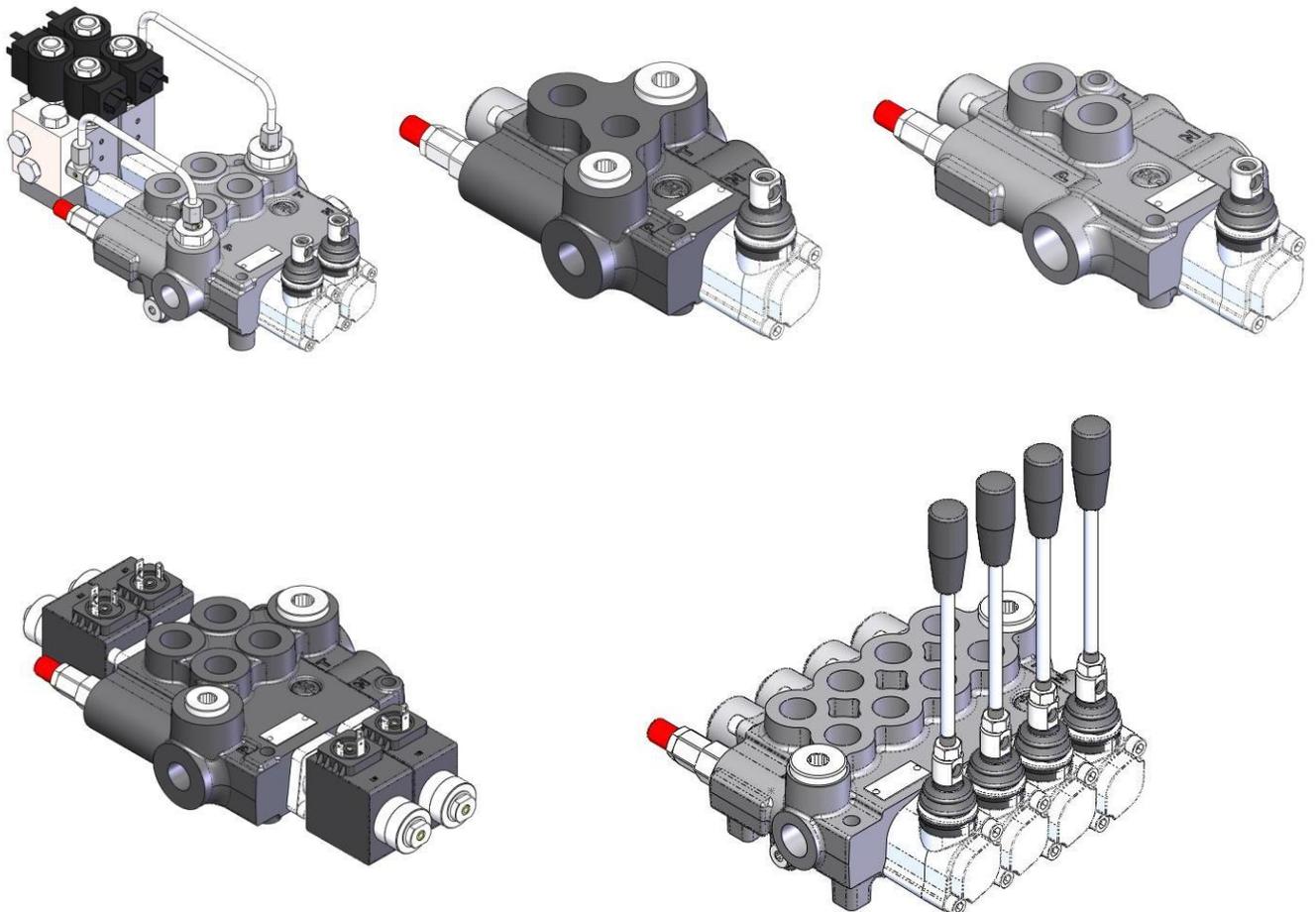


HYDRAULIC VALVES Z80

Simple, compact and heavy-duty monoblock directional control valve available with 1 to 6 sections for open-centre and closed-centre hydraulic systems.

- Fitted with a main pressure relief valve and a load check valve (optional individual check valve per spool).
- Available with parallel or tandem circuits.
- Optional power beyond port for parallel and tandem circuits.
- 18 mm diameter interchangeable spools.
- Wide range of available options.
- Floating spools and regenerative spools (and corresponding kits) do not require additional machining of the valve body.
- Actuation options: manual, pneumatic, electro-pneumatic, hydraulic, electro-hydraulic, solenoid, or remote control with flexible cable spool control kits.



Working conditions

Nominal flow rating		80 l/min
Operating pressure (max.)	parallel and tandem	315 bar
Back pressure (max.)	outlet port T, static	35 bar
Internal leakage (min.) A(B) → T	$\Delta p = 100$ bar, fluid and valve at 40 °C	8 cm ³ /min
Hydraulic fluid		Mineral based oil
Fluid temperature	with NBR seals	from -20 °C to 80 °C
	with FPM (Viton) seals	from -20 °C to 100 °C
	operating range	from 15 to 75 mm ² /s
Viscosity	min.	12 mm ² /s
	max.	400 mm ² /s
Permissible degree of fluid contamination		ISO 4406 -/19/16, NAS 1683 class 10
Ambient temperature	with mechanical devices	from -40 °C to 60 °C
	with pneumatic and hydraulic devices	from -30 °C to 60 °C
	with electric devices	from -20 °C to 50 °C

Standard threads

Reference standard

	BSP	UN-UNF	Metric	NPTF
Thread according to	ISO 228/1 BS 2779	ISO 263 ANSI B1.1 unified	ISO 262	ANSI B1.20.3
Cavity dimension according to	ISO SAE	11926 J1926	9974-1 J2244	J476a

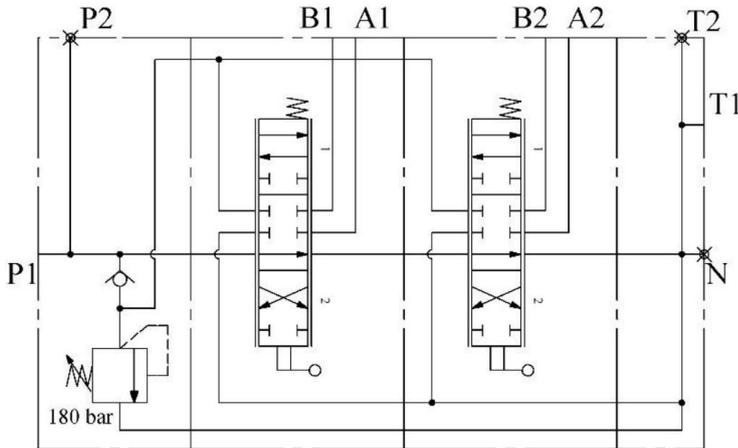
Port threadings and codes

Codes:	G	S	NPTF	M
Main ports	BSP	UN-UNF	NPTF	Metric
Inlet P	G1/2	7/8-14 (SAE10)	1/2 NPTF	M22x1.5
Outlet port T	G3/4	1 1/16-12 (SAE12)	3/4 NPTF	M26x1.5
Working ports A and B	G1/2	7/8-14 (SAE10)	1/2 NPTF	M22x1.5
Control pilot ports				
Pneumatic	1/8-27 NPTF	1/8-27 NPTF	1/8-27 NPTF	1/8-27 NPTF
Hydraulic	G1/4	9/16-18 (SAE6)	9/16-18 (SAE6)	G1/4

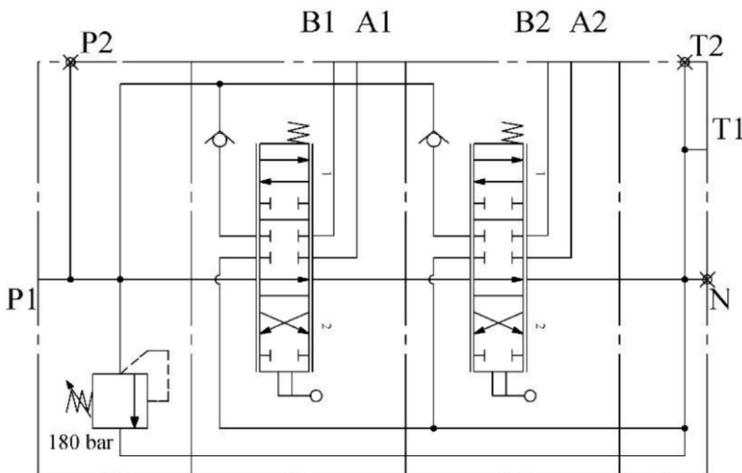


Hydraulic circuits

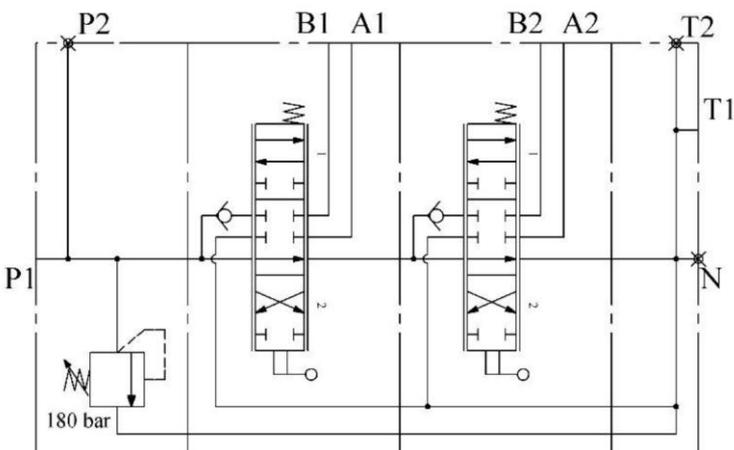
Standard configuration – parallel body, common check valve – 1 to 6 spools



Standard configuration – parallel body, individual check valve – 1 to 6 spools



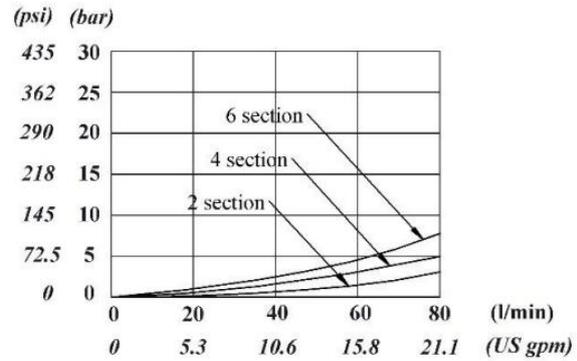
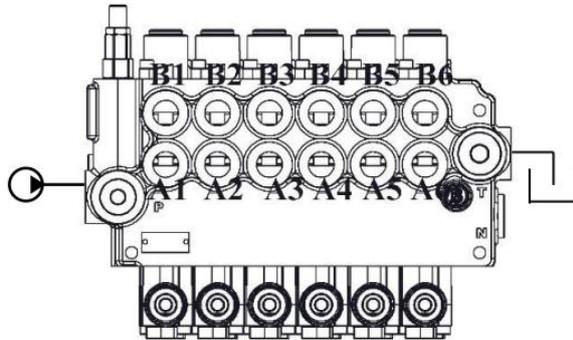
Standard configuration – tandem body, individual check valve – 1 to 6 spools



Performance data

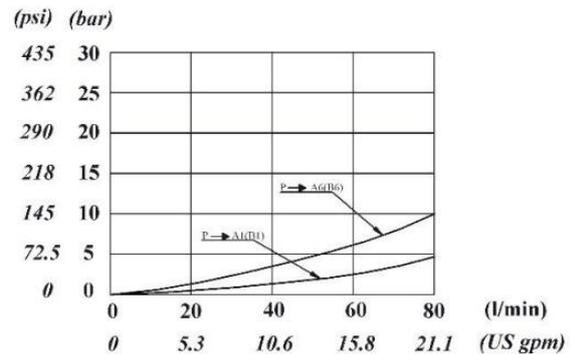
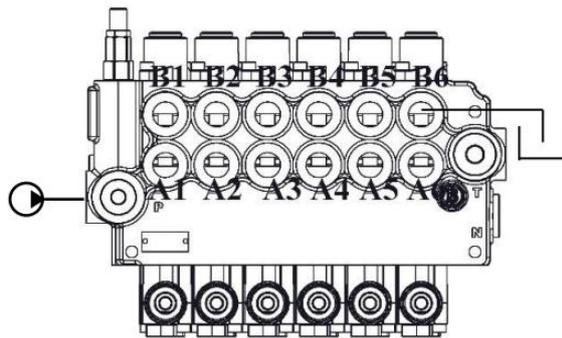
Open centre

From side inlet to side outlet



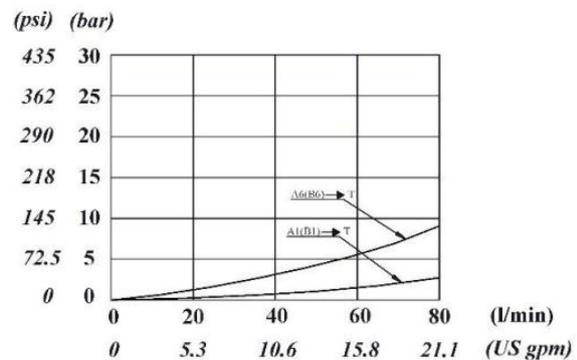
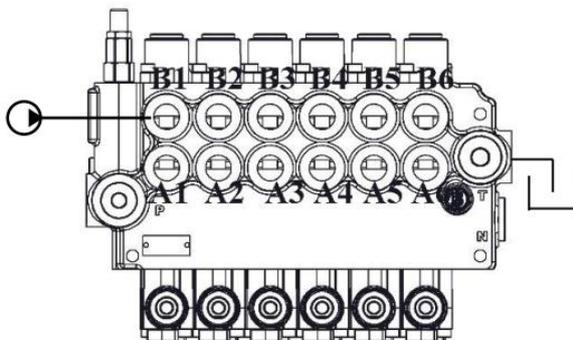
Inlet to work port

From side inlet to A port spool in position 2 or B port spool in position 1



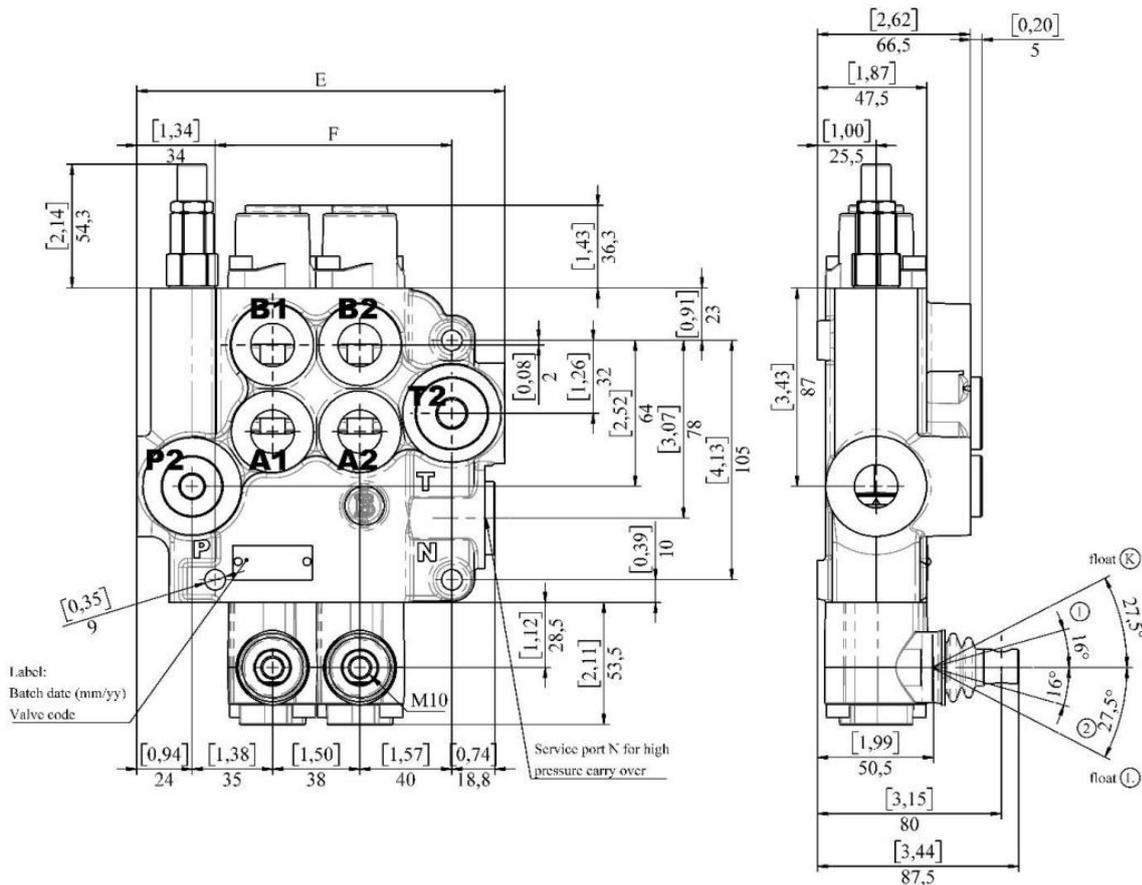
Work port to outlet

From A port spool in position 1 or B port spool in position 2 to side outlet



Dimensions

This drawing refers to a directional control valve with 2 working sections with common check valve.

