозитет 35 mm²/s и температура 50°C.



The main relief valve characteristic $p=f(Q)$ at working liquid with kinematic viscosity of 35 mm²/s и температура 50°C.
Характеристики $p=f(Q)$ на основния предпазен клапан при работна течност с кинематичен вискозитет 35 mm²/s и температура 50°C.



BADESTNOST AD 6200 Chirpan, Bulgaria, Tel: 00359 416 941 35, Fax: 00359 416 955 34
E –mail: badestnost@hydraulic–vlv.com; www.hydraulic–vlv.com

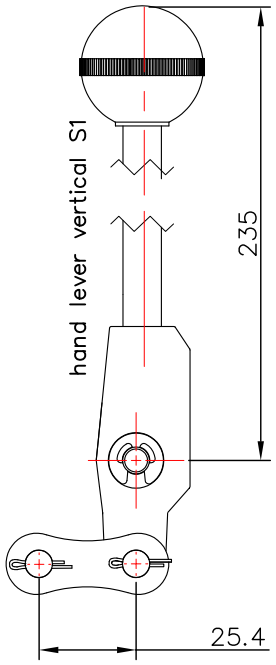
RRV ... 3/2 or 3/3 circuit selector valve is designed to handle flow rates up to 120 l/min(32GPM) at a maximum pressure 250 bar. (3630 psi).

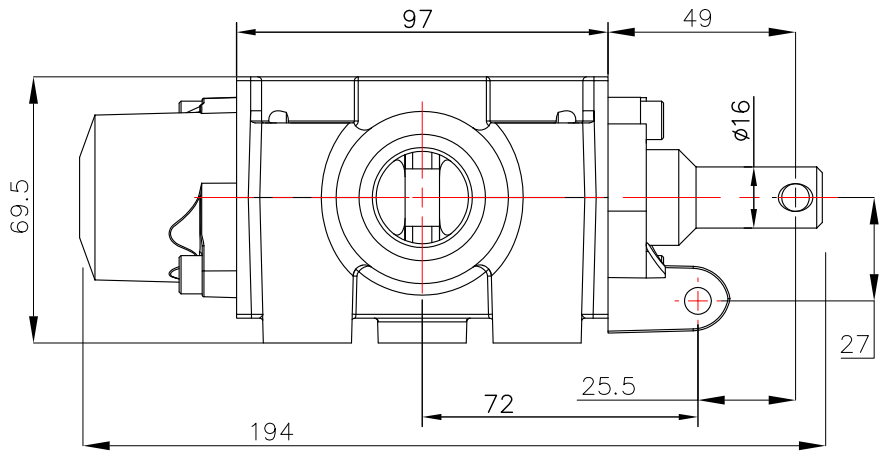
The valve can be equipped with a number of different spools to provide 3/3 as well as 3/3 functions.

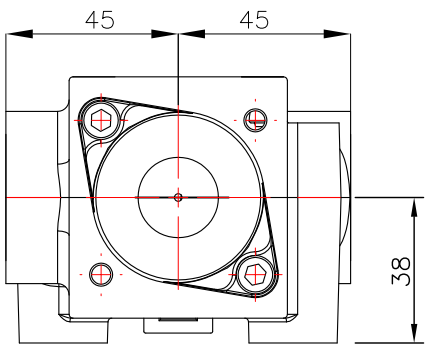
The RRV can be controlled either by hand or any direct acting force on the spool in combination with spring center or detent mechanizm.

