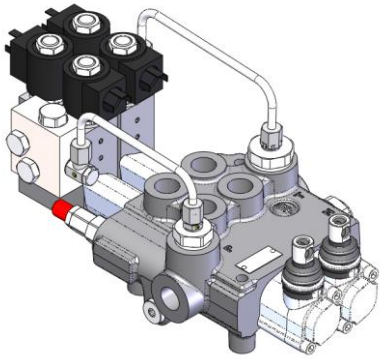
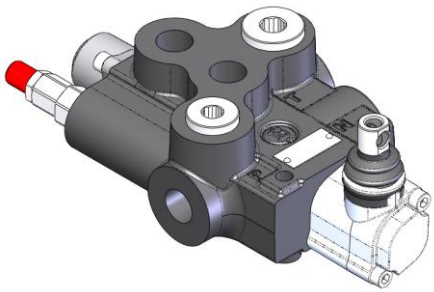
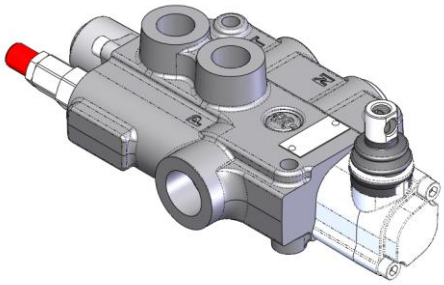
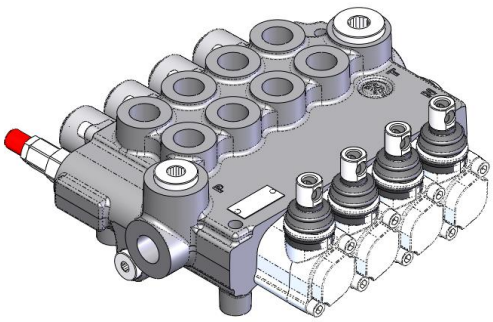
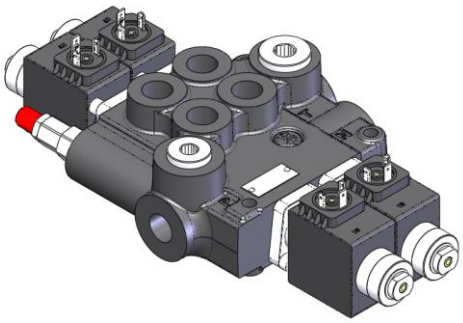
Z80

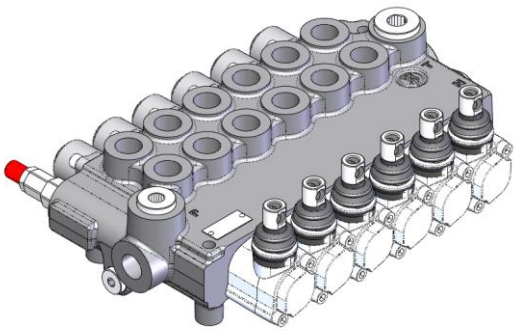












Features

Simple compact and heavy duty designed monoblock from 1 to 6 sections for open and closed centre hydraulic systems.

- Fitted with a main pressure relief valve and a load check valve (optionally individual check valve per spool).
- Available with parallel and tandem circuit
- Optional power beyond port for parallel and tandem circuit
- Diameter 18 mm *0.71 in* interchangeable spools.
- A wide variety of options
- Floating spools and kits, regenerative spools and kits do not require additional machining on the body
- Actuation – manual, pneumatic, electro-pneumatic, hydraulic, electro-hydraulic, with solenoid and remote with flexible cables spool control kits.

Additional information

This catalogue shows the product in the most standard configuration. For special requests please contact sales.

WARNING!

All specifications of this catalogue refer to the standard product at this date. Badestnost, oriented in continuous improvement, reserves the right to discontinue, modify or revise specifications, without notice.

BADESTNOST IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN INCORRECT USE OF THE PRODUCT

First edition 09-2025

Working conditions

Nominal flow rating		80 l/min	*21.1 US gpm*
Operating pressure (max.)	*parallel and tandem*	315 bar	*46000 psi*
Back pressure (max.)	*outlet port T, static*	35 bar	*508 psi*
Internal leakage (min.) A(B) to T	*Δp = 100 bar (1450 psi) fluid and valve at 40 °C (104 °F)*	8 cm^3/min	*0.48 in^3/min*
Hydraulic fluid		Mineral based oil	
Fluid temperature	*with NBR seals*	from -20 °C to 80 °C	*from -4 °F to 176 °F*
	with FPM (Viton) seals	from -20 °C to 100 °C	*from -4 °F to 212 °F*
Viscosity	*operating range*	from 15 to 75 mm^2/s	*from 15 to 75 cSt*
	min.	12 mm^2/s	*12 cSt*
	max.	400 mm^2/s	*400 cSt*
Permisable degree of fluid contamination		-/19/16 - ISO 4406	*NAS 1683 - class 10*
Ambient temperature	with mechanical devices	from -40 °C to 60 °C	*from -40 °F to 140 °F*
	with pneumatic and hydraulic devices devices	from -30 °C to 60 °C	*from -22 °F to 140 °F*
	with electric devices	from -20 °C to 50 °C	*from -4 °F to 140 °F*