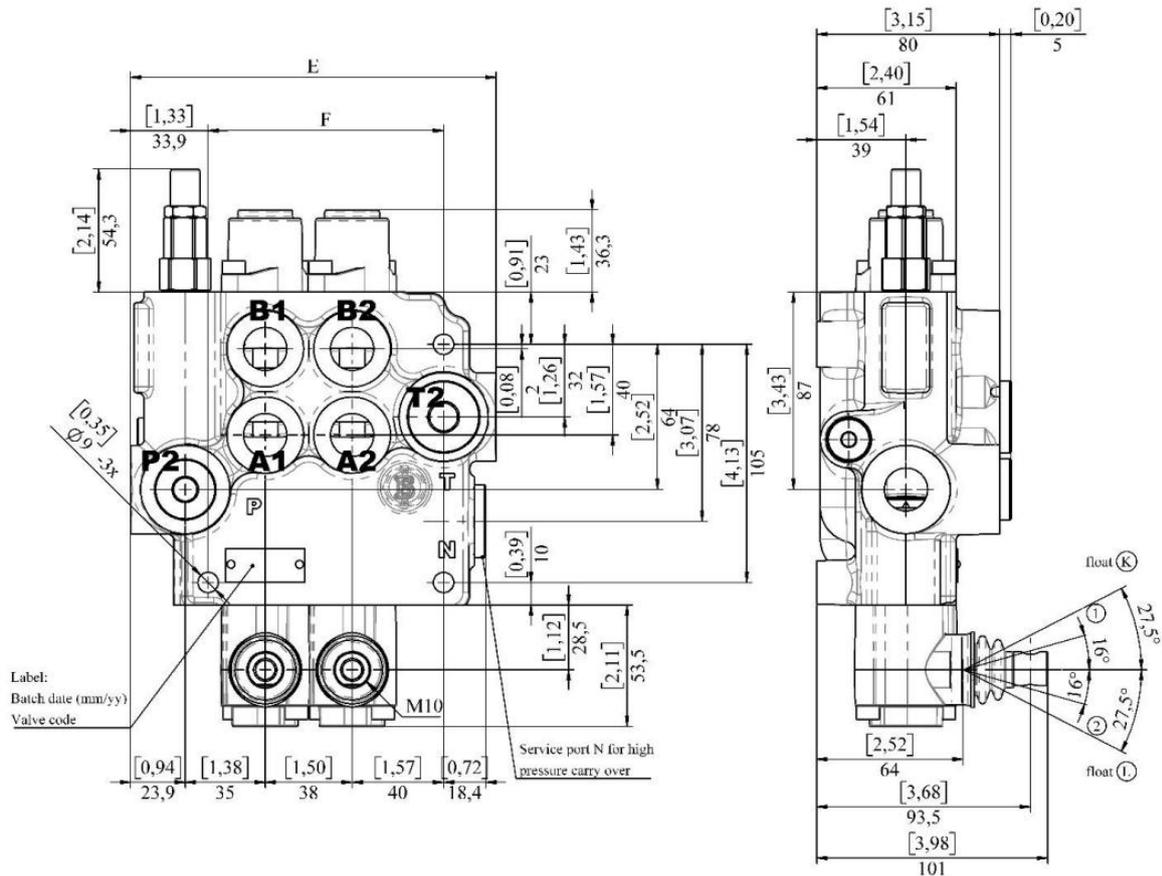


Note: Float K is presented on the drawing above just to show the convention for direction, Z80 can have float K (spool out) only in right hand version of the valve. For example code will be (Z80R/K16KZ1-G).

TYPE	E	F	Weight
	mm	mm	kg
Z80	111	65	3,9
Z80PT	122	65	4,55
02Z80	160	103	6,75
03Z80	198	141	9,05
04Z80	236	179	11,15
05Z80	274	217	13,45
06Z80	312	255	15,55

Dimensions

This drawing refers to a directional control valve with 2 working sections with individual check valve per spool (refer to next page for the body with individual check valves).

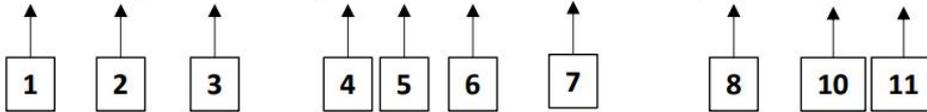


Note: Float K is presented on the drawing above just to show the convention for direction. Z80 can have Float K (spool out) only in the right-hand version of the valve. For example, the code will be (Z80R/K16KZ1-G).

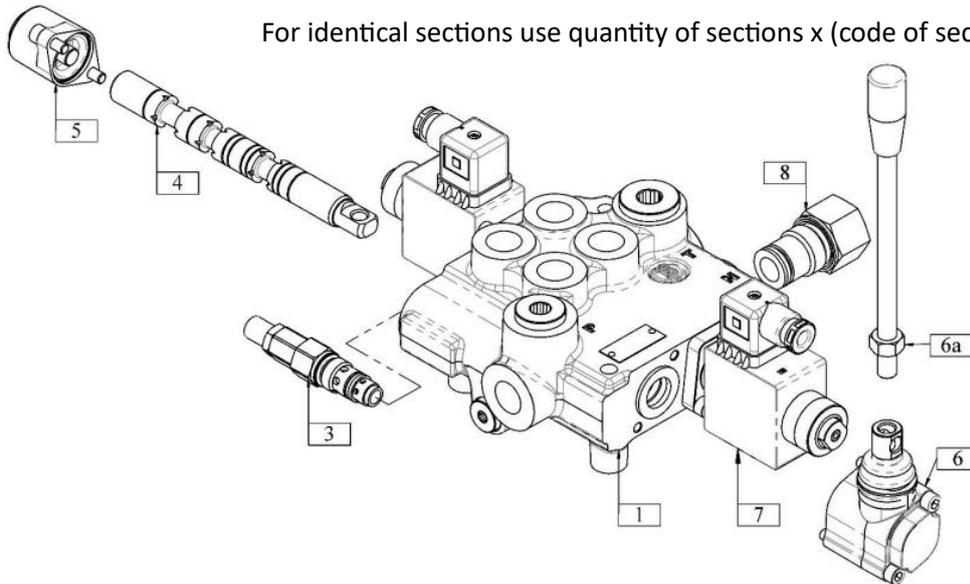
TYPE	E	F	Weight
	mm	mm	kg
Z80	111	65	3,9
Z80PT	122	65	4,55
2Z80	160	103	7,2
3Z80	198	141	9,5
4Z80	236	179	11,6
5Z80	274	217	13,9
6Z80	312	255	16

Order code, complete

2Z80/1/ (D4-280-FV)/A 1 KZ1/A ES3- 12V(C)-C2-G - Zn



For identical sections use quantity of sections x (code of section).



1	Body kits
Type	Description
Z80	Parallel, 1 section
Z80PT	Parallel, 1 section with side and top ports
Z80CV	Parallel, 1 section (3- and 4-way valve with single spool and extra plug)
02Z80	Parallel, 2 section, common check valve
03Z80	Parallel, 3 section, common check valve
04Z80	Parallel, 4 section, common check valve
05Z80	Parallel, 5 section, common check valve
06Z80	Parallel, 6 section, common check valve
2Z80/1	Parallel, 2 section, individual check valves
3Z80/1	Parallel, 3 section, individual check valves
4Z80/1	Parallel, 4 section, individual check valves
5Z80/1	Parallel, 5 section, individual check valves
6Z80/1	Parallel, 6 section, individual check valves
2Z80/2	Tandem, 2 section, individual check valves
3Z80/2	Tandem, 3 section, individual check valves
4Z80/2	Tandem, 4 section, individual check valves
5Z80/2	Tandem, 5 section, individual check valves
6Z80/2	Tandem, 6 section, individual check valves

Valve bodies for 'K' pressure release positions (31-32-33-42-46) and spools 'K' (kick out bodies)

2ZK80/1	Parallel, 2 section, individual check valves
3ZK80/1	Parallel, 3 section, individual check valves
4ZK80/1	Parallel, 4 section, individual check valves
5ZK80/1	Parallel, 5 section, individual check valves
6ZK80/1	Parallel, 6 section, individual check valves
2ZK80/2	Tandem, 2 section, individual check valves
3ZK80/2	Tandem, 3 section, individual check valves
4ZK80/2	Tandem, 4 section, individual check valves
5ZK80/2	Tandem, 5 section, individual check valves
6ZK80/2	Tandem, 6 section, individual check valves

2 Position with respect to pump inlet	
omit	Left hand configuration, pump port is on the left-hand side with respect to control
R	Right hand configuration, pump port is on the right-hand side with respect to control

3 Inlet relief options	
Type	Description
omit	Range 120-250 bar, standard setting at 180 bar
(D2-120)	Range 50-120 bar, standard setting at 120 bar
(120-250)	Range 120-250 bar, setting other than 180 bar
(D5-220)	Range 220-315 bar, standard setting at 220 bar
(sok)	Without check valve
(svp)	Relief valve blanking plug
(FV)	Fixed valve setting and steel cap nut

Standard setting is referred to 12 l/min flow, example for relief valve with a preset valve at 250 bar with cap nut without check valve (D4-250-sok-FV)



4 Spool options	
Type	Description
A	Double acting, 3 position, with A and B closed in pos. 0
Af	Double acting, 3 position, with A and B closed in pos. 0, fine metering
B	Single acting on A, 3 positions, B plugged
C	Single acting on B, 3 positions, A plugged
D	Double acting, 3 position, A and B opened to tank in pos. 0
E	Double acting, 3 position, B opened to tank in pos. 0
F	Double acting, 3 position, A opened to tank in pos. 0
M	Double acting, 3 position, blocked by-pass channel for closed center circuit
<i>Special spools for particular positioner kits</i>	
Us	Double acting, 4 positions, regenerative position between pos. 0 and pos. 2
K	Double acting, 4 positions, floating circuit in 4th position (spool out)
L	Double acting, 4 positions, floating circuit in 4th position (spool in)
Ak	Double acting, 3 position for pressure release option (kick-out)
Bk	Single acting on A for pressure release option (kick-out)
Ck	Single acting on B, 3 positions, A plugged, requires a plug; for pressure release option (kick out)
Dk	Double acting, 3 position, with A and B opened to tank in pos. 0 for pressure release option (kick out)
Ek	Double acting, 3 position, B opened to tank in pos. 0 for pressure release option (kick out)
Fk	Double acting, 3 position, A opened to tank in pos. 0 for pressure release option (kick out)
Lk	Double acting, 4 positions, floating circuit in 4th position with spool in, only available in left hand configuration with pressure release (kick out) from pos. 1 and pos. 2 (requires kit 42)
Kk	Double acting, 4 positions, floating circuit in 4th position with spool out, only available in right hand configuration with pressure release (kick out) from pos. 1 and pos.2 (requires kit 46)
Uk	Double acting, 4 positions, regenerative position in between pos. 0 and position 2, spool in with pressure release (kick out) from pos. 2 (requires kit 1732), only available in left hand configuration

5 Spool positioners (side B)	
Type	Description
1	With spring return in pos. 0
1C	With spring return in pos. 0, soft spring
1Z	With spring return in pos. 0 and pin with M8 male thread for dual control
1rAB	With spring return in pos. 0 and stroke adjustments both directions
1E	With spring return in pos. 0 and microswitch included
1D(M8)	With spring return in pos 0 and pin with M8 female thread for dual control
1T	With spring return in pos. 0 with teton (push piston)
14	Spring return in pos. 0, no microswitch kit included
4	2 positions, with spring return in pos. 0 from pos. 2
5	2 positions, with spring return in pos. 0 from pos. 1
6	2 positions, with spring return in pos. 1 from pos. 2
7	2 positions, with spring return in pos. 2 from pos. 1
7Z	2 positions, with spring return in pos. 2 from pos. 1 and pin with M8 male thread for dual control
7T	2 positions, with spring return in pos. 2 from pos. 1 with teton (push piston)
7D(M8)	2 positions, with spring return in pos. 2 from pos. 1, and pin with M8 female thread for dual control
7rS1	2 positions, with spring return in pos. 2 from pos. 1 with special tie rod kit M8 for dual control
8	Detent in positions 0, 1 and 2
8Z	Detent in positions 0, 1 and 2, and pin with M8 male thread for dual control
8F	Friction detent with infinite positions limit with pos. 0, 1 and 2
9	Detent in positions 1 and 0
10	Detent in positions 0 and 2
11	Detent in positions 1 and 2
11B	Detent in positions 1 and 2, and spring return to pos. 0
2	With detent in position 1 and spring return in pos. 0
3	With detent in position 2 and spring return in pos. 0
3D(M8)	With detent in position 2 and spring return in pos. 0 and pin with M8 female thread for dual control
6B3	2 positions, with spring return in pos. 2 from pos. 1 with detent in pos. 2
7B2	2 positions, with spring return in pos. 1 from pos. 2 with detent in pos. 1
1V2	With spring return in pos. 0 for flexible cable control
8V2	Detent in positions 0, 1 and 2 for flexible cable control
1H	Proportional hydraulic control- single side
1P	ON/OFF pneumatic control
1EP	ON/OFF electro-pneumatic control
1ED3	ON/OFF electro-hydraulic control
<i>Particular positioner kits for special spools</i>	
6	2 positions, with spring return in pos. 1 from pos. 2 for spool Us



17	4 position with spring return to pos. 0 from pos. 2, soft stop at (regenerative) before pos. 2 and detent in pos. 1
12	4 position with spring return in pos. 0 and detent in float position - only for spool L
13	Detent in 4 positions - only for spool L
16	4 position with spring return in pos. 0 and detent in float position - only for spool K
15	Detent in 4 positions - only for spool K
31	3 position detent with pressure release (kick out) from pos. 1 and 2
32	3 position detent with pressure release (kick out) from pos. 1 and spring return from pos. 2
33	3 position detent with pressure release (kick out) from pos. 2 and spring return from pos. 1
42	4 position detent with pressure release (kick out) from pos. 1 and 2 only for spool Lk
46	4 position detent with pressure release (kick out) from pos. 1 and 2 only for spool Kk
1732	4 position with spring return to pos. 0 from pos. 2, soft stop at (regenerative) before pos.2 and detent in pos. 1 with pressure release from it (kick out) to pos. 0

6 Spool controls (side A)

without lever box, with plate

KZ	Lever box for M10
Kze	Lever box for M10, extreme conditions
KZT	Lever box for M8 with teton (push piston)
KI	Lever box, collet type, horizontal Ø 9 mm
KY	Lever box, collet type, vertical Ø 9 mm

Adding a 0 after the first part of the code will make the execution rotated 180°, lever will face the bottom of the valve, not the ports eg. KZ0

KZV	Safety lever box, vertical configuration
KZH	Safety lever box, horizontal configuration
SLP	without lever box with dustproof plate
V1	Flexible cable connection
ju+1	Joystick lever for 2 sections with pivot 1 o'clock
ju+2	Joystick lever for 2 sections with pivot at 11 o'clock
ju+3	Joystick lever for 2 sections with pivot 7 o'clock
ju+4	Joystick lever for 2 sections with pivot at 5 o'clock

Optional ball type handle (jb+...), and custom lengths



6a Handle options

1 M10x170

Custom lengths and bends available

7 Complete controls

ES Single acting solenoid kit

A26 Control with rotation (CW-CCW)

7a Coil specifications

12V 12V coil

24V 24V coil

12V 12V DT coil

24V 24V DT coil

7b Connectors

By default, connectors are not included

(C) Connector for the particular coil is included

8 Outlet port options

BSP G3/4 plug on port N

C Closed center plug

C2 G3/4 high pressure carry-over sleeve

C2(12) G1/2 high pressure carry-over sleeve

C2(S) For SAE threading - SAE12 high pressure carry-over sleeve

C2(NPTF) For NPTF threading - 3/4NPTF high pressure carry-over sleeve

VRE Back pressure valve

9 Inlet outlet selection

Side ports open, plugs on top ports P2&T2, standard configuration (omit in valve description)

22 Top ports open, plugs on side ports

12 Side inlet, top outlet, else plugged

21 Top inlet, side outlet, else plugged

10 Valve Threading - refer to page 2

11 Coating and plating

Valve body is phosphated, steel parts Zn plated, spools either Ni, or Cr plating (omit in valve description)