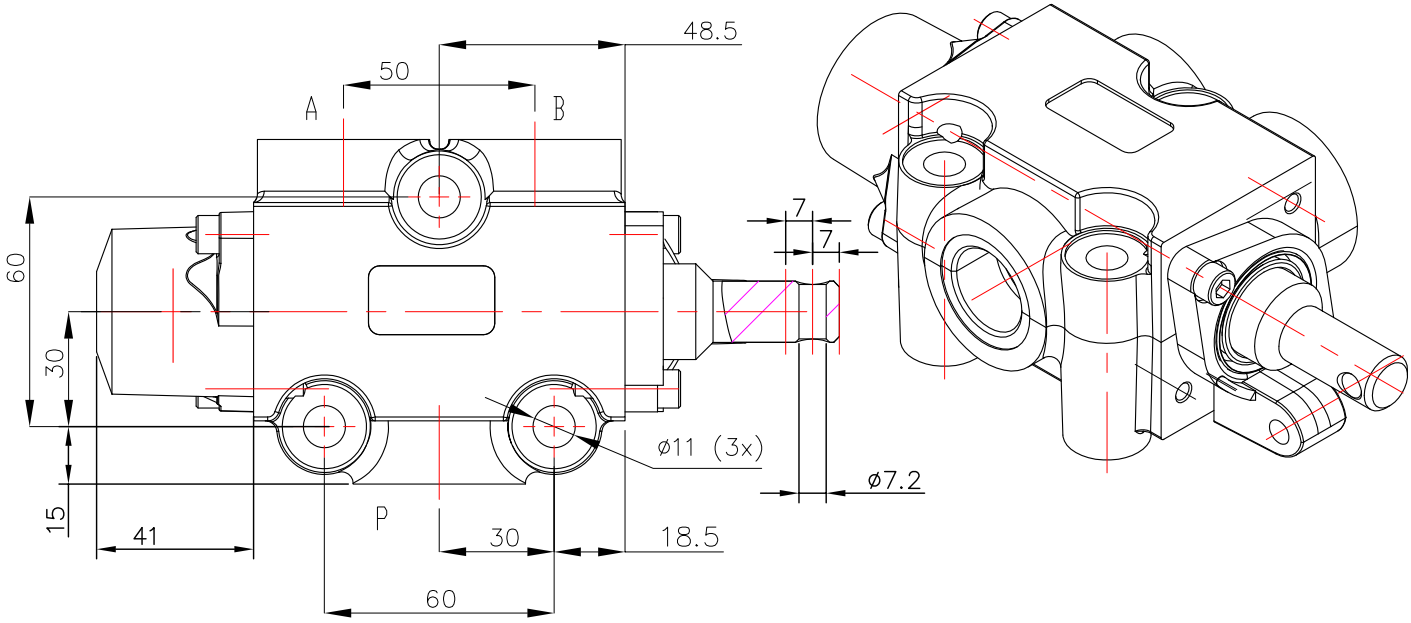
The RRV ... can be equipped with pneumatic and hydraulic contol.

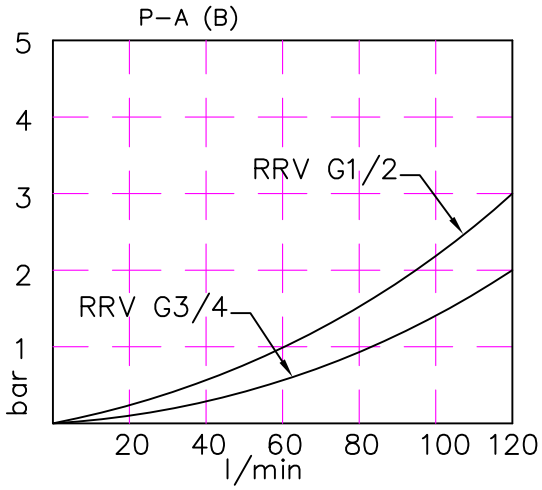
Max. working pressure	250 bar	3630 psi
Max. flow rate	120 l/min	32 GPM
Temperature range	–30 to 80°C	–40 to 176F°
Internal leakage A(B) to T(100 bar, 35 cst)	10 ccm/min	