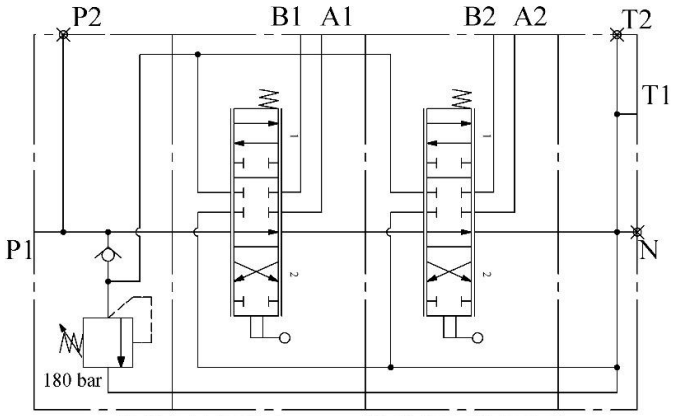
Standard threads

Refernce standard					
		BSP	UN-UNF	Metric	NPTF
Thread according to		ISO 228/1	ISO 263	ISO 262	Ansi B1.20.3
		BS 2779	ANSI B1.1 unified		
Cavity dimension according to	ISO	1179	11926	9974-1	
	SAE		J1926	J2244	J476a
	DIN 3852-2 (Shape X or Y)			3852-1 (Shape X or Y)	

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

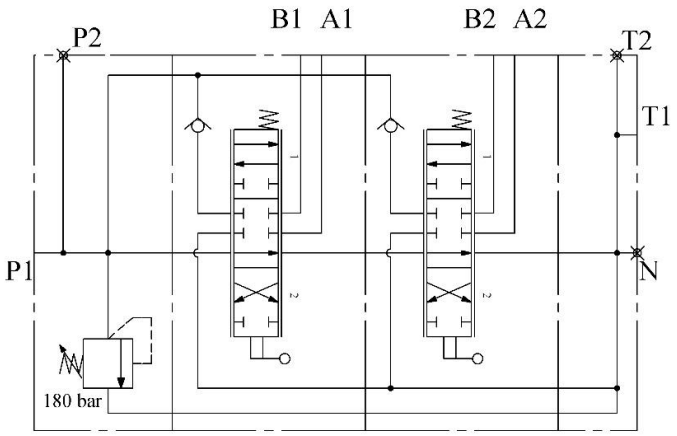
Hydraulic circuits

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



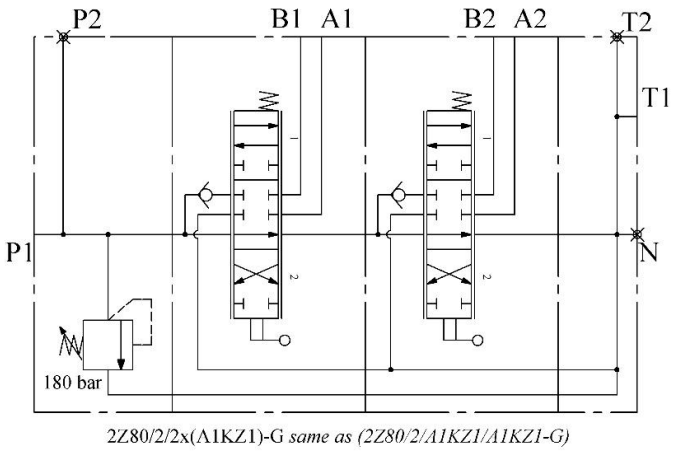
02Z80/2x(A1KZ1)-G *same as (02Z80/A1KZ1/A1KZ1-G)*

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



2Z80/1/2x(A1KZ1)-G *same as (2Z80/1/A1KZ1/A1KZ1-G)*

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

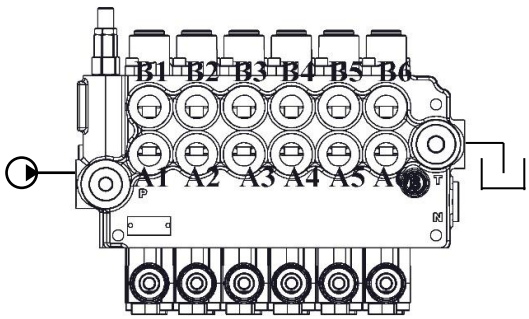


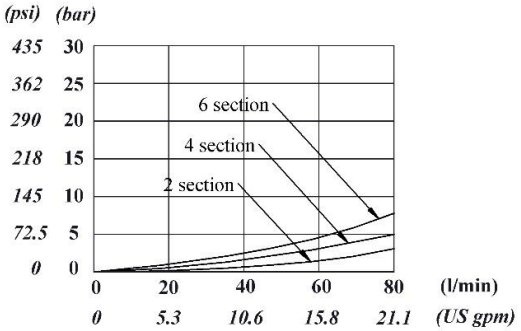
2Z80/2/2x(A1KZ1)-G *same as (2Z80/2/A1KZ1/A1KZ1-G)*