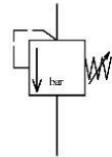
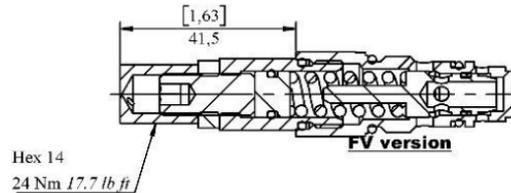
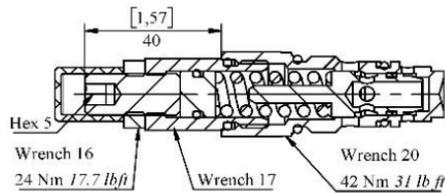
Zn Valve body - Zinc plated

BP Painting

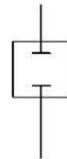
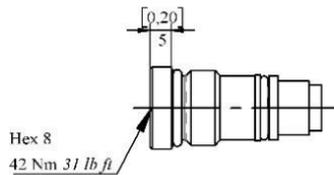


D4-280-sok-FV

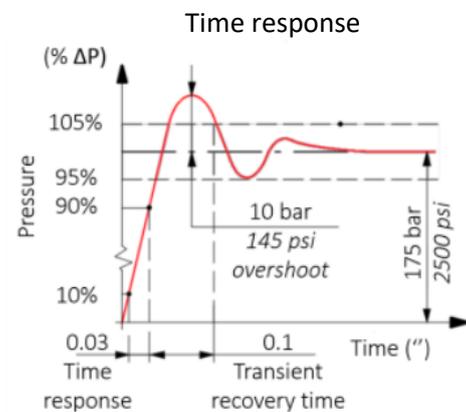
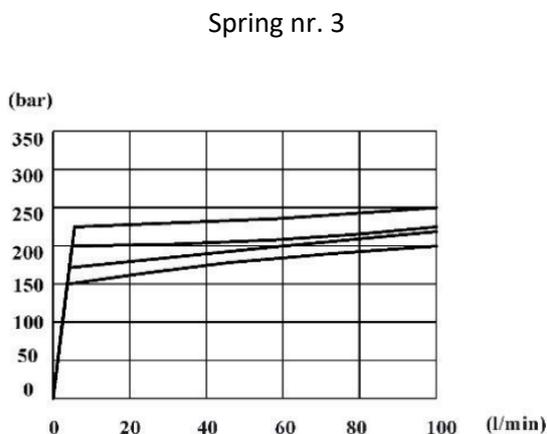
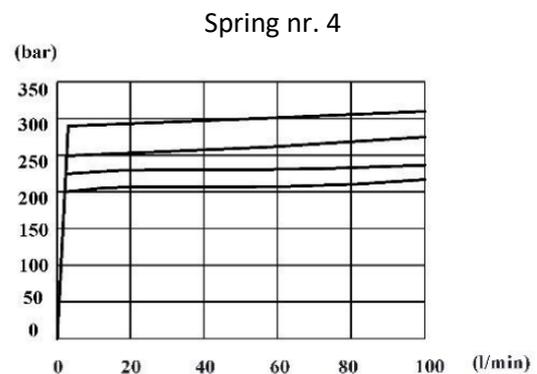
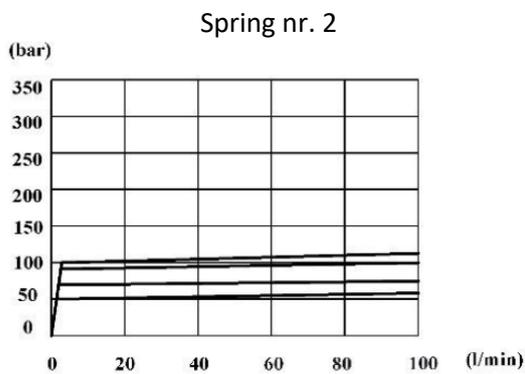
D4	280	sok	FV
Adjustable spring type (2, 3, and 4)	Pressure setting, if not specified – standard pressure setting per spring (p.8)	sok – without check valve	Steel cap nut for pre-set pressure



sok – relief valve blanking plug

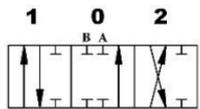
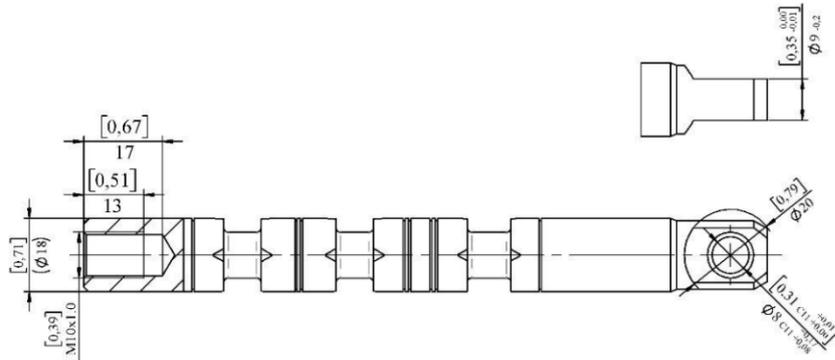


Relief valve type “D” performance characteristics

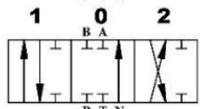
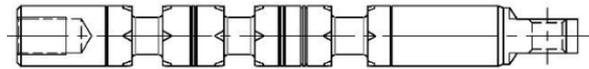


Spool options:

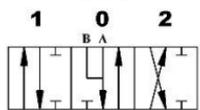
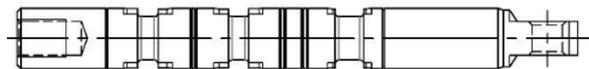
Our standard spools have the ends shown in the drawing below. These spool ends are necessary for connecting the controls and the positioners.



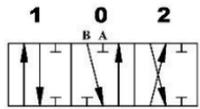
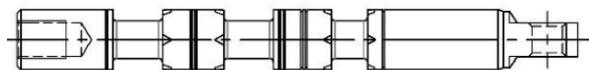
A Double acting spool, work ports closed in neutral position.



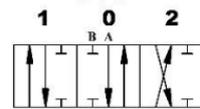
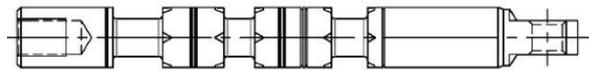
Af Double acting spool, high metering, work ports closed in neutral position.



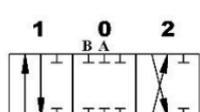
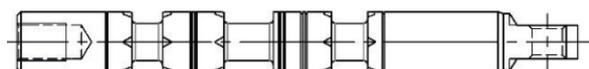
D Double acting spool, work ports open to tank in neutral position.



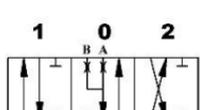
E Double acting spool, work port B open to tank in neutral position.



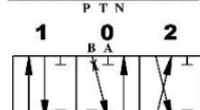
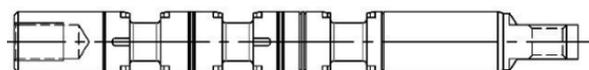
F Double acting spool, work port A open to tank in neutral position.



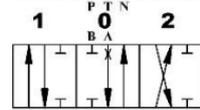
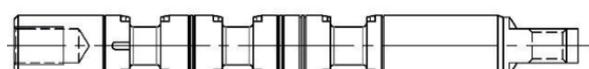
M Double acting spool, closed center, work ports closed in neutral.



Dd Double acting spool, closed center, work ports partially open to tank.



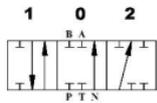
Ed Double acting spool, closed center, work port B partially open to tank.



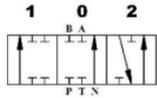
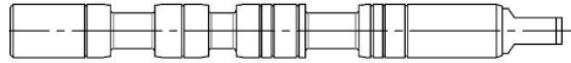
Fd Double acting spool, closed center, work port A partially open to tank.



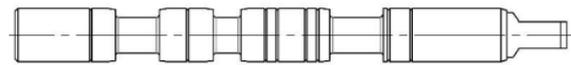
Single acting spools



B Single acting on A, 3 position, B plugged

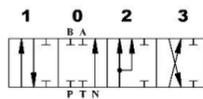


C Single acting on B, 3 positions, A plugged

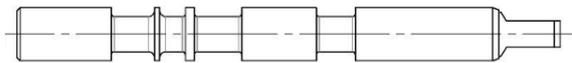


Spool Us requires positioner 6 or 17 and is available only with left-hand valve configuration (P on the left side relative to the lever control).

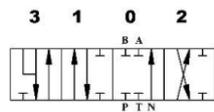
Floating spools



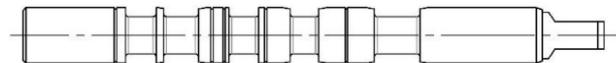
Us Double acting, 4 positions, floating circuit in 4th position with spool in



Spool L requires positioner 12 or 13 and is available only with "R" right-hand valve configuration (P on the right side relative to the lever control).



K Double acting, 4 positions, floating circuit in 4th position with spool out



Spool K requires positioner 16 or 15 and is available only for valves with left-hand configuration (P on the left side of the lever control).

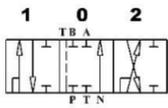
All spools are available in an "R" version for the right-hand configuration of the valve, except for Us, K and L.

To order the right-hand version of a spool, add "R" after the spool code (e.g. AR, BR, CR, etc.).

To order the low-leakage version of a spool, add "n" after the spool code (e.g. An, Bn, Cn, etc.).

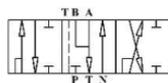
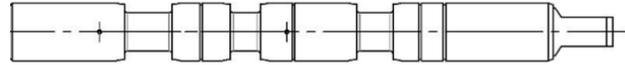
Spools for pressure release detent kits "kick out" – require additionally machined valve body (ZK)

Standard double acting



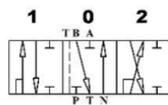
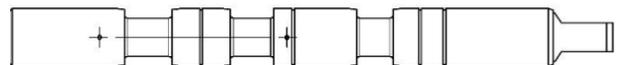
Ak

Double acting spool, work ports closed in neutral position.



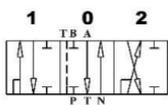
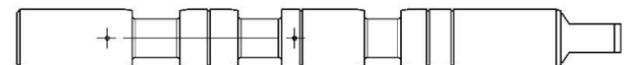
Dk

Double acting spool, work ports open to tank in neutral position.



Ek

Double acting spool, work port B open to tank in neutral position.

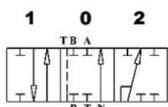


Fk

Double acting spool, work port A open to tank in neutral position.

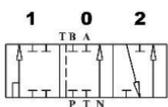
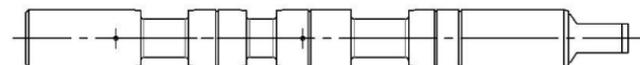


Single acting



Bk

Single acting on A, 3 position, B plugged



Ck

Single acting on B, 3 positions, A plugged



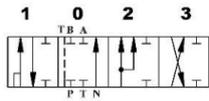
All spools are available in an "R" version for the right-hand configuration of the valve, except for Uk, Kk and Lk.

To order the right-hand version of a spool, add "R" after the spool code (e.g. AkR, BkR, CkR, etc.).

To order the low-leakage version of a spool, add "n" after the spool code (e.g. Akn, Bkn, Ckn, etc.).

Spools for pressure release detent kits "kick out" – require additionally machined valve body (ZK)

Regenerative

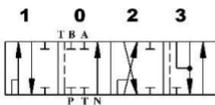


Uk Double acting, 4 positions,
regenerative position

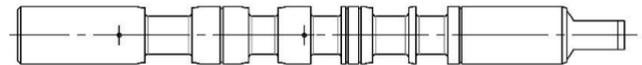


Spool Uk requires spool positioner 1732 and is available only for valves with left-hand configuration (P on the left with respect to the lever control).

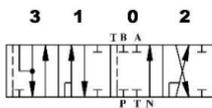
Floating



Lk Double acting, 4 positions,
floating circuit in 4th position
with spool in



Spool Lk requires spool positioner 42 and is available only for valves with "R" right-hand configuration (P on the right with respect to the lever control).



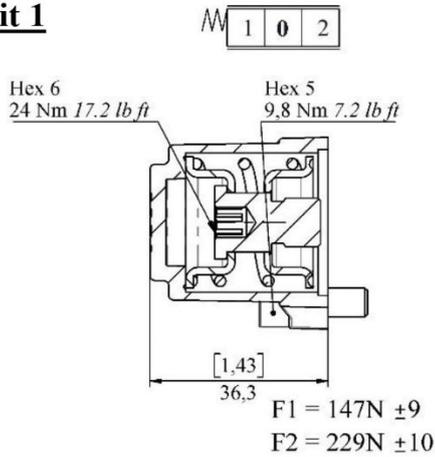
Kk Double acting, 4 positions,
floating circuit in 4th position
with spool out



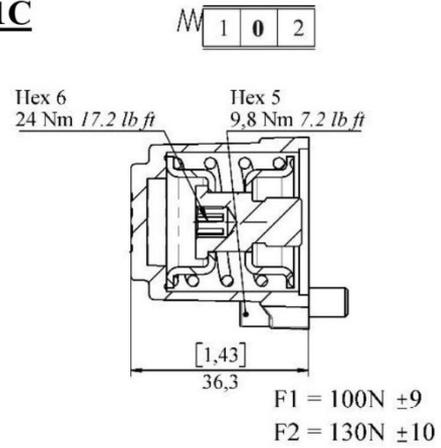
Spool Kk requires spool positioner 46 and is available only for valves with left-hand configuration (P on the left with respect to the lever control).

Spool positioners (B-side)

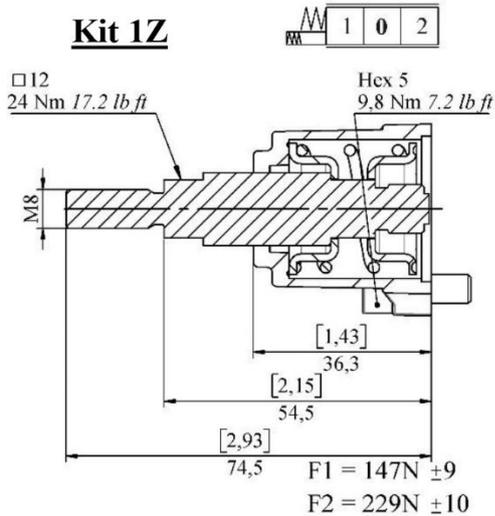
Kit 1



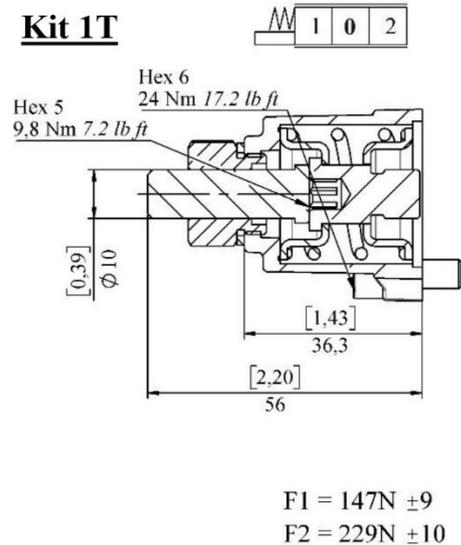
Kit 1C



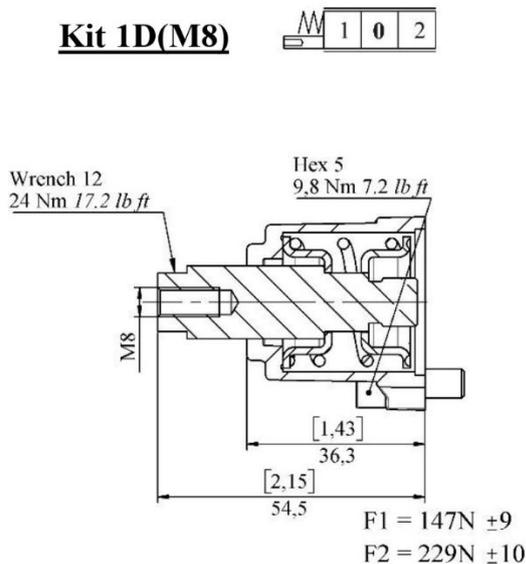
Kit 1Z



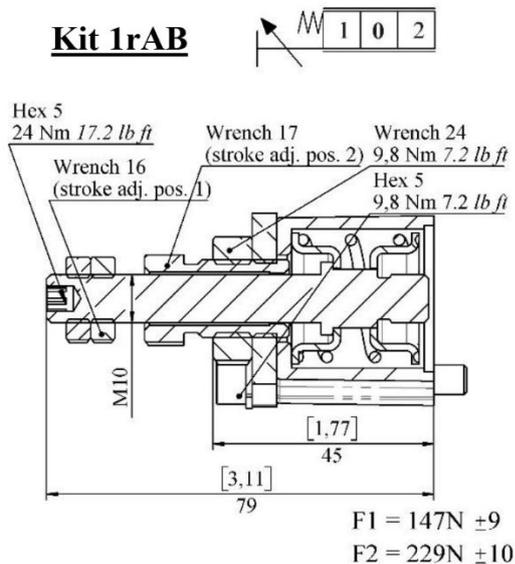
Kit 1T



Kit 1D(M8)