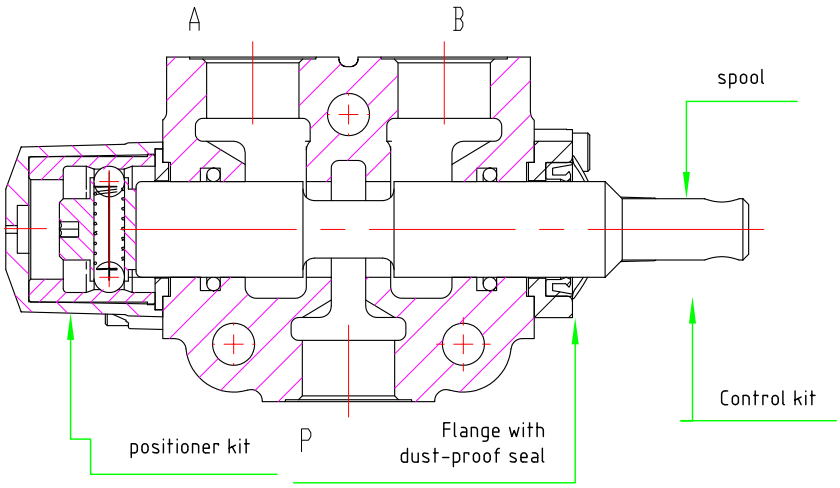












Order code

RRV G12 A11 S1–model example

1.Body kit standart – G3/4

2.Spool options

A–3 way 2 positions with ports connected in transit position

B–3 way 2 positions with ports closed in transit position

AT–type A with spherical end

An–type A spring return in pos. 1

Re–3 way 2 positions with ports closed in transit position

CV–2 way 2 positions with check valve

3.Positioner kits

1–3 positions, sprig centered
4–pos 0–2 spring return in 0
5–pos 1–0 spring return in 0
6–pos 1–2 spring return in 1
7–pos 1–2 spring return in 2
8–3 positions detent in 1,0,2
9–pos 1–0 detent in 0,1
10–pos 0–2 detent in 0,2
11–pos 1–2 detent in 1,2

4.Control kits

S1–vertical hand lewer 235 mm
S7–horisontal hand lever 235 mm
– without lever

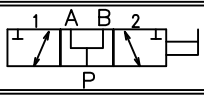
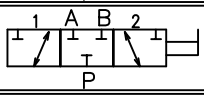
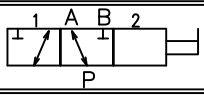
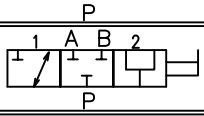
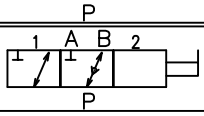
P–pneumatic kit on/off 1/8–27NPTF with spring return in pos. 2– pilot pressure 6–10 bar (87–145psi)

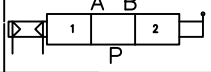
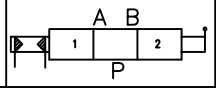
H–hydraulic kit on/off G1/4 with spring return in pos. 2– pilot pressure 30–250bar (435–3600psi)

RRV ...

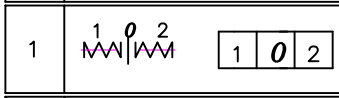
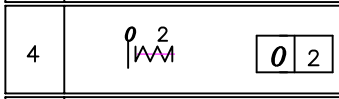
code	ports dimensions
ports	P, A, B
G12	G 1/2
G34	G 3/4
SAE10	7/8–14(SAE10)
SAE12	1 1/16–12(SAE12)

RRV ...

code	Spool type
A	
B	
An	
Re	
CV	

code	operation feature	
S1	hand lever vertical S7–horizontal	
P		pneu matic
H		hydraulic

RRV ...

code	Spool control
1	
4	
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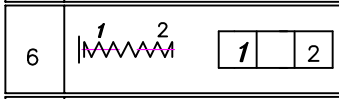
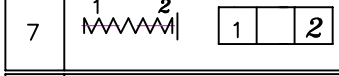
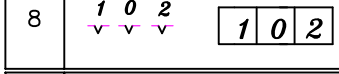
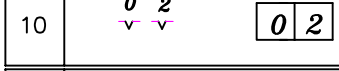
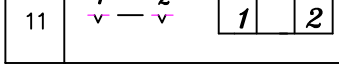
6	
7	
8	
9	
10	
11	