Performance data

Open centre

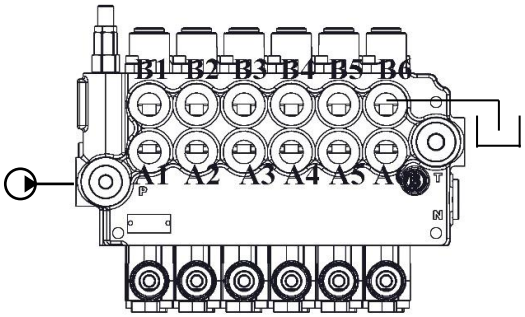
From side inlet to side outlet

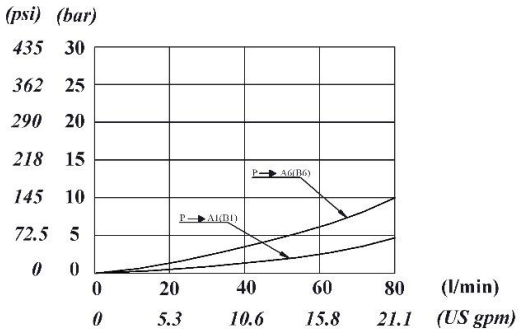




Inlet to work port

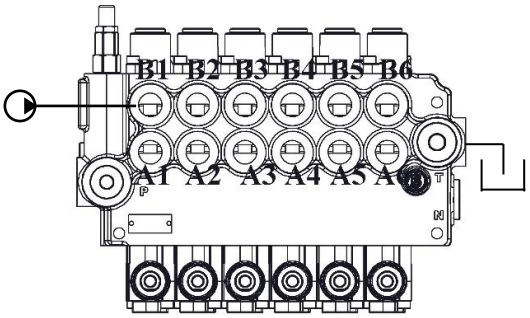
From side inlet to A port spool in position 2 or B port spool in position 1

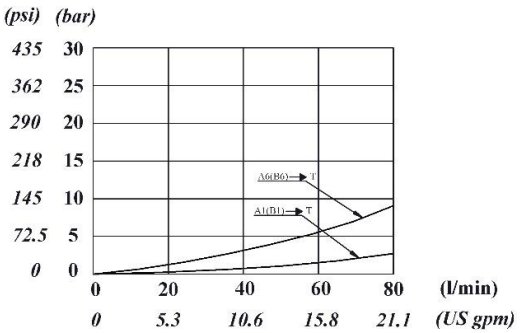




Work port to outlet

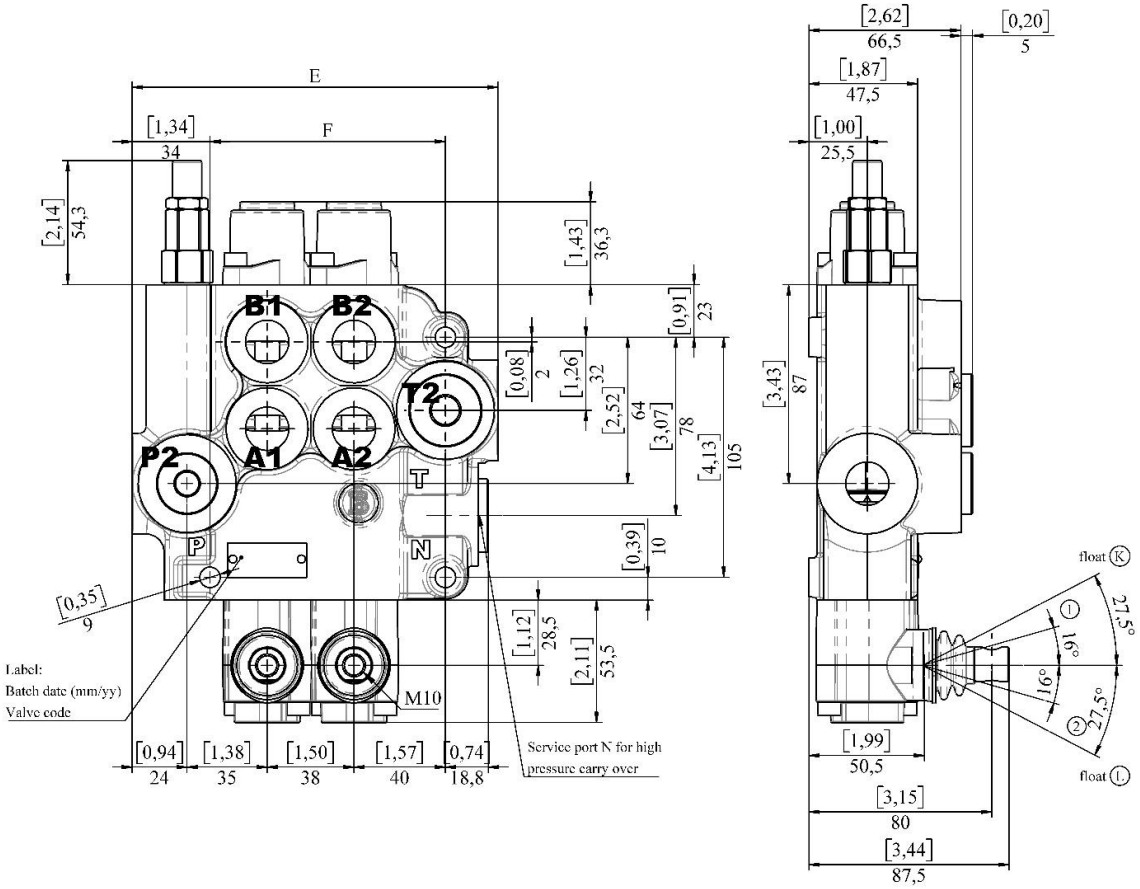
From A port spool in position 1 or B port spool in position 2 to side outlet