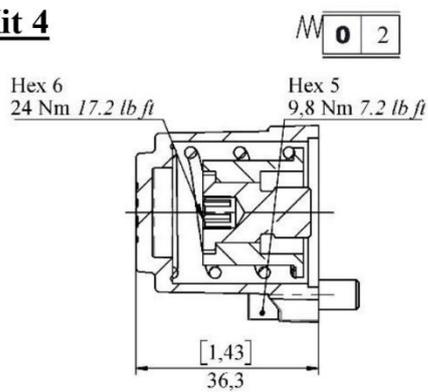


Kit 1rAB

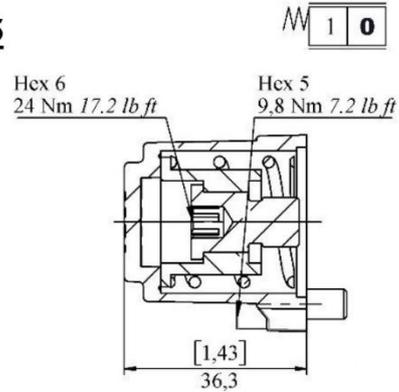


Spool positioners (B-side)

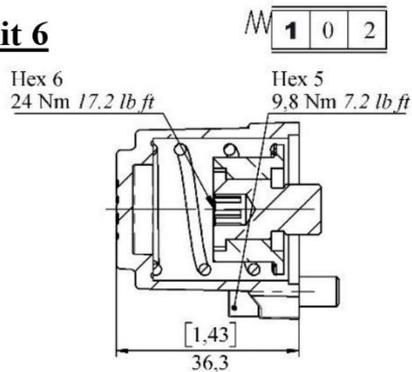
Kit 4



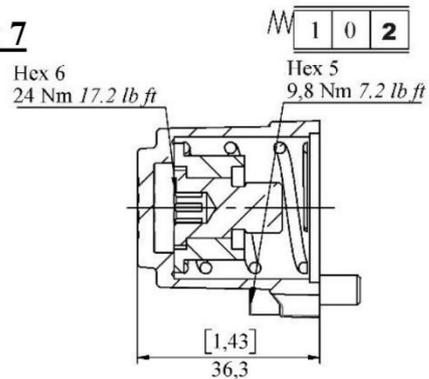
Kit 5



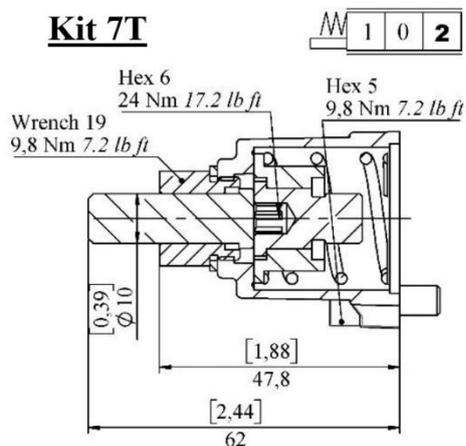
Kit 6



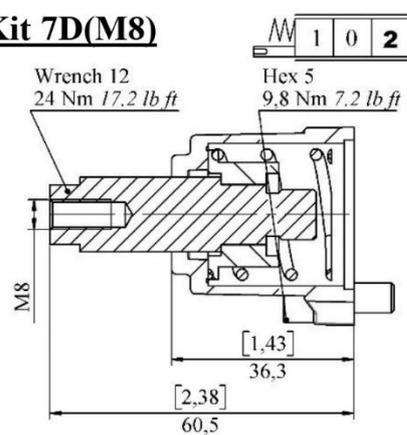
Kit 7



Kit 7T

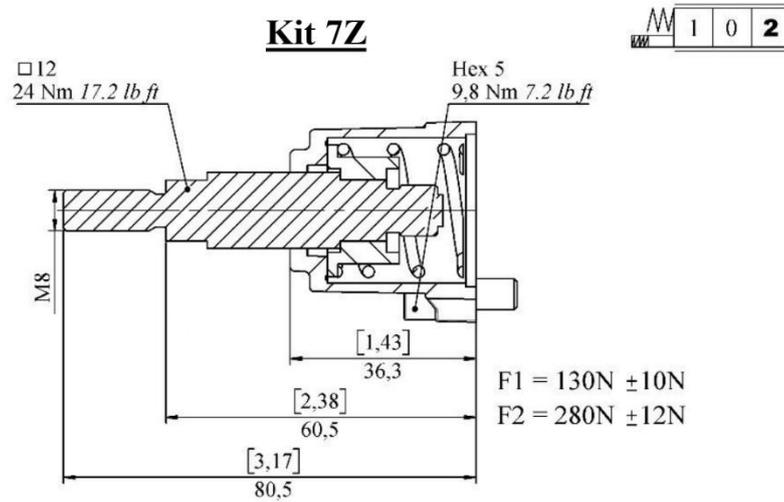


Kit 7D(M8)

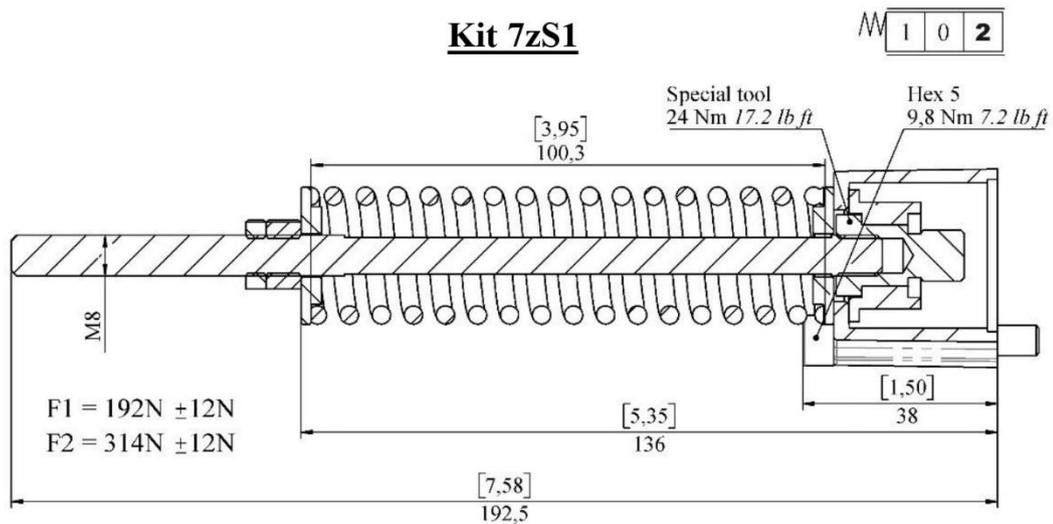


Spool positioners (B-side)

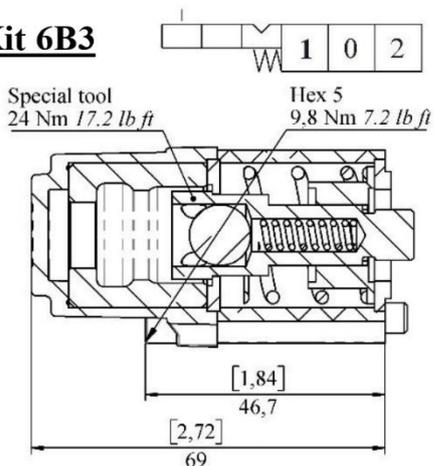
Kit 7Z



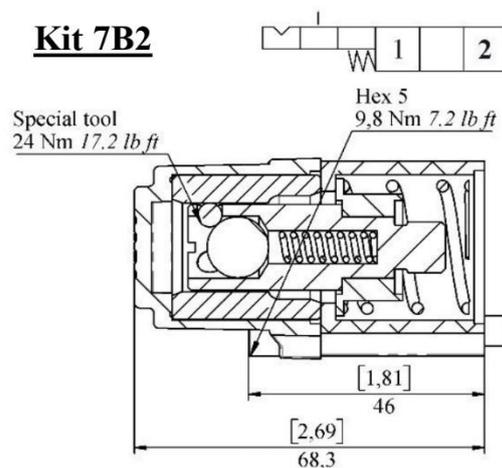
Kit 7zS1



Kit 6B3

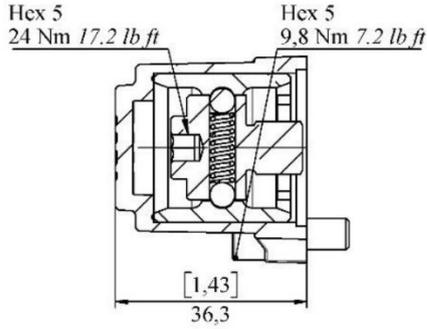
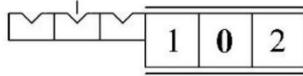


Kit 7B2

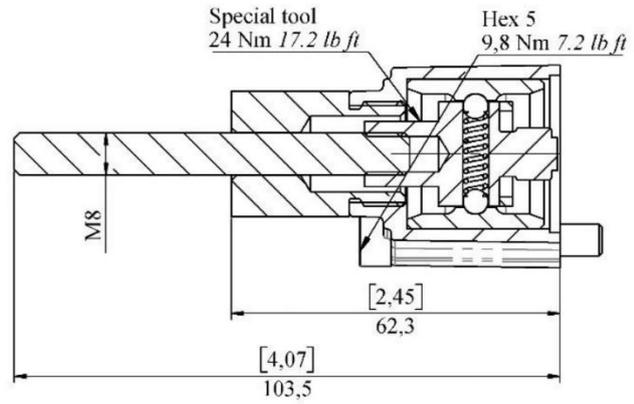
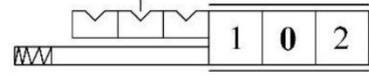


Spool positioners (B-side)

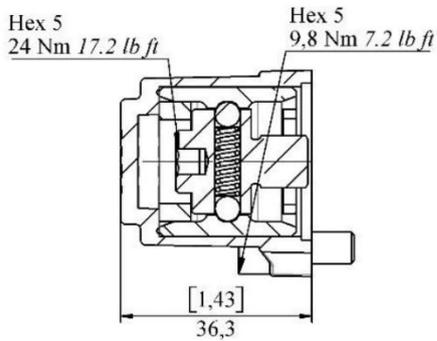
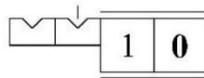
Kit 8



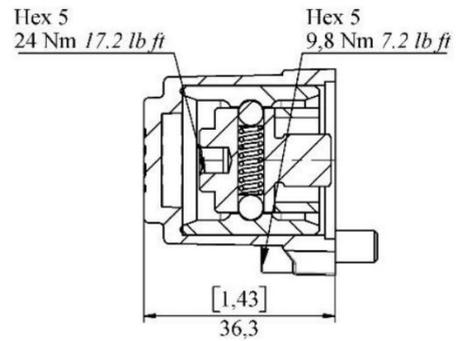
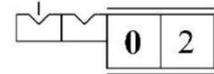
Kit 8Z



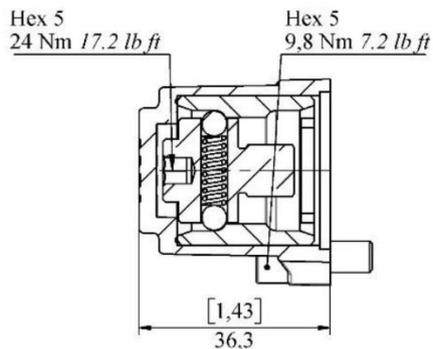
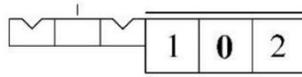
Kit 9



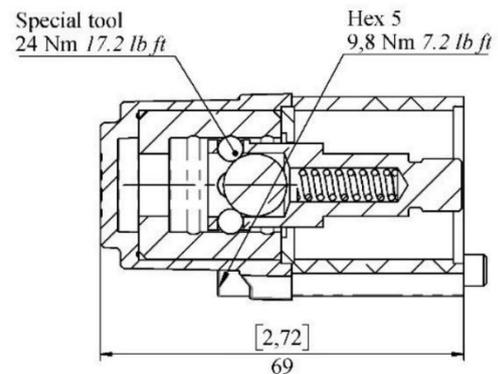
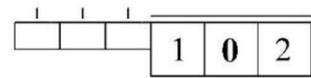
Kit 10



Kit 11

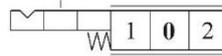
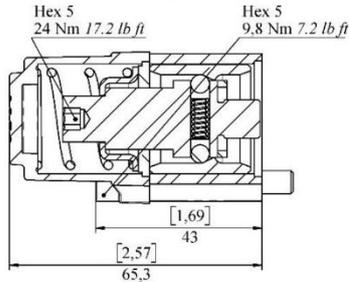


Kit 8F

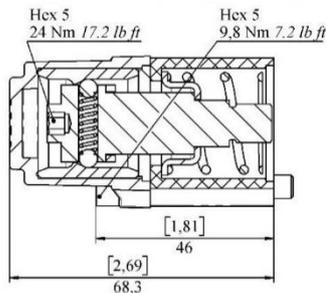


Spool positioners (B-side)

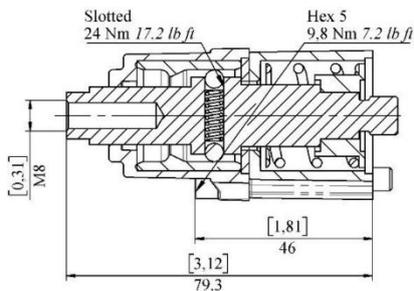
Kit 2: 3 position, spring return from position 2 to position 0 and detent in position 1



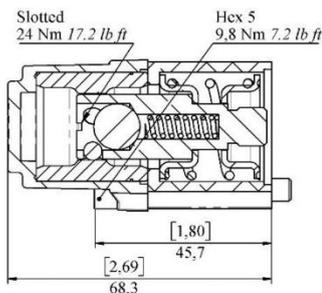
Kit 3: 3 position, spring return from position 1 and detent in position 2



Kit 3D(M8): 3 position, spring return from position 1 and detent in position 2 and pin with thread M8 for dual control

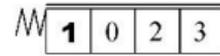
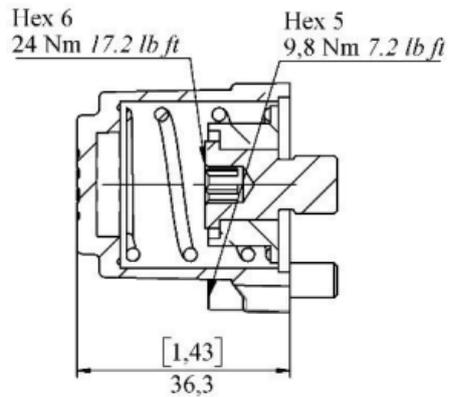


Kit 11B: 2 position, with detent in both positions and spring return to neutral from either direction

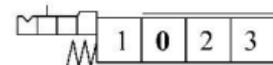
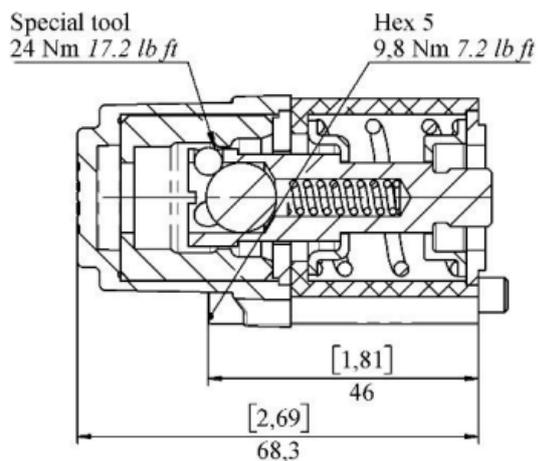


Particular spool positioners kits for regenerative spools

Kit 6 for Us



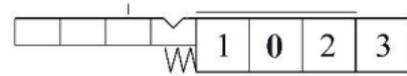
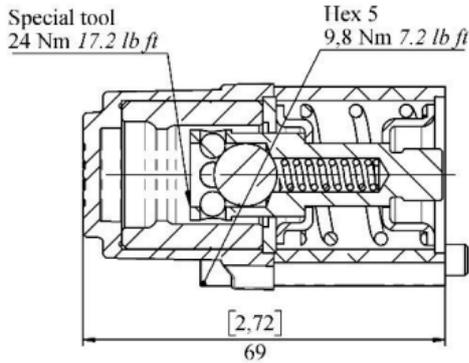
Kit 17



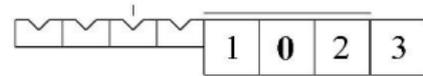
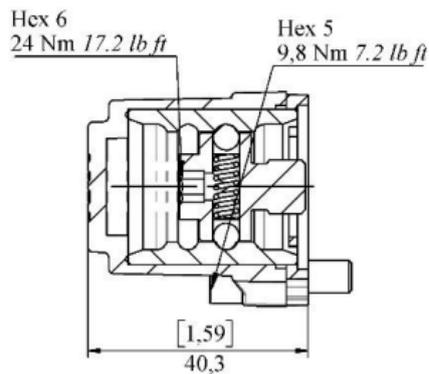
Regeneration function is available only for valves with standard configuration and left-side inlet (relative to the lever control).