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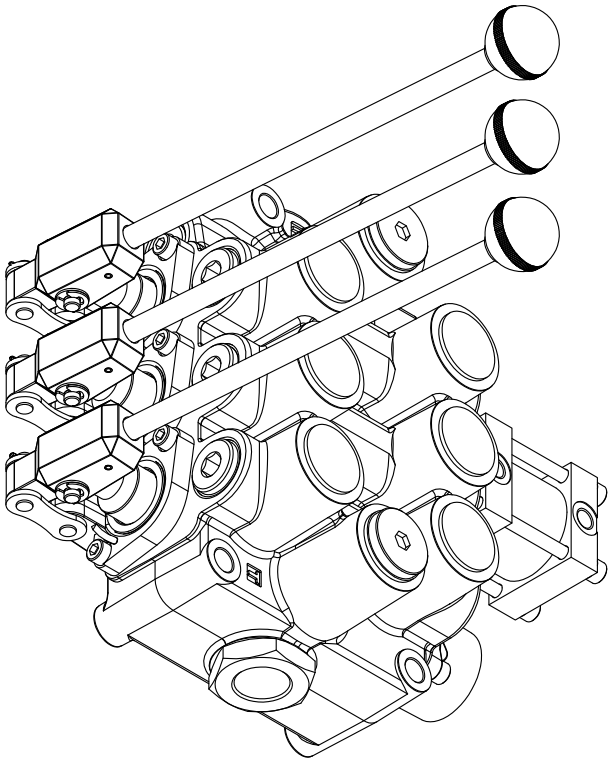
E -mail:badestnost@hydraulic-vlv.com www.hydraulic-vlv.com



Description
Назначение и область применения
For starting, controlling and stopping the working fluid between the generator of pressured flow, the consumers ai 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 Крепление	3 bolts M8
3.Pressure connections Присоединительние отверстия	internal thread внутренние резби
4.Ambient temperature Температура воздуха	-40C…+60C
5.Pressure medium Рабочая жидкость	mineral oil based hydraulic oil
6.Viskosity Кинематическая вязкость	12…800 mm²/s permissible range 20…100 mm²/s recommended range
7.Fluid temperature	- 15C…+80C
8.Filtration	Oil contamination 10 to NAS1638
9. Max. operating pressure Давление max. bar	P = 250 bar T = 50 bar A, B = 300 bar
10.Leakage Внутренние потери (A, B – T)	20-40 cm³/min at 120 bar
11.Nominal flow Разход рабочей жидкости	90 l/min (see “operating” diagram)
12.Spool stroke Ход золотника	± 7 mm
13.Actuating force	< 300 N in spool axis direction