Dimensions

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

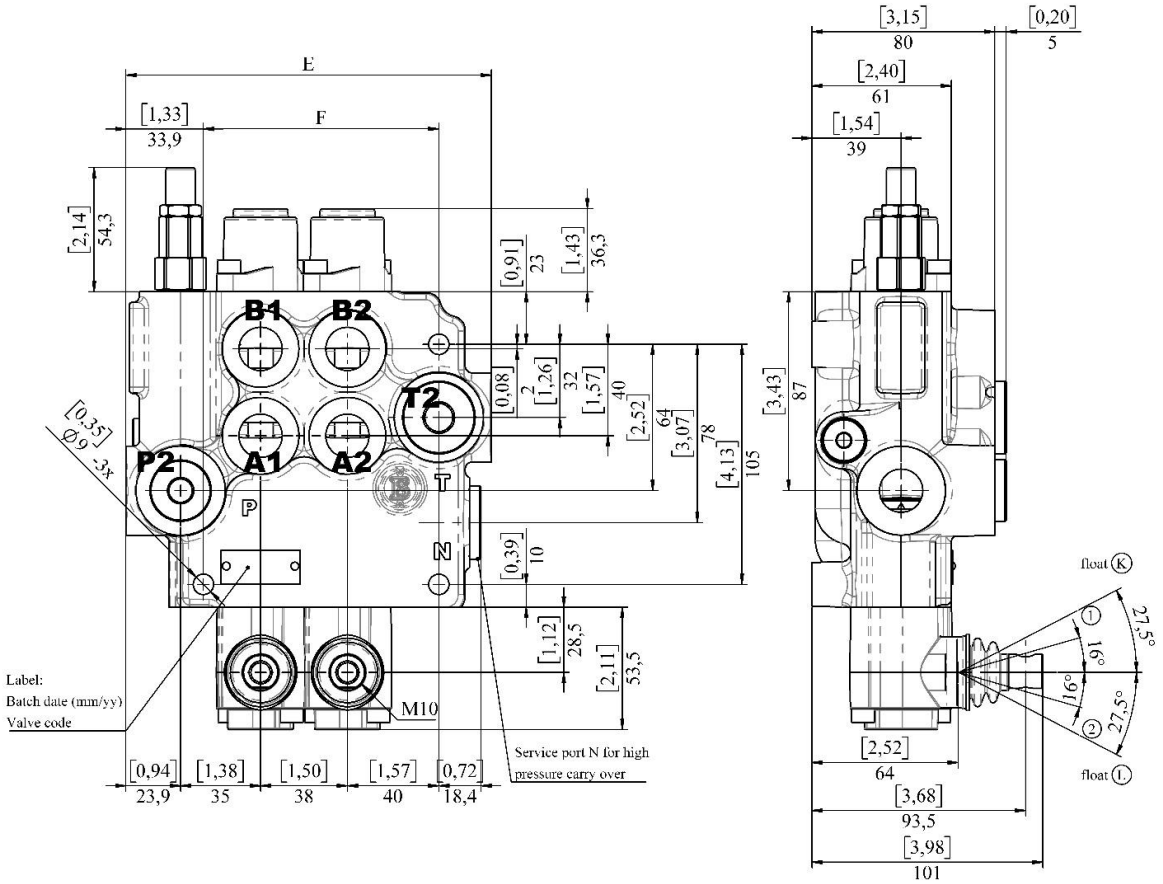


Note:Float K is presented on the drawing above just to show the convention for direction, Z80 can have float K (spool out) only in right hand version of the valve. For example code will be (Z80R/K16KZ1-G)

TYPE	E		F		Weight	
	mm	*in*	mm	*in*	kg	*lb*
Z80	111	*4.37*	65	*2.56*	3.90	*8.6*
Z80PT	122	4.80	65.00	2.56	4.55	10.03
02Z80	160	*6.30*	103	*4.06*	6.75	*14.9*
03Z80	198	*7.80*	141	*5.55*	9.05	*19.9*
04Z80	236	*9.29*	179	*7.0*	11.15	*24.6*
05Z80	274	*10.8*	217	*8.5*	13.45	*29.6*
06Z80	312	*12.3*	255	*10.0*	15.55	*34.3*

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 right hand version of the valve. For example code will be (Z80R/K16KZ1-G)