Particular spool positioners kits for floating spool L (float when spool IN)

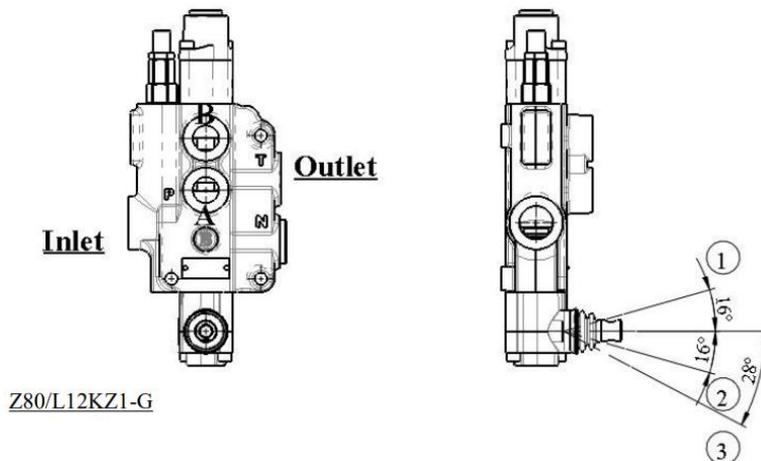
Kit 12: four position, return to neutral from 1 and 2 and detent in float



Kit 13: four position detent



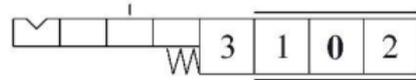
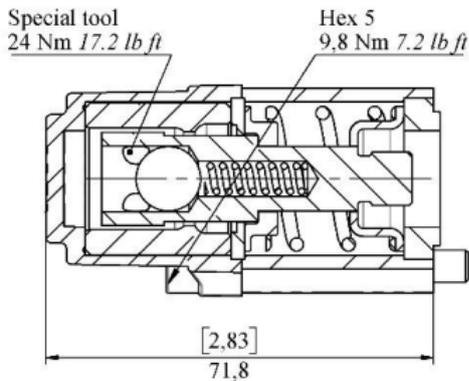
Limitations of floating sections for Z80 for kits 12 and 13



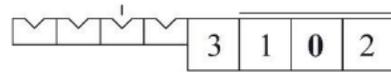
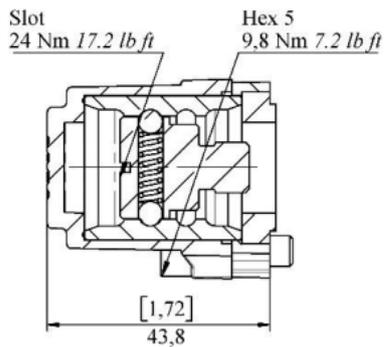
Floating spool IN (L12 and L13) can be used only on standard configuration valve with left inlet (with respect to the lever).

Particular spool positioners kits for floating spool K (float when spool OUT)

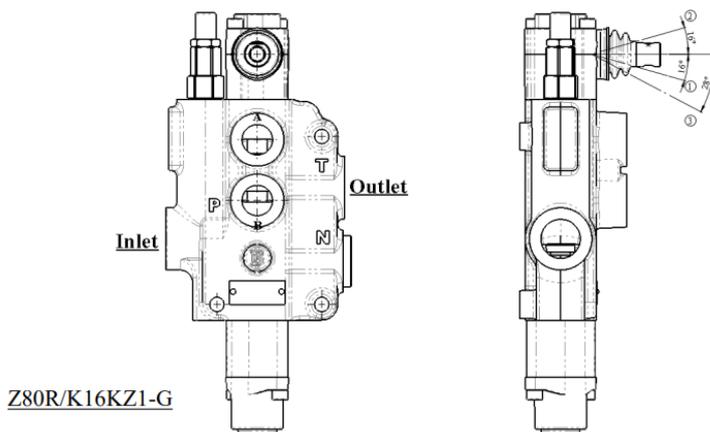
Special spool positioner kits for spool K (floating function with spool OUT).



Kit 15: four position detent



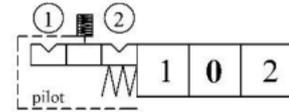
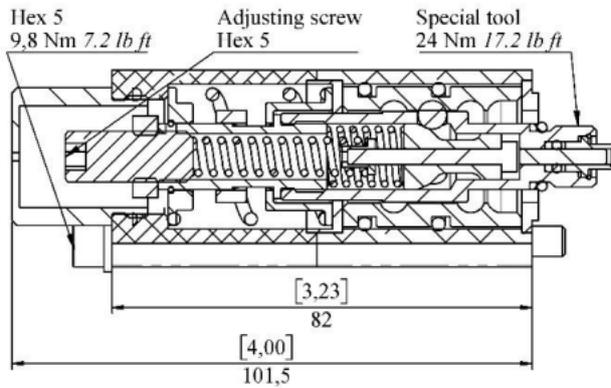
Limitations of floating sections for Z80 for kits 16 and 15



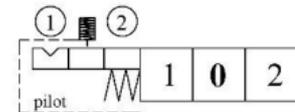
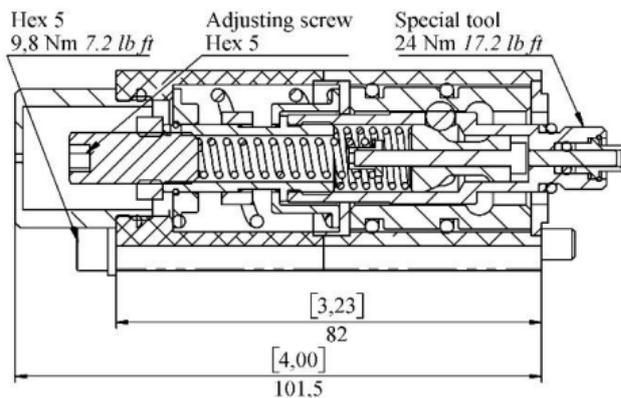
Floating spool OUT (K16 and K13) is available only for valves with "R" right-hand configuration and right-side inlet (relative to the lever control).

Particular spool positioners kits for pressure release kits (kick out)

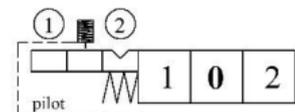
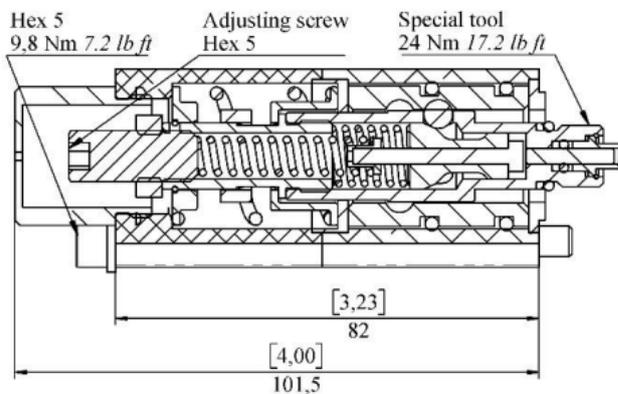
Kit 31: 3 position with detent and pressure release from position 1 and position 2



Kit 32: 3 position with detent and pressure release from position 1 and spring return from position 2

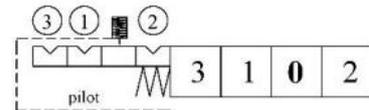
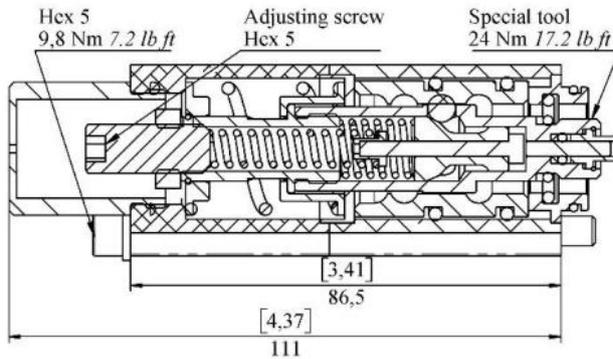


Kit 33: 3 position with detent and pressure release from position 2 and spring return from position 1

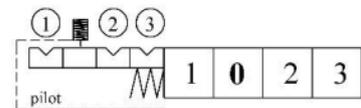
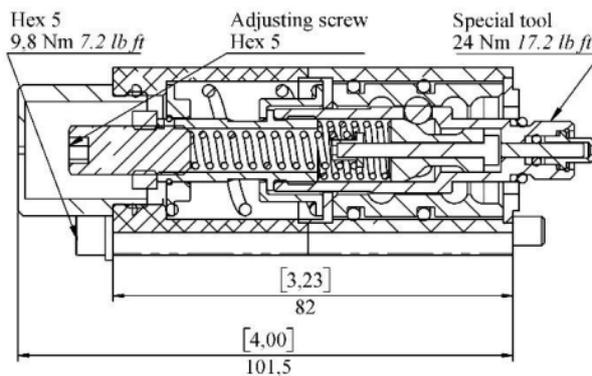


Particular spool positioners kits for pressure release kits (kick out)

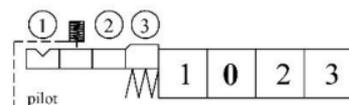
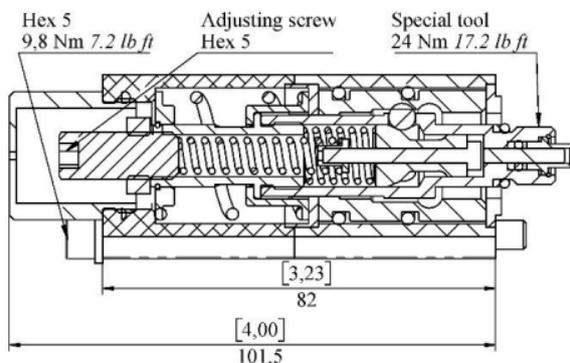
Kit 46: Four-position kit with pressure release from pos. 1 and pos. 2 to pos. 0, floating spool OUT; available only for valves with "R" right-hand configuration (right inlet).



Kit 42: Four-position, pressure release from position 1 and position 2 to position 0, float spool IN; available only for standard valves (left inlet).

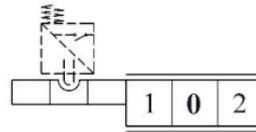
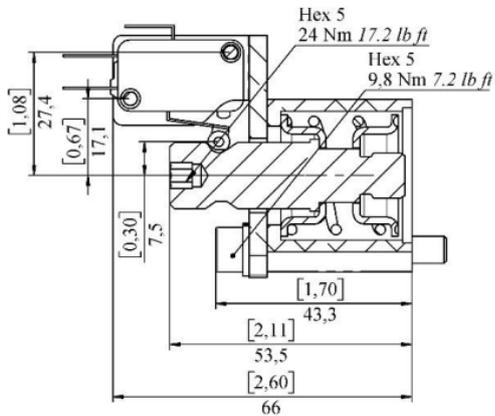


Kit 1732: Four-position kit with pressure release from position 1 and spring return from position 2 (soft stop) and position 3 (regenerative position); for standard valves only (left inlet).

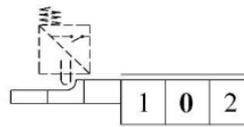
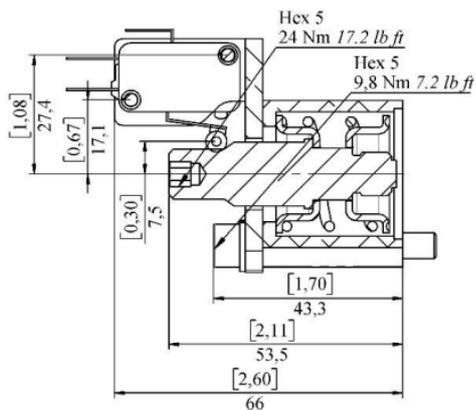


Particular spool positioners kits for microswitch

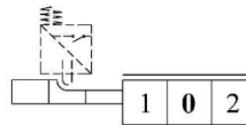
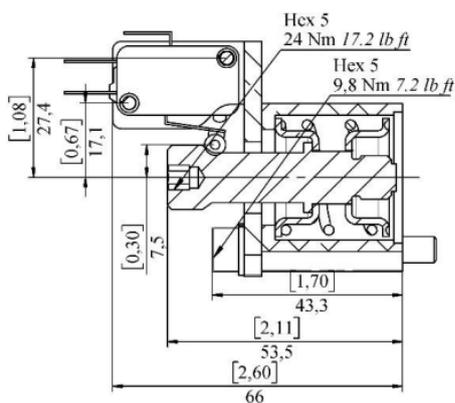
Kit 1E for double acting spool A or D



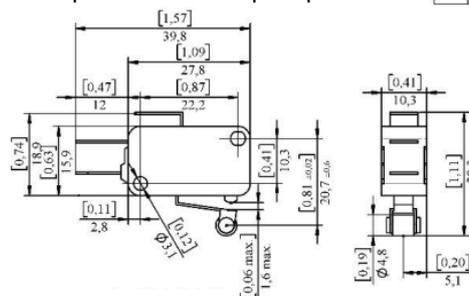
Kit 1E for single acting spool B



Kit 1E for single acting spool C

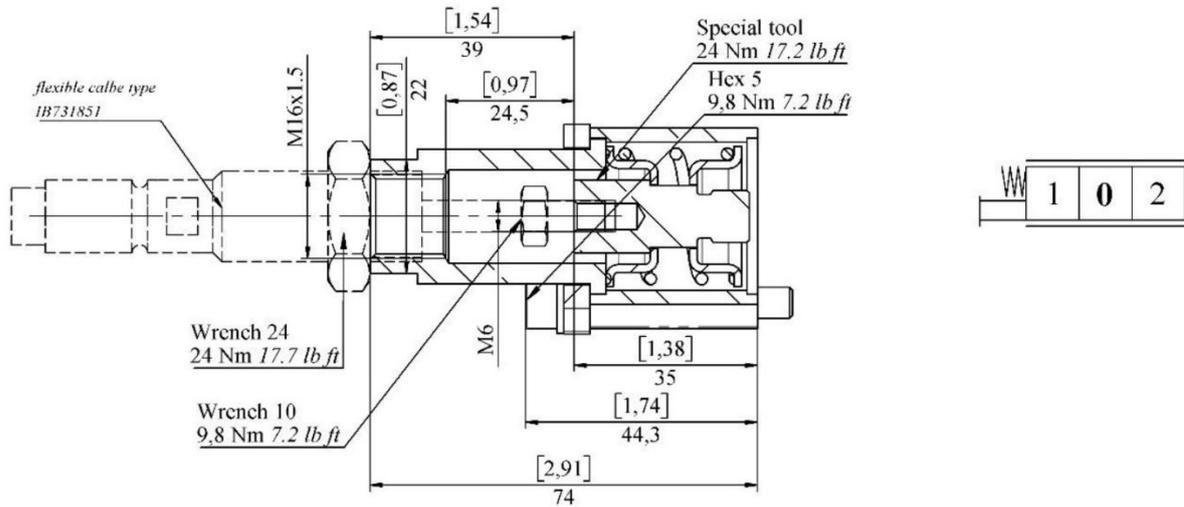


Microswitch specification for spool positioner **1E**

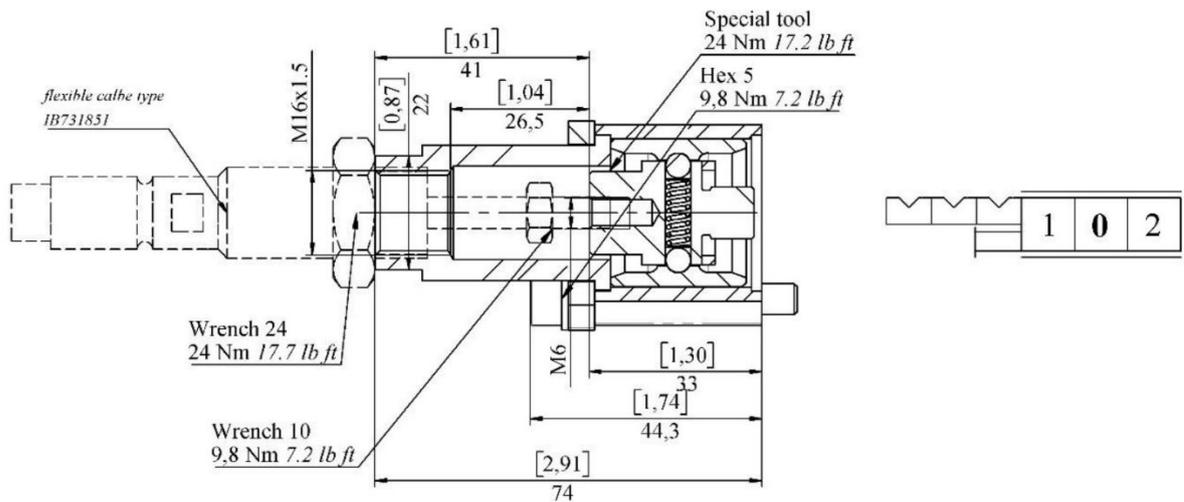


Spool positioner for flexible cable connection (side B)