Directional Control Valve S290

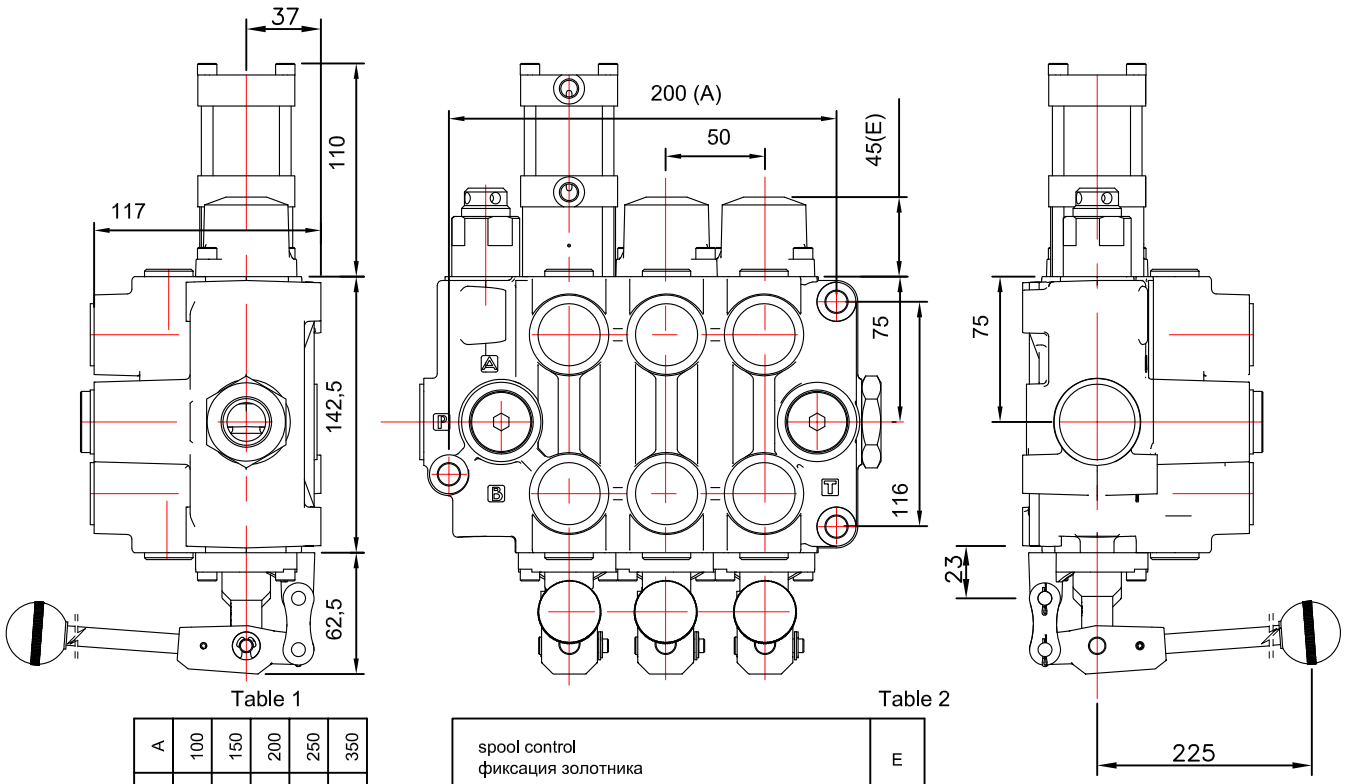


Table 1

A	100	150	200	250	350
	S291	S292	S293	S294	S296

Table 2

spool control фиксация золотника	E
1; 4; 5; 6; 7; 8; 9; 10; 11;	45
2; 3;	76

S29 ☐ ☐ ☐

No of spools 1-6

Main relief valve, pressure settings- RV bar
or without relief valve -"svp"

Port inlet

1 spool ☐ ☐ ☐ ☐

Spool type

Spool control A side

Secondary valves

Spool control B side

2 spool ☐ ☐ ☐ ☐

3 spool ☐ ☐ ☐ ☐

4 spool ☐ ☐ ☐ ☐

5 spool ☐ ☐ ☐ ☐

6 spool ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐

Thread: G , M, SAE

Carry over: C, C2

Reduction fitting - R

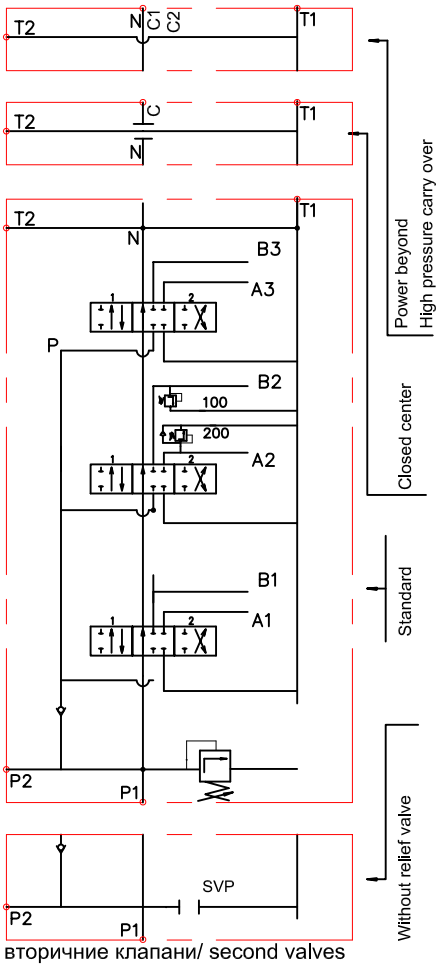
Outlet port:

Other

S293-svpP2-As1(Ay50By300)S1-AsS1-As(AzBz)S1-SAE-R

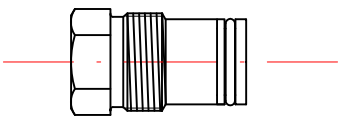
Directional Control Valve S290

S293 -RV220P2-As1S1-A1(Az200By100)S1-A1S1-G-T2

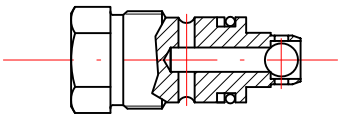


вторичние клапани/ second valves

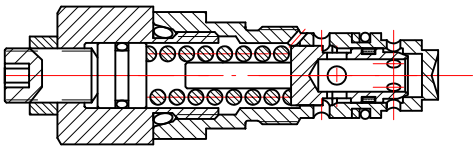
plug "o"



anticavitation valve "x"



second relief valve "y"



combined part relief and anticavitation valve "z"

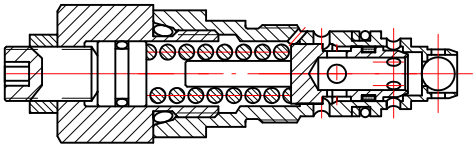


Table 3

code	Number of spools
S291	1
S292	2
S293	3

ets.

Table 4

code	way of distribution ; распределение потока
1	parallel ; паралельное

Table 5

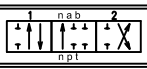
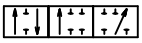
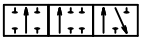
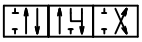
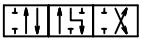
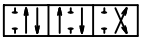
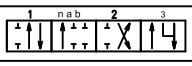
code 90 l/min	code 110 l/min	spool type
As	A	
Bs	B	
Cs	C	
Ds	D	
Es	E	
Fs	F	
Ks		

Table 6

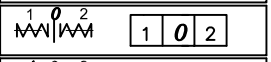
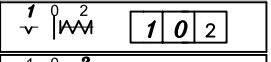
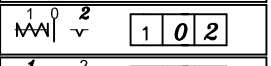
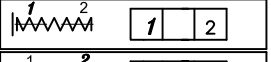
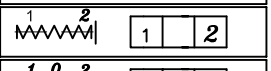
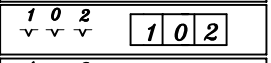
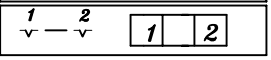
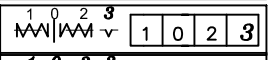
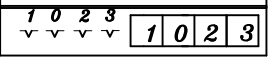
code	spool control
1	
2	
3	
6	
7	
8	
11	
12	
13	

Table 7

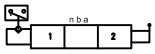
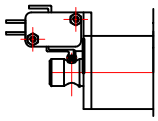
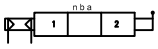
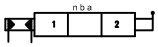
code	с микро шалтер ; incorporated microswitch	
E		mikroswitch type Omron-V 165 I C5 

Table 8

code	другое управление ; operation feature	
P		пневматическое on-off pneumatic contol; 5-10 bar ; ports G1/8
H		гидравлическое on-off hydraulic control ; pn = 7 - 20 bar ; ports G1/4

S290

Table 9

code	ports (treads) ; присоединительные отверстия			
	P1, P2	A ; B; T2	T1	N
G	G3/4	G3/4	G1"	G1"
S	1 1/16-12UN-2B	1 1/16-12UN-2B	1 5/16-12UN-2B	G1"

Pilot ports

pneumatic	G1/8	NPTF 1/8-27
hydraulic	G1/4	9/16-18UNF-2B(SAE6)