TYPE	E		F		Weight	
	mm	*in*	mm	*in*	kg	*lb*
Z80	111	*4.37*	65	*2.56*	3.90	*8.6*
Z80PT	122	*4.80*	65	*2.56*	4.55	*10.0*
2Z80	160	*6.30*	103	*4.06*	7.20	*15.9*
3Z80	198	*7.80*	141	*5.55*	9.5	*20.9*
4Z80	236	*9.29*	179	*7.0*	11.60	*25.6*
5Z80	274	*10.8*	217	*8.5*	13.90	*30.6*
6Z80	312	*12.3*	255	*10.0*	16.00	*35.3*

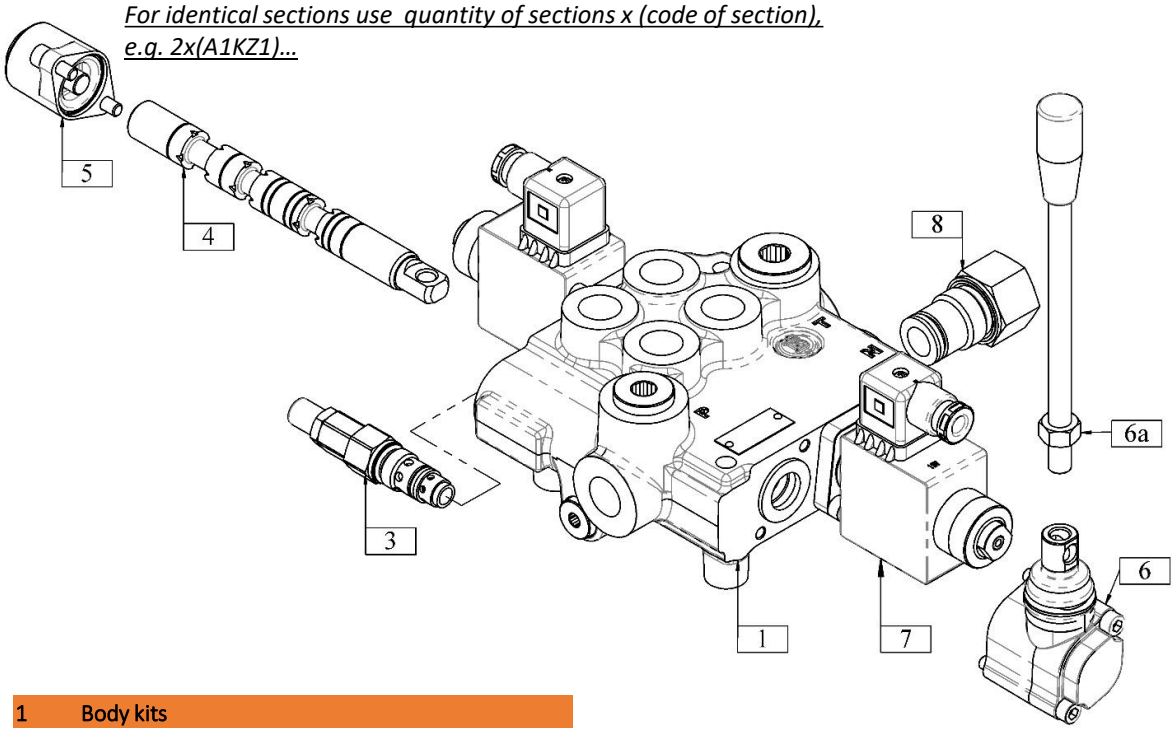
Order code, complete

First section *Following sections*

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

1 2 3 4 5 6 7 8 10 11

For identical sections use quantity of sections x (code of section), e.g. 2x(A1KZ1)...



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 positioners (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*

Order code, continue

3	Inlet relief options
Type	*Description*
omit	*Range 120-250 bar / 1740 to 3625 psi* standard setting at 180 bar / 2610 *psi*
(D2-120)	*Range 50-120 bar / 725 to 1740 psi* standard setting at 120 bar / *1740 psi*
(120-250)	*Range 120-250 bar / 1740 to 3625 psi* setting other than 180 bar / 2610 *psi*
(D4-220)	*Range 220-315 bar / 3190 to 4570 psi* standard setting at 220 bar / *3190 psi*
(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, requires a plug.*
C	*Single acting on B, 3 positions, A plugged, requires a plug.*
D	*Double acting, 3 position, with 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*
Special spools for particular positioner kits	
Us	*Double acting, 4 positions, regenerative position in between pos. 0 and position 2, spool in, only available in left hand configuration*
K	*Double acting, 4 positions, floating circuit in 4th position with spool out, only available in right hand configuration*
L	*Double acting, 4 positions, floating circuit in 4th position with spool in, only available in left hand configuration*
Ak	*Double acting, 3 position, with A and B closed in pos. 0 for pressure release option (kick out)*
Bk	*Single acting on A, 3 positions, B plugged, requires a plug; 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 microswtich 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*

Order code, continue

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*
7zS1	*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*
Particular positioner kits for special spools	
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 Ø9 mm*
KY	*Lever box, collet type, vertical Ø9 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)*