Kit 1V2

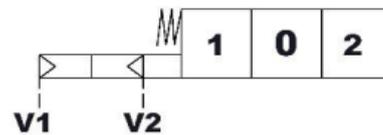
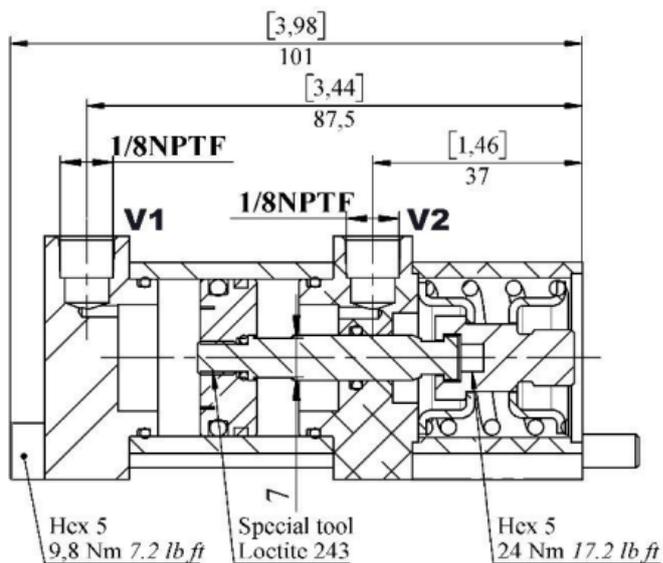


Kit 8V2



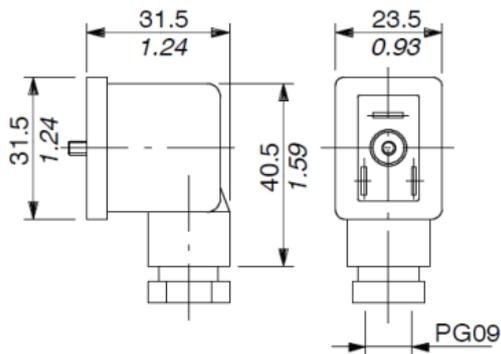
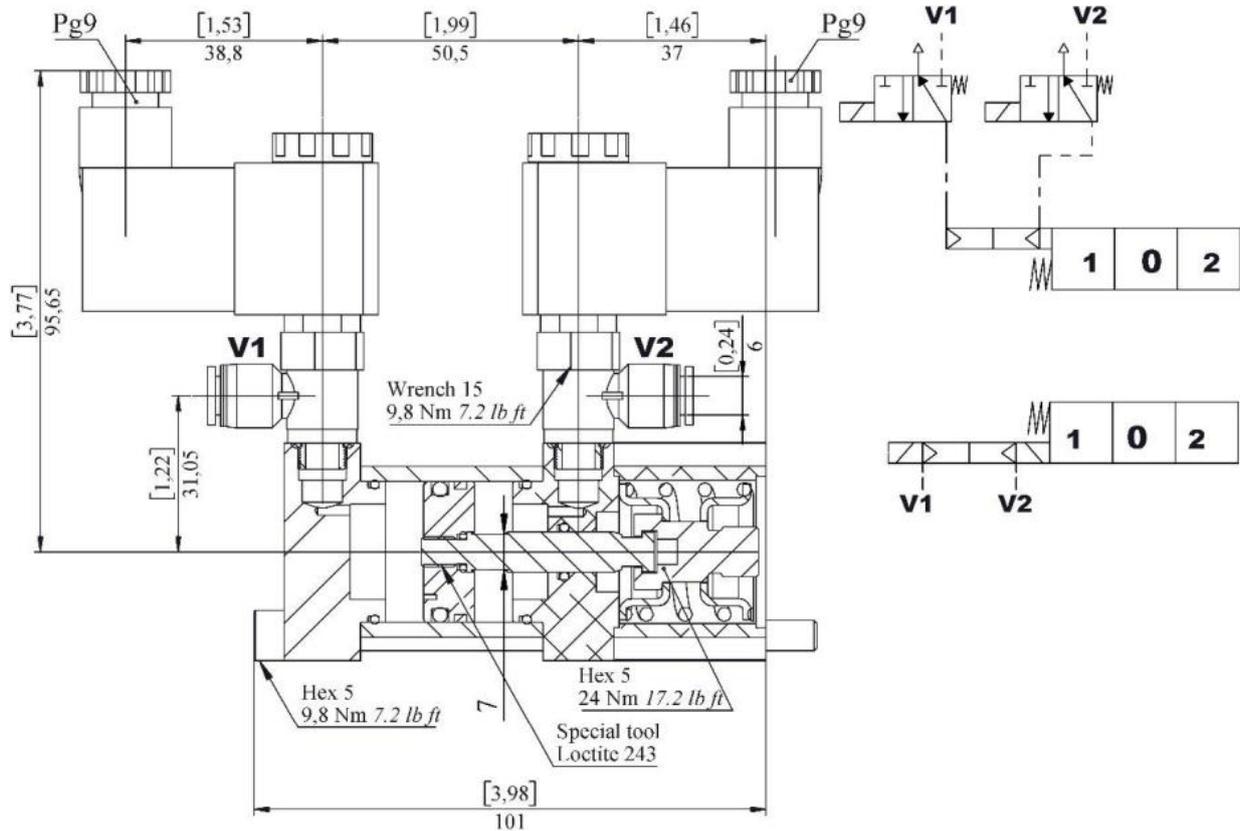
For more information on controls, cable lengths and ordering codes, refer to the page for flexible cable control V1 (Side A).

ON/OFF Pneumatic kit - 1P



Pilot pressure: min. 6 bar, max. 10 bar

ON/OFF Electro pneumatic kit - 1PE



Operating features

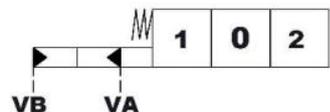
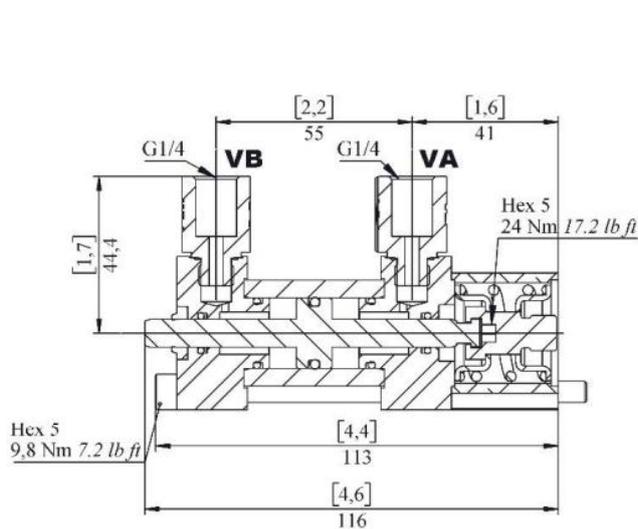
Pilot pressure	min. 6 bar
	max. 10 bar

Coil specifications

Nominal voltage tolerance	±10 %
Power rating	4,8 W
Nominal current	0,4 A - 12 VDC
	0,2 A - 24 VDC
Coil insulation	Class F
Weather protection	IP65
Duty cycle	100%

Connector is always included in 1EP control.

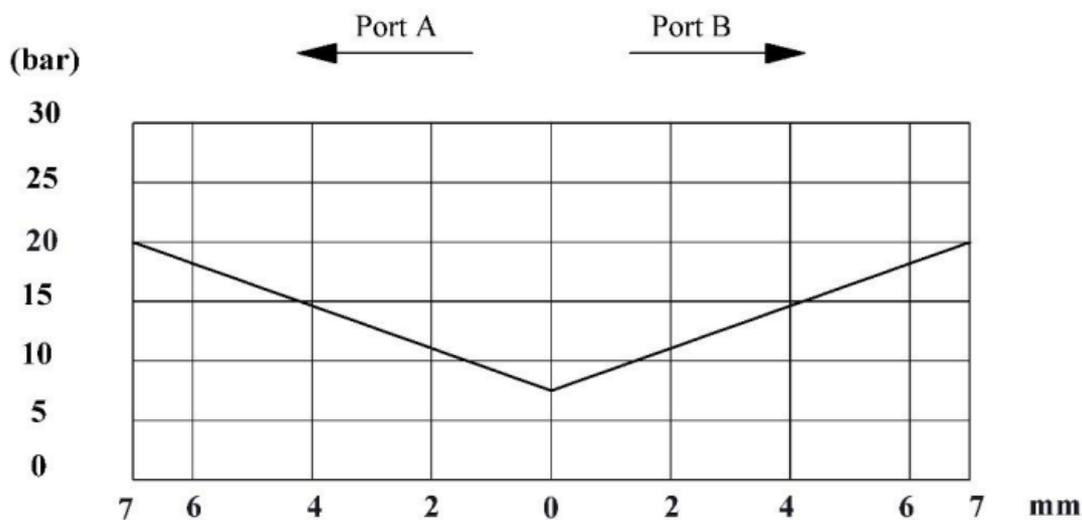
Proportional hydraulic, single side kit - 1H



Operating features

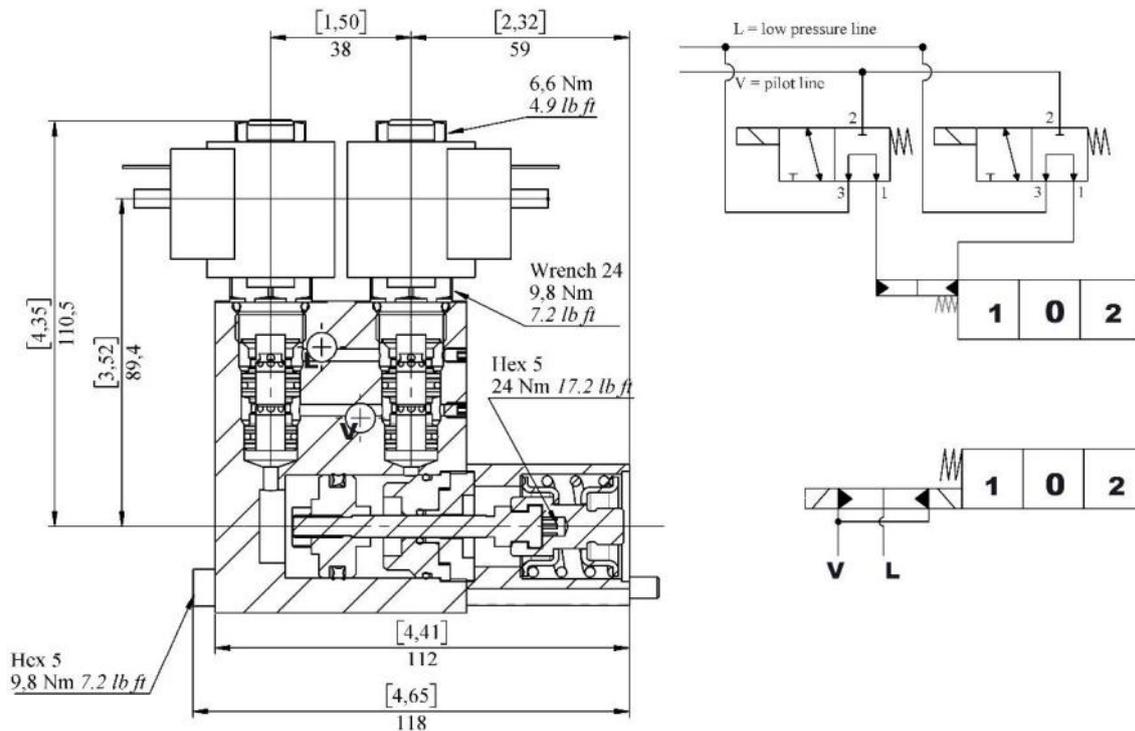
Pilot pressure	max. 10 bar
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Pilot pressure – stroke diagram

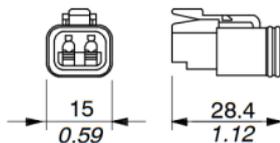


ON/OFF electro-hydraulic kit - 1ED3

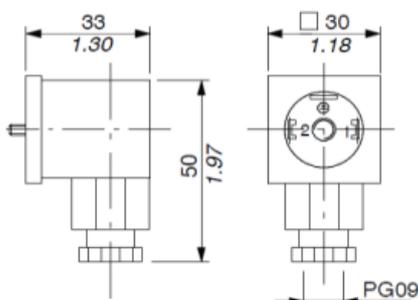
With spring return to neutral position



Connector specifications 2 poles, type Deutsch DT06-2S Male housing with female ends



Connector specifications 2P+T according to ISO 4400 / EN175301-803



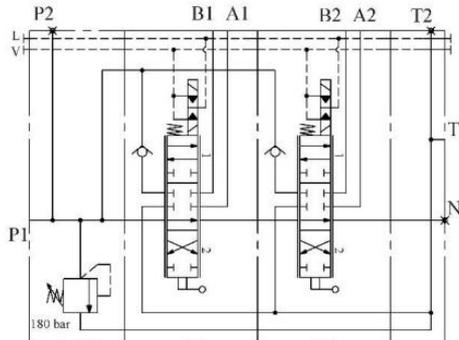
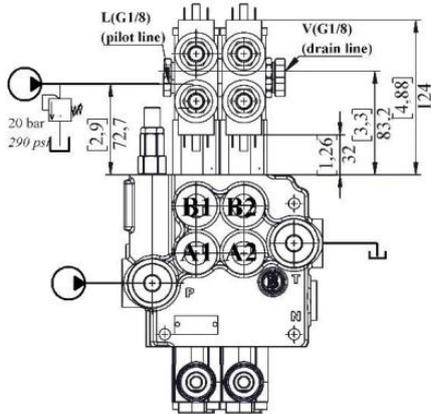
Operating features

Pilot pressure	min. 10 bar
	max. 50 bar
Back pressure on drain L	max. 25 bar

Coil specifications

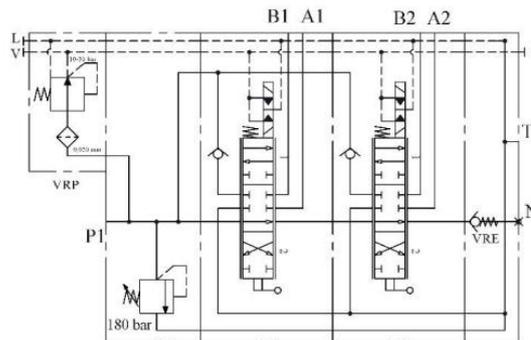
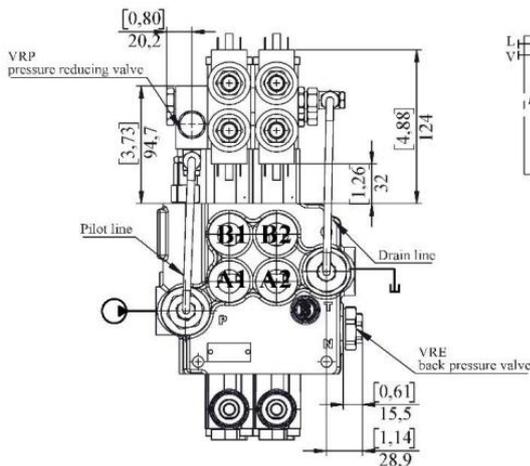
Nominal voltage tolerance	±10 %
Power rating	21 W
Nominal current	1,75 A - 12 VDC
	0,87 A - 24 VDC
Coil insulation	Class F
Weather protection	IP65
Duty cycle	100%

ON/OFF electro-hydraulic kit - 1ED3 with external drain



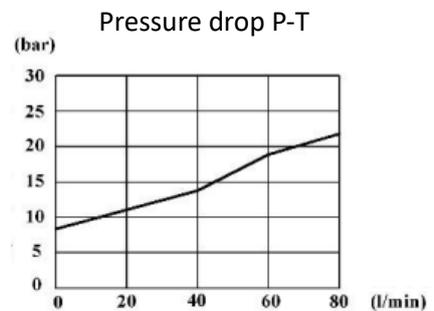
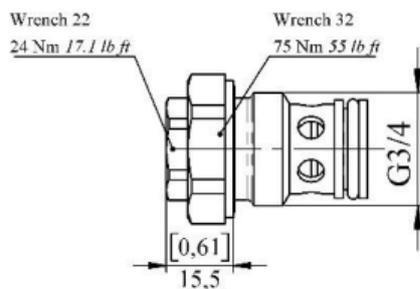
ON/OFF electro-hydraulic kit - 1ED3 with pilot and drain lines

Kit consists of pressure reducing valve, VRP, back pressure valve VRE and pipes.