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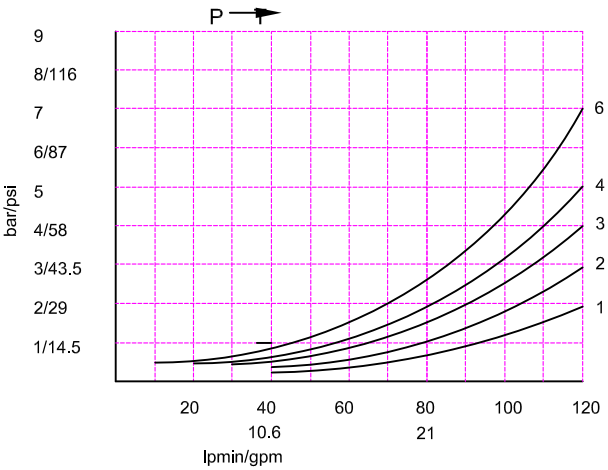
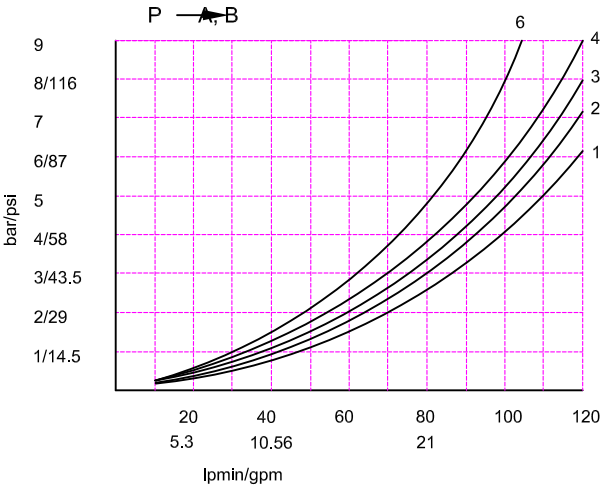
E -mail:badestnost@hydraulic-vlv.com www.hydraulic-vlv.com

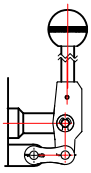
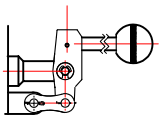
S290 directional control valve



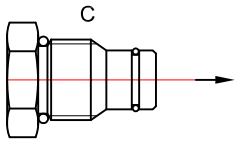


kind of hand control ; вид ручного управления

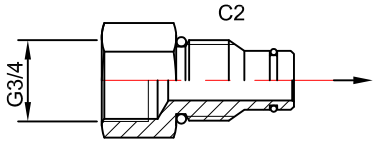
Table 10

code		ескиз feature
S1	Hand lever vertical.Link connection.	
S7	Hand lever vertical.Link connection. Opposite direction.	
S2	Hand lever horisontal.Link connection.	
-	without hand control ; без лостова система за управление	

closed center



carry over



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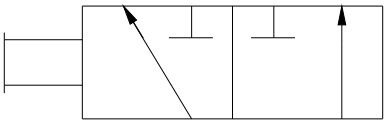
selector valve SV80

selector valve SV120

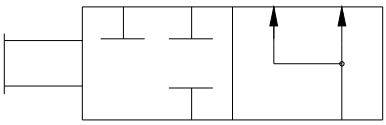
HYDRAULIC SELECTOR VALVE
РАСПРЕДЕЛИТЕЛИ ГИДРАВЛИЧЕСКИЕ

Type: SV80
Type: SV120

Spool A



Spool B



Spool "A" offer a simple method of directing system flow to one or the other of two separeta line.Since the "A" spool is of open–crossover design, they should be shifted before pressure is applied.
Spool "D" can be used with a 3–position four way control valve to provide a float or free wheeling condition.Aplication exaples include plows, loaders and certain winches.

Spesifications

1. Operating pressure _____ 3000 PSI (210 bar) max.

2.Capacity (Nominal)
SV80 _____ 20 GPM (75 l/min)
SV120 _____ 30 GPM (113 l/min)

Fluid recommendations
Premium grade hydraulic oil with 60 SUS (10 CST) to 1000 SUS (216 cst) viscosity at operating temperature per VG32.

Seals
standard _____ BUNA N

Temperature
Under normal conditions of operation, fluid temperature should not exceed 160°F (71°C).In no instance should temperature exceed 180°F (82°C).

Ports _____ SAE or BSP

Mounting position _____ unrestricted

Weight
SV80 _____ 3.2 lbs. (1.4 kg)
SV120 _____ 5.4 lbs. (2.4 kg)