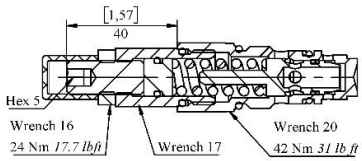
Order code, continue

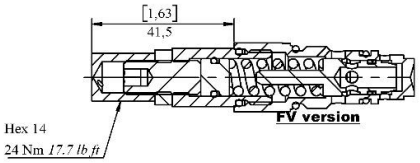
7a	**Coil specifications**
12V	*12V coil*
24V	*24V coil*
12V	*12V DT coil*
24V	*24V DT coil*
7b	**Connectors**
	By default, connectors are not included
(C)	*Connector for the particular coil is included*
8	**Outlet port options**
	BSP G3/4 plug on port N
C	*Closed center plug*
C2	*G3/4 high pressure 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 3**
11	**Coating and plating**
	Valve body is phoshpated, steel parts Zn plated, spools either Ni, or Cr plating (omit in valve description)
Zn	Valve body - Zinc plated
BP	Painting

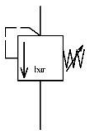
Inlet relief options

D4-280-sok-FV

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

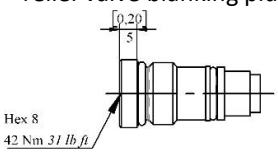


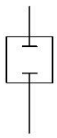




Note: Check valve is not shown

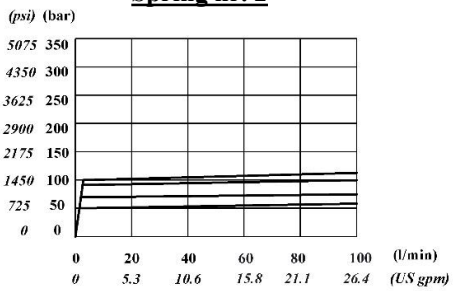
sok– relief valve blanking plug



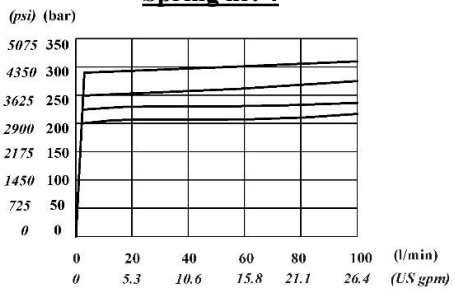


Relief valve type "D" performance characteristics

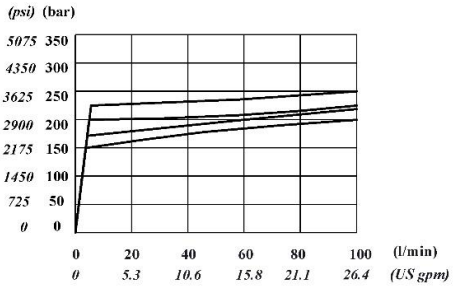
Spring nr. 2



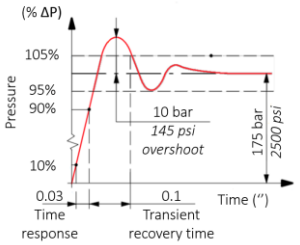
Spring nr. 4



Spring nr. 3

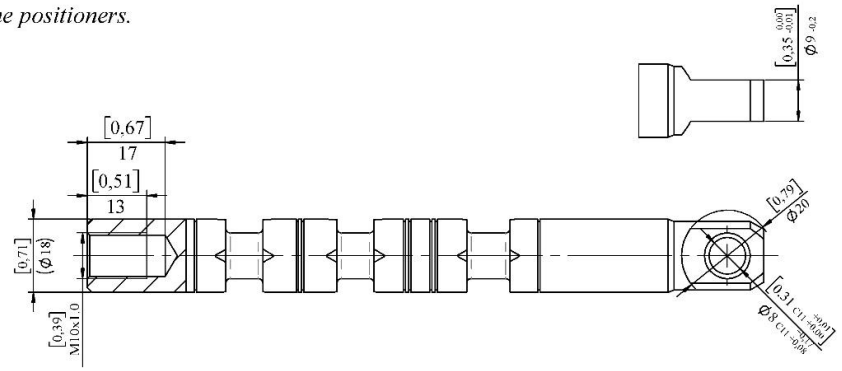


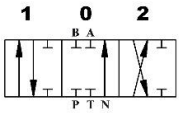
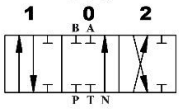
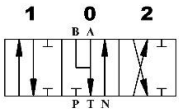
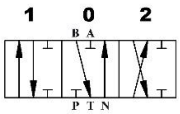
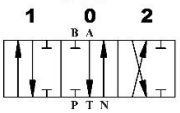
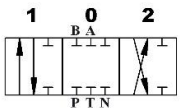
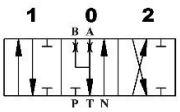
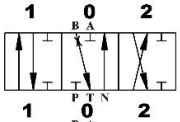
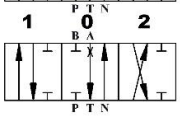
Time response