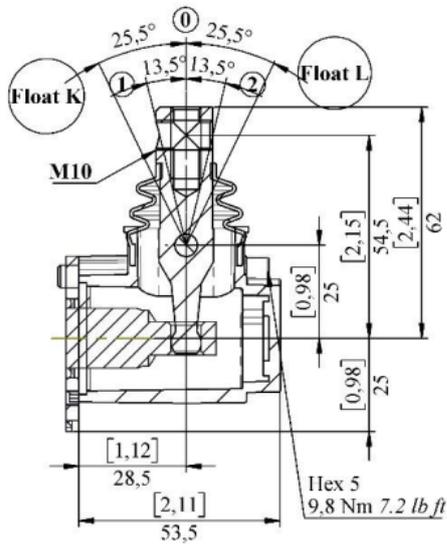


Back pressure valve (VRE) specifications

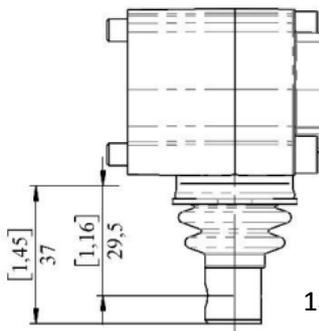
The valve is mounted on bypass port N to supply pilot pressure to the actuator.



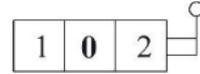
Lever control (Side A) – aluminum cap, with protection booth lever pivot box



Type KZ & KZe

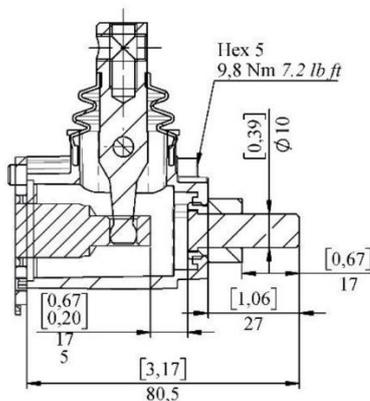
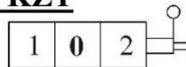


180° rotated – KZ0

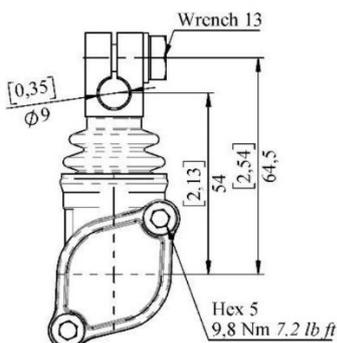
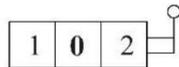


Float L&K only available in certain configuration.

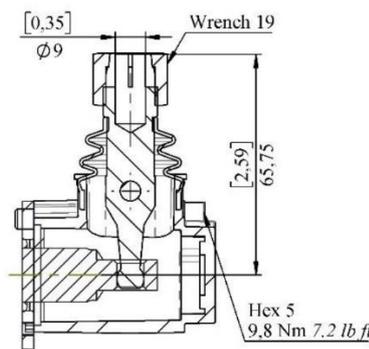
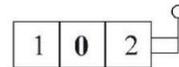
Kit KZT



Type KI



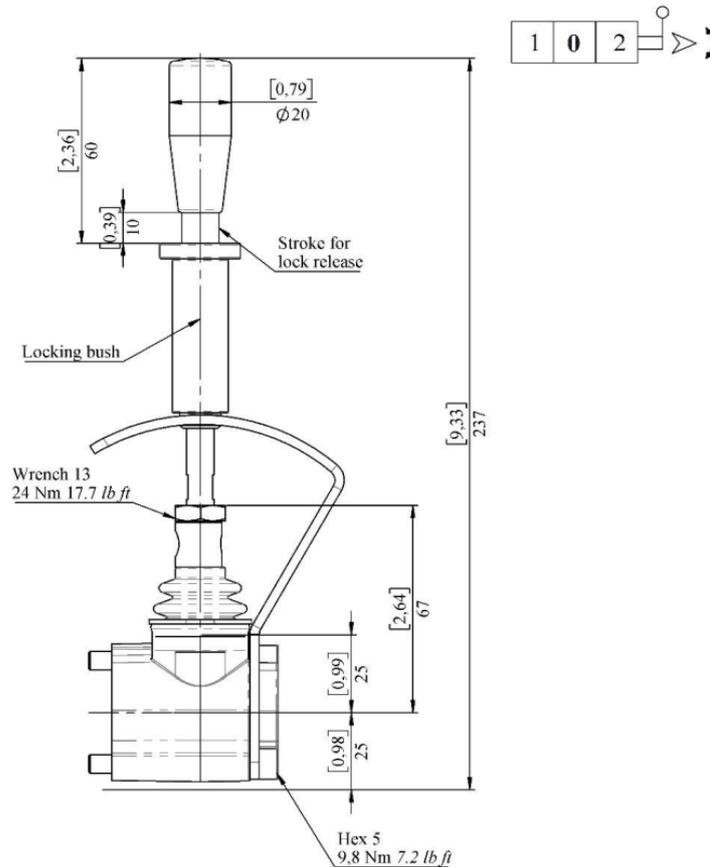
Type KY



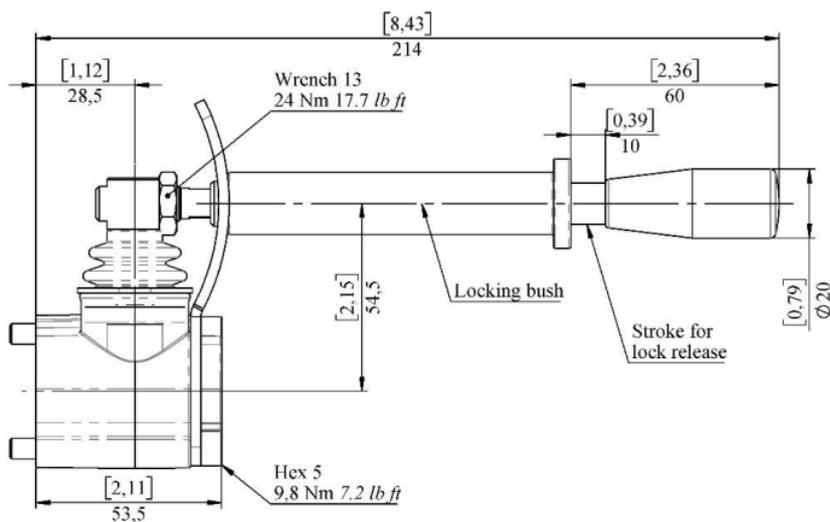
Special lever controls (side A)

Safety levers with lock in neutral complete with hand lever; lift hand lever knob to operate.

Type KZV



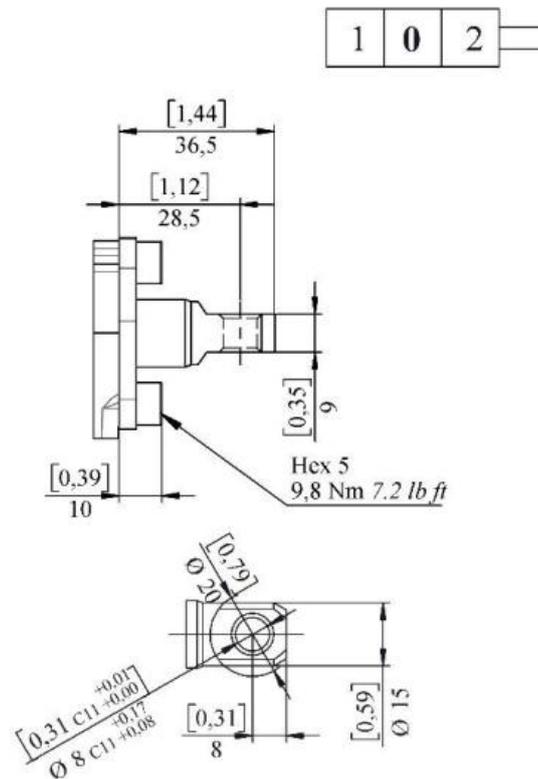
Type KZH



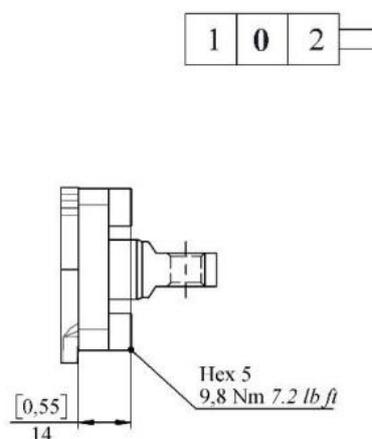
Other control arrangements (side A)

Type SLP

If in the order code side A is left blank, omit control type will be supplied:

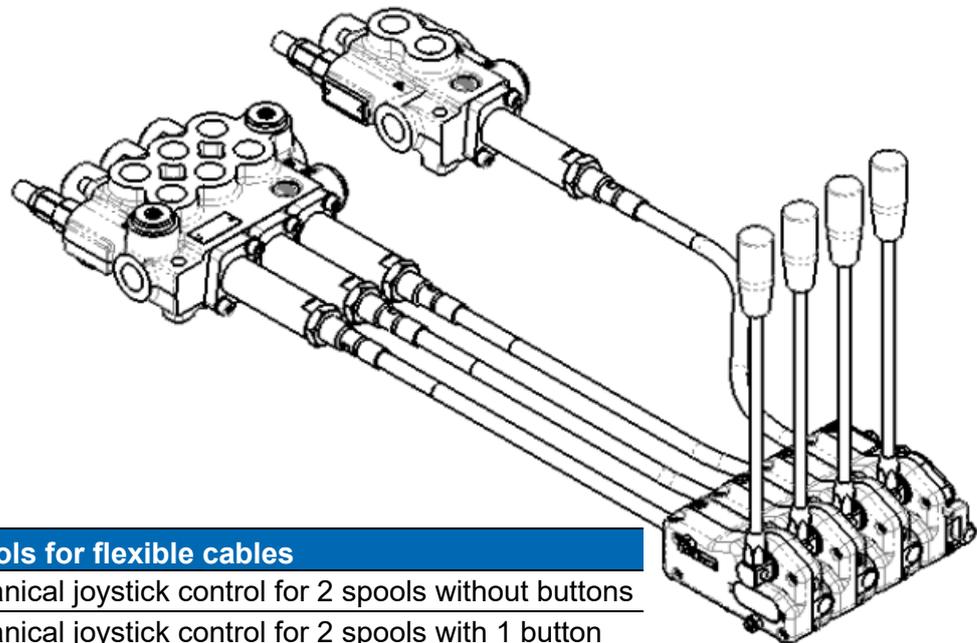
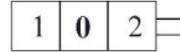
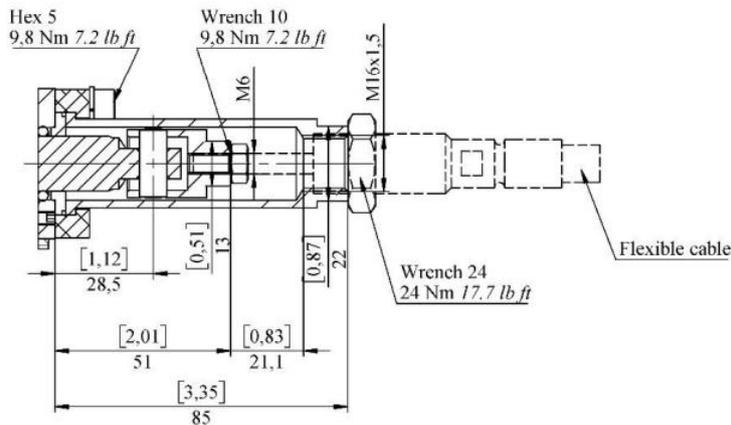


Type SLP



Mechanical control with dust-proof plate

Cable remote control – V1



Controls for flexible cables

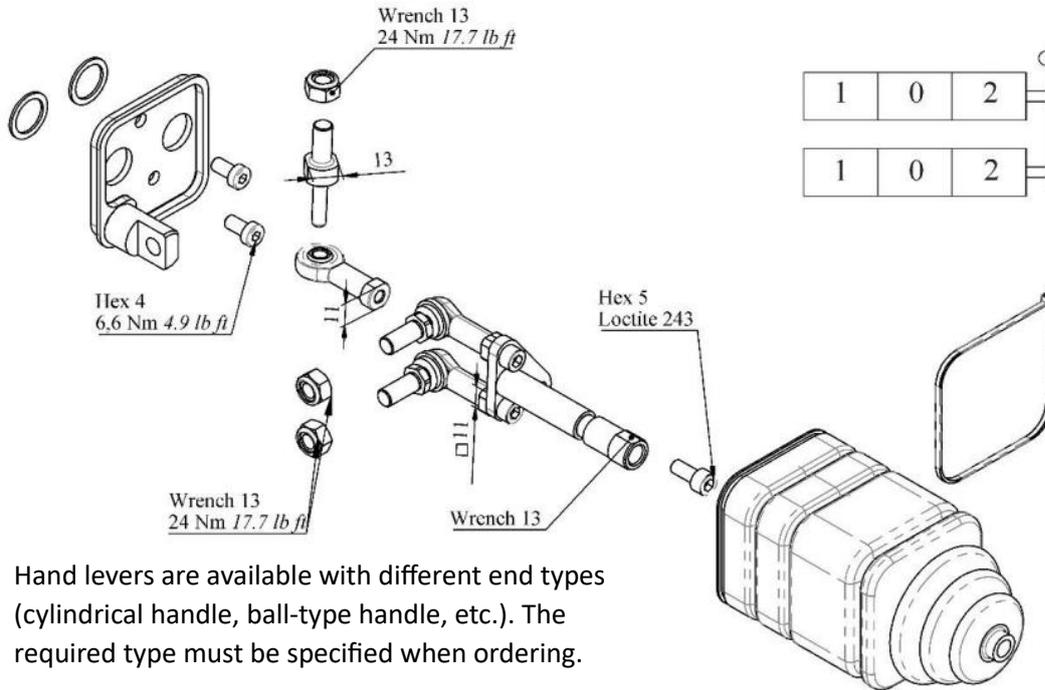
3335	Mechanical joystick control for 2 spools without buttons
3375	Mechanical joystick control for 2 spools with 1 button
6008	Mechanical joystick control for 2 spools with 2 buttons
IS 3047	Single lever control
IS 3076	Single lever control with antireverse lock

Flexible cable options code + length

IT-731133	1 m
IT-731134	1,5 m
IT-731135	2 m
IT-731136	2,5 m
IT-731137	3 m
IT-731138	3,5 m
IT-731139	4 m



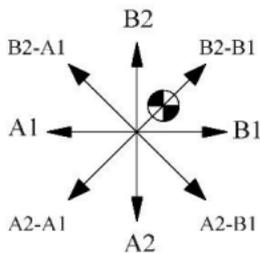
Mechanical joystick for two section control



Hand levers are available with different end types (cylindrical handle, ball-type handle, etc.). The required type must be specified when ordering.