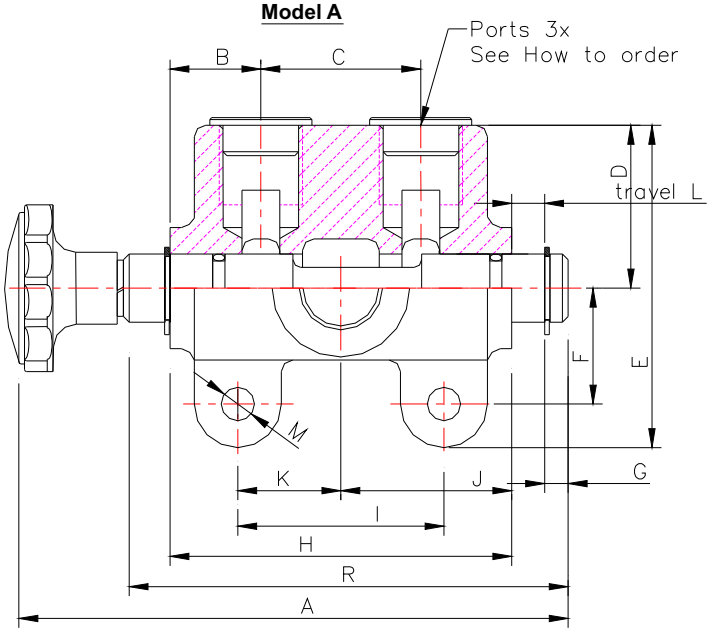
Leakage _____ at 1000 PSI (70 bar) less than 20 cu.in. (322cc)

BADESTNOST AD 6200 Chirpan, Bulgaria, Tel: 00359 416 41 35, Fax: 00359 416 55 34
E –mail: badestnost@hydraulic–vlv.com www.hydraulic–vlv.com

selector valve SV80

selector valve SV120

Model A



Shown with knob(standard)
Reverse assembly available

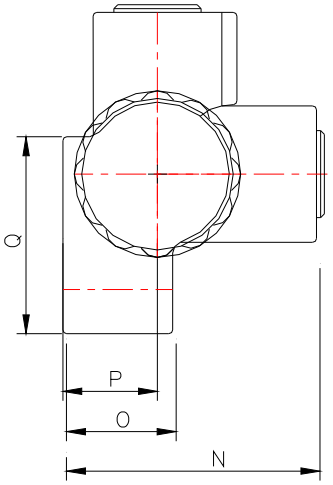
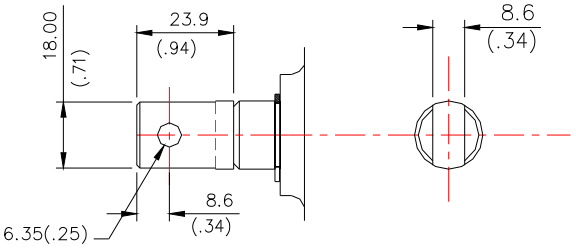


Table 1

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
SV80	147.1	24.6	41.4	42.9	84.1	30.2	6.4	90.4	54.1	45.2	26.9	7.9	8.9	66.6	28.5	25.4	50.8	117.4
	5.79	.97	1.63	1.69	3.31	1.19	.25	3.56	2.13	1.78	1.06	.31	.35	2.62	1.12	1.00	2.00	4.62
SV120	168.2	28.7	53.9	52.3	101.6	38.1	6.4	111.3	76.2	55.6	38.1	9.7	8.9	66.6	28.5	25.4	58.7	138.2
	6.62	1.13	2.12	2.06	4.00	1.50	'25	4.38	3.00	2.19	1.50	0.38	.35	2.62	1.12	1.00	2.31	5.44

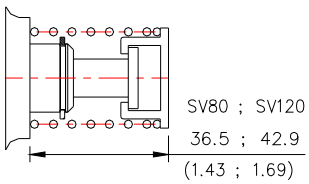
Optional Clewis

Both valves are available with a Clevis actuator in place of the standard knob, or can be supplied with neither.



Optional Spring

Spool "A" only is available with an offset spring for intermittent actuation.It is installed on the Spool end opposite that of the actuator and returns the spool to the "IN" position when released.(The spring machanism is open to atmosphere).



ORDER CODE: SV . . . A S8 K R – S

- selector valve (80 or 120)
- spool type (A or D)
- port sizes (S or G)
  - SV 80 (S8=SAE8; S10=SAE10; G12=G1/2)
  - SV120 (S12=SAE12; G34=G3/4)
- actuator (Knob–standard)
  - K–Knob; C–Clevis: L–Less knob and clevis
- R–Reverse Assembly
- Spring offset (spool A only)