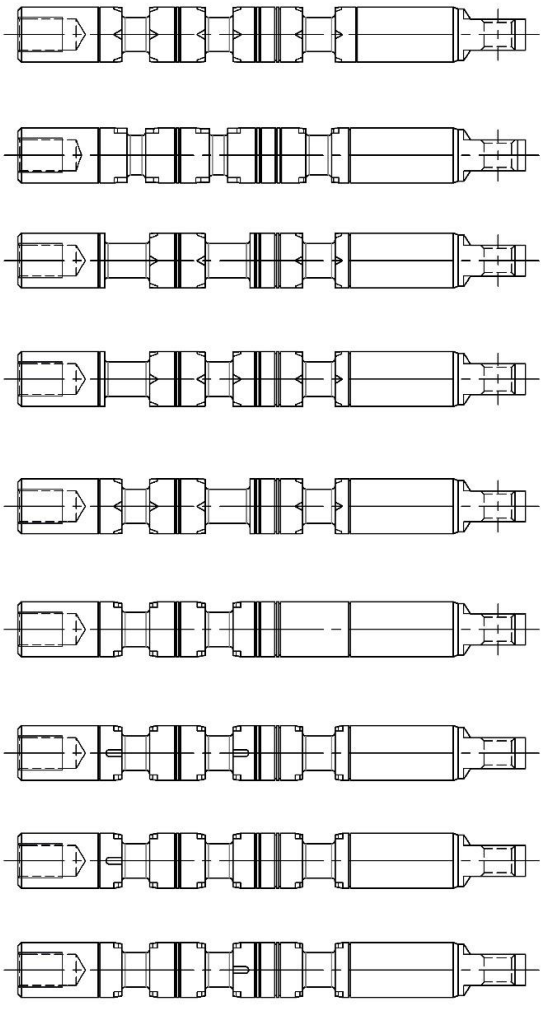


Spool options:

Badestnost standard spool have the ends shown in the drawing below. These end spool are necessary to join it the controls and the positioners.

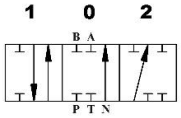


	**A**	Double acting spool, work ports closed in neutral position.
	**Af**	Double acting spool, high metering, work ports closed in neutral position.
	**D**	Double acting spool, work ports open to tank in neutral position.
	**E**	Double acting spool, work port B open to tank in neutral position.
	**F**	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



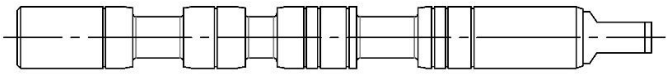
Spool options, continue

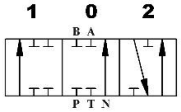
Single acting spools



B

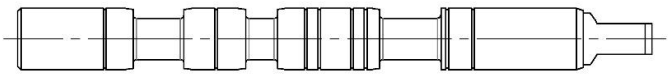
Single acting on A, 3 position, B plugged



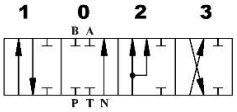


C

Single acting on B, 3 positons, A plugged

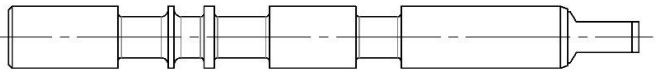


Regenerative spools



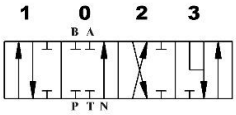
Us

Double acting, 4 positions, regenerative position



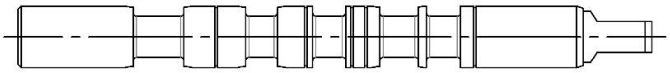
Spool Us requires spool positioner - 6 or 17, and it is available to valves ONLY with left hand configuration (P on left with respect to lever control)

Floating spools

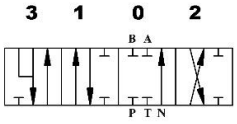


L

Double acting, 4 positions, floating circuit in 4th postion with spool in

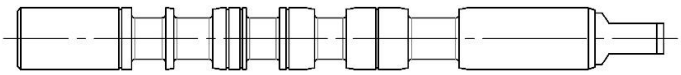


Spool L requires spool positioner - 12 or 13, and it is available to valves ONLY with left hand configuration (P on left with respect to lever control



K

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



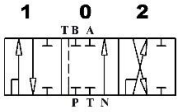
Spool K requires spool positioner - 16 or 15, and it is available to valves ONLY with "R" right hand configuration (P on right with respect to lever control)

All spools have "R" version for right version of the valve, exceptions are Us, K and L.
To order right hand version of a spools, add "R" behind the spool description e.g. AR, BR, CR, etc.
To order low leakage version of spools, add "n" behind the spool description e.g. An, Bn, Cn, etc.

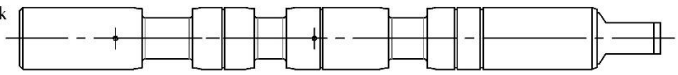
Spool options, continue

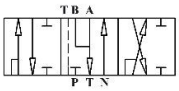
*Spools for pressure release detent kits "kick out" – require additionally machined valve body (**ZK**)*

Standard double acting

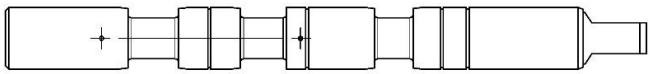


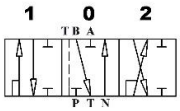
Ak Double acting spool, work ports closed in neutral position.