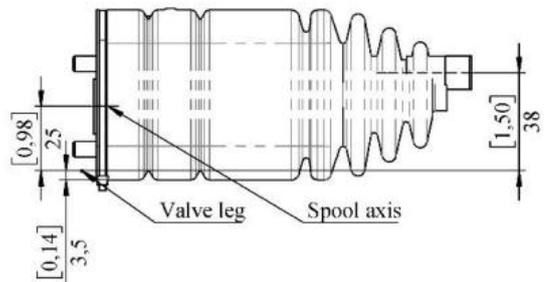
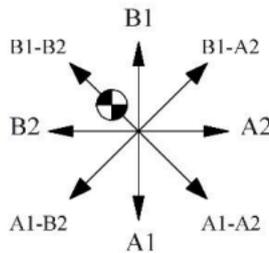
Type j+1

Pivot is above right



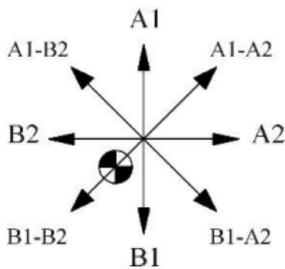
Type j+2

Pivot is above left



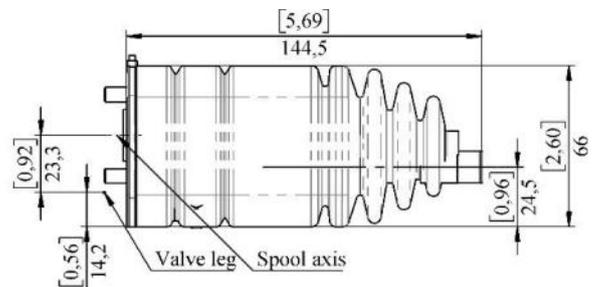
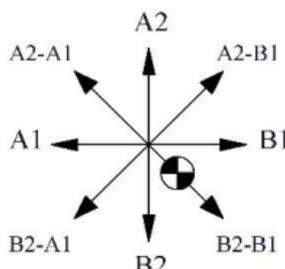
Type j+3

Pivot is bottom left

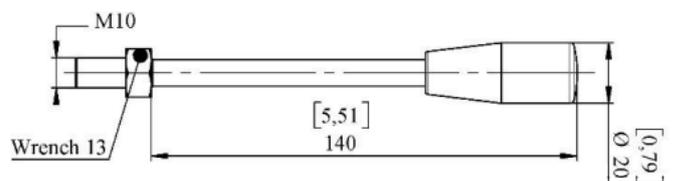


Type j+4

Pivot is bottom right



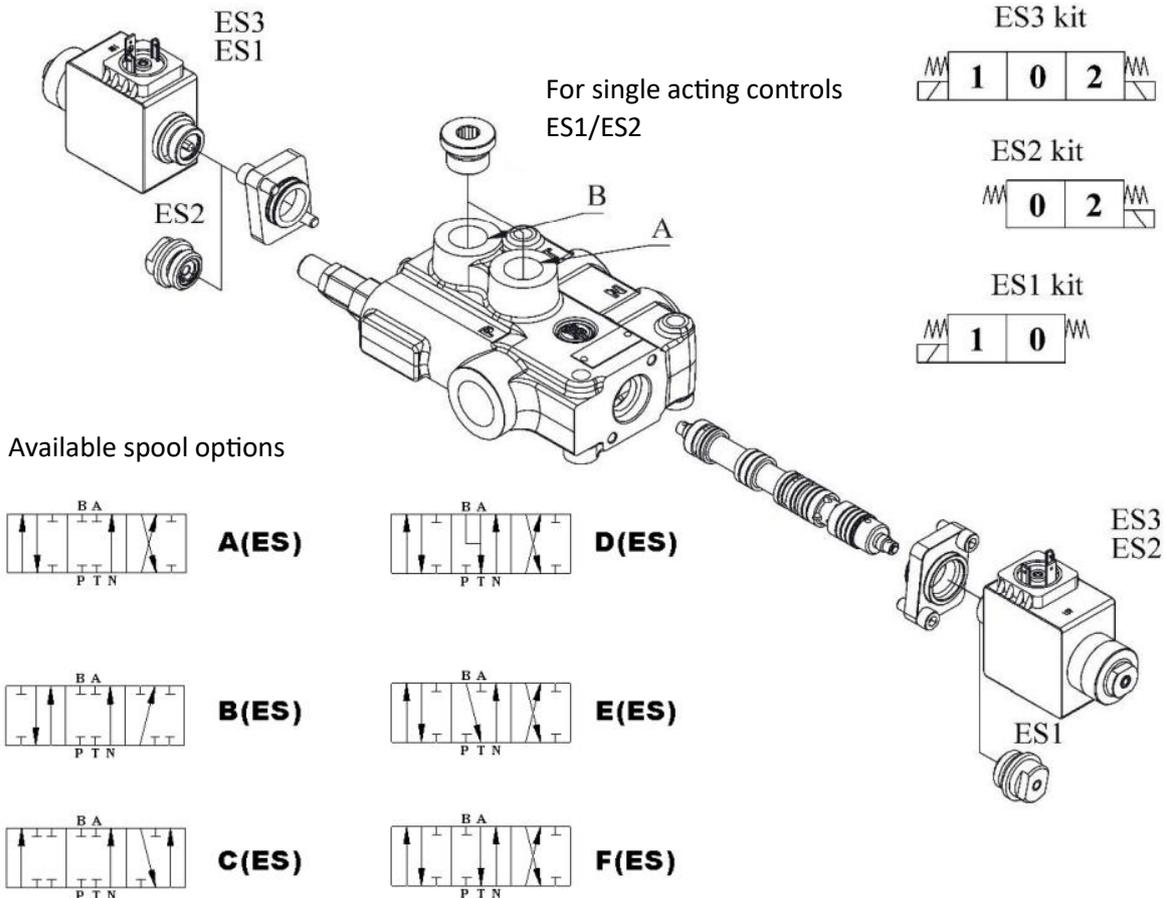
Standard hand lever dimensions



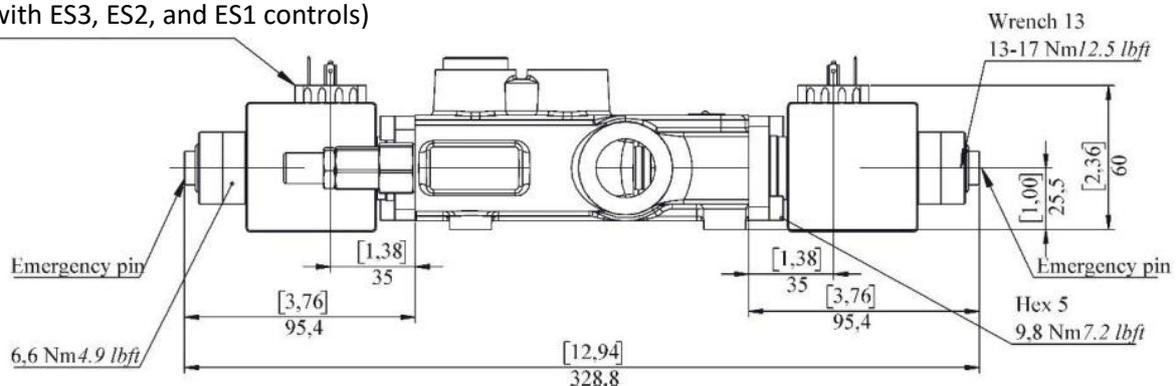
Complete control – single-acting ON/OFF solenoid control

Complete control – ES3 / ES2 / ES1

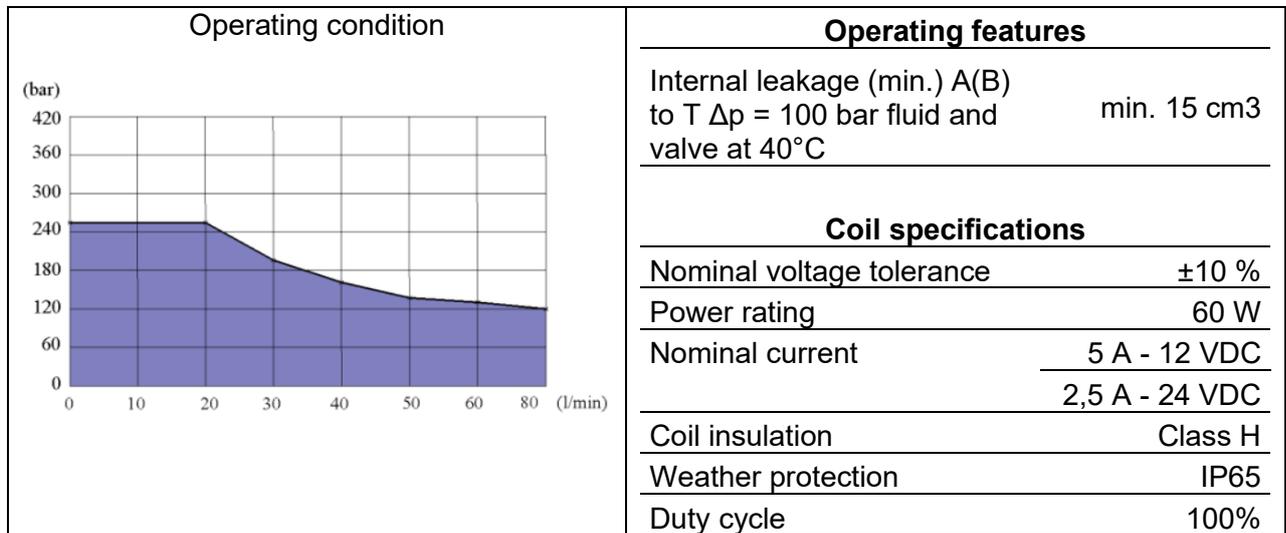
Direct control by two single-acting solenoids with spring return to the neutral position (ES3) or by one single-acting solenoid (ES1 or ES2); available for 1 to 6 spools, including valve bodies with individual check valves (parallel and tandem versions).



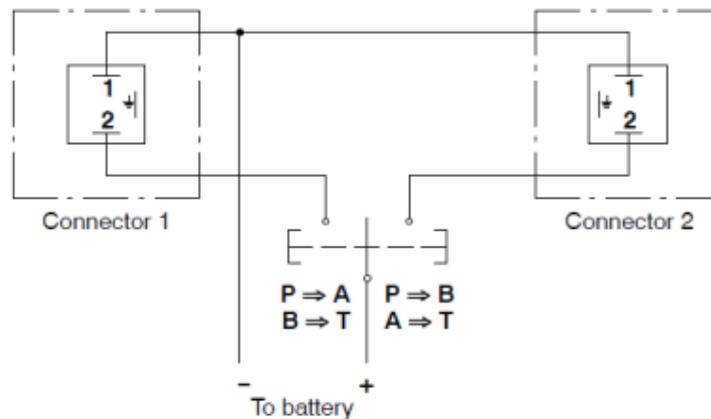
Connector 2P+T according to ISO4400/EN175301-803 (not included with ES3, ES2, and ES1 controls)



Complete control – single acting ON/OFF solenoid control

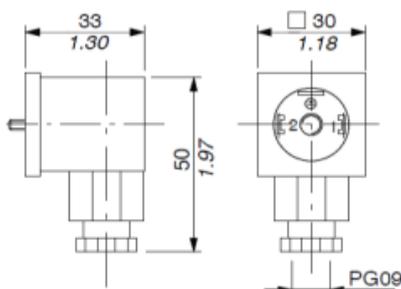


Electric wiring example

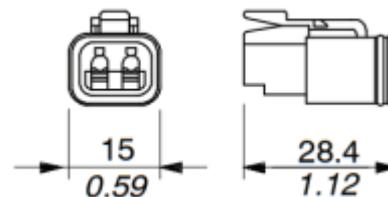


Connector specifications per type of coils available

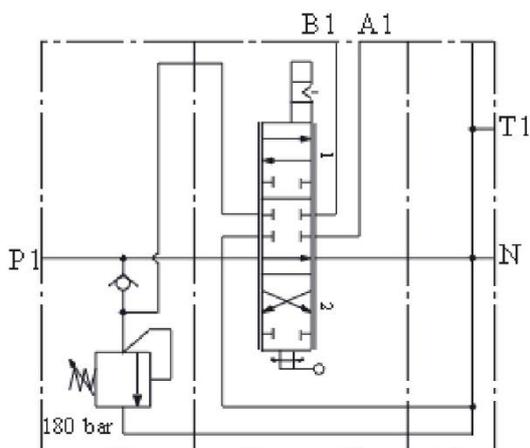
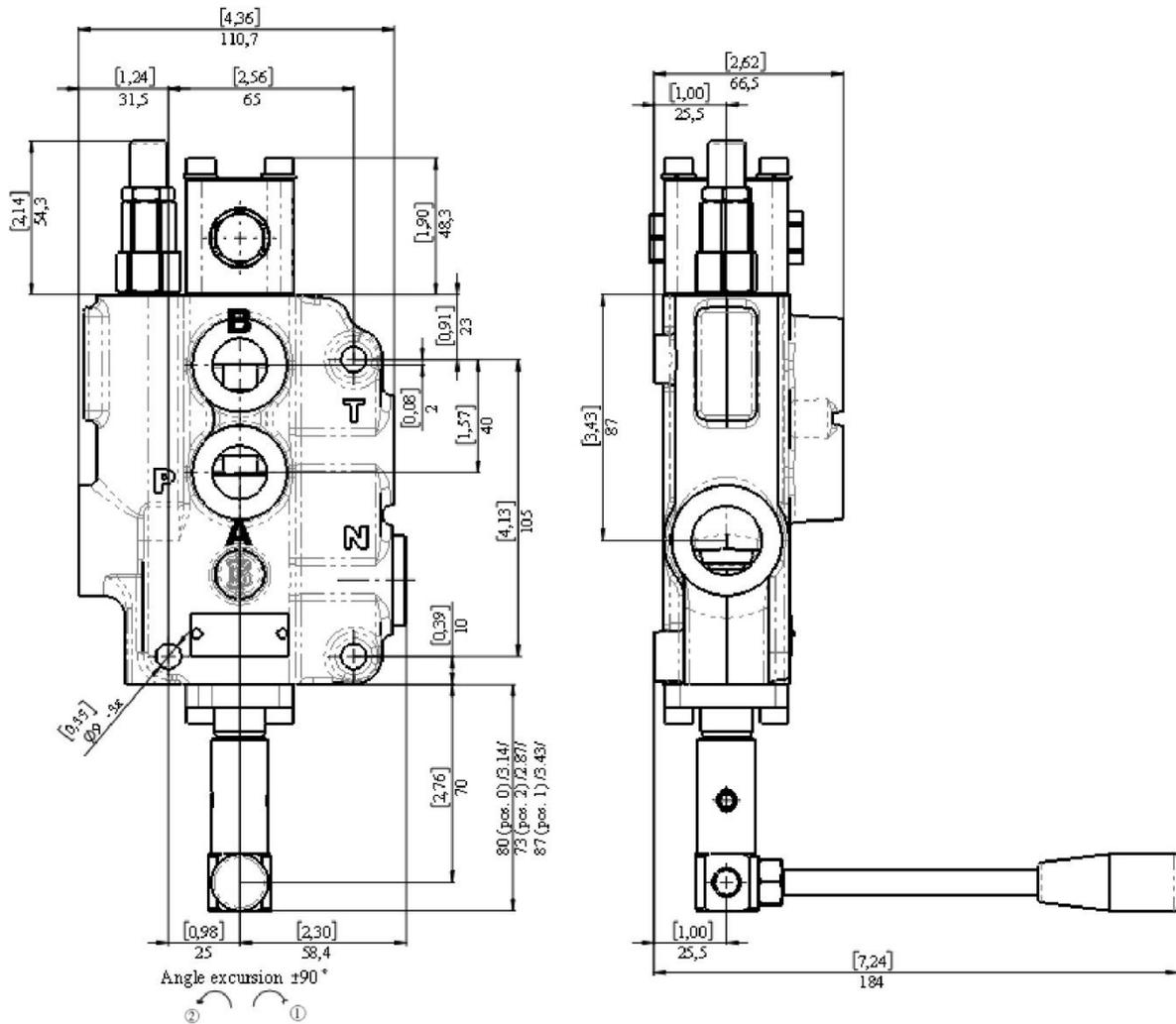
2P+T according to ISO 4400 / EN175301-803



**Connector specifications
2 poles, type Deutsch DT06-2S
Male housing with female ends**



Complete control – Rotary control A26



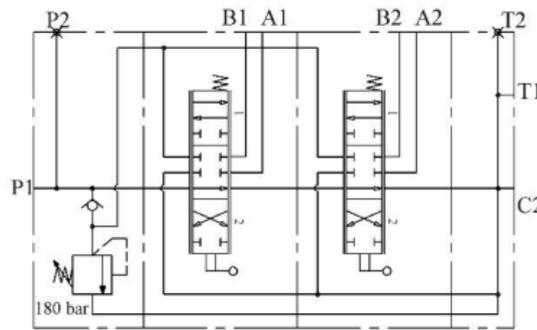
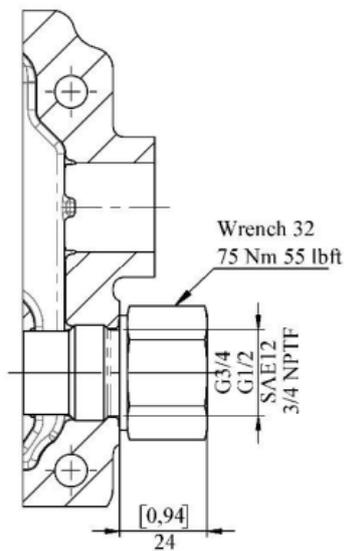
Outlet port options

It is possible to have open centre, closed centre and high-pressure carry-over (power beyond)

If in the order code before the thread specification port N is plugged with standard G3/4 plug

C – closed center

C2 - with carry-over (high pressure carry over)



C – closed center