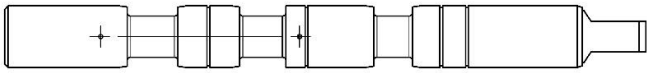


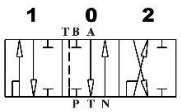
Dk Double acting spool, work ports open to tank in neutral position.



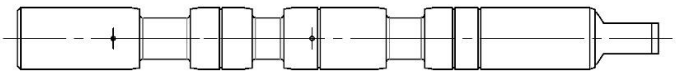


Ek Double acting spool, work port B open to tank in neutral position.

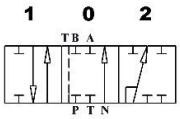




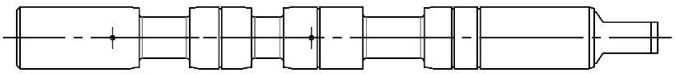
Fk Double acting spool, work port A open to tank in neutral position.

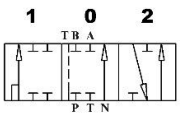


Single acting

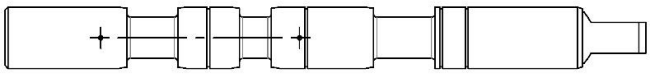


Bk Single acting on A, 3 position, B plugged





Ck Single acting on B, 3 positons, A plugged

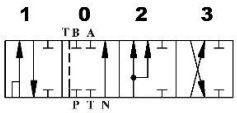


All spools have "R" version for right version of the valve, exceptions are Uk, Kk and Lk.
To order right hand version of a spools, add "R" behind the spool description e.g. AkR, BkR, CkR, etc.
To order low leakage version of spools, add "n" behind the spool description e.g. Akn, Bkn, Ckn, etc.

Spool options, continue

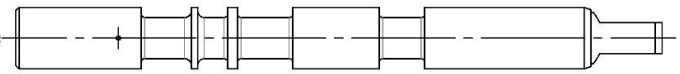
*Spools for pressure release detent kits "kick out" – require additionally machined valve body (**ZK**)*

Regenerative



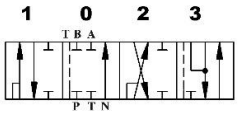
Uk

Double acting, 4 positions, regenerative position



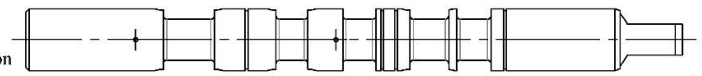
Spool Uk requires spool positioner – 1732 and it is available to valves ONLY with left hand configuration (P on left with respect to lever control)

Floating

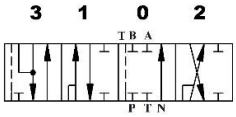


Lk

Double acting, 4 positions, floating circuit in 4th postion with spool in

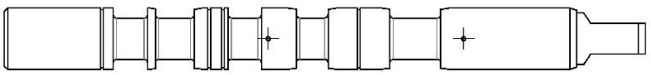


Spool Lk requires spool positioner - 42 and it is available to valves ONLY with left hand configuration (P on left with respect to lever control)



Kk

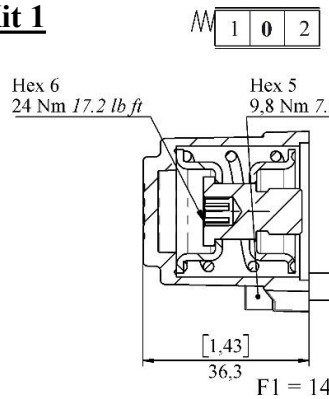
Double acting, 4 positions, floating circuit in 4th postion with spool out



Spool Kk requires spool positioner - 46 and it is available to valves ONLY with "R" hand configuration (P on right with respect to lever control)

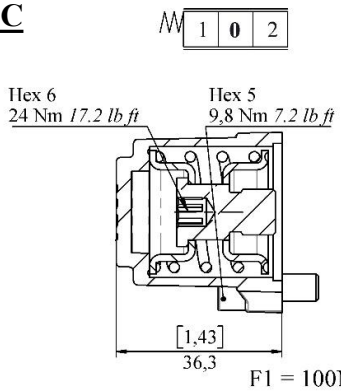
Spool positioners (B-side)

Kit 1



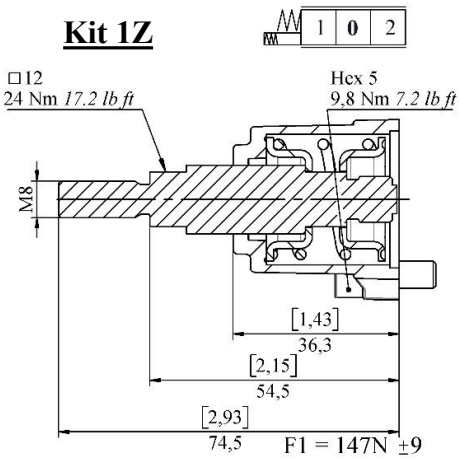
F1 = 147N ±9
F2 = 229N ±10

Kit 1C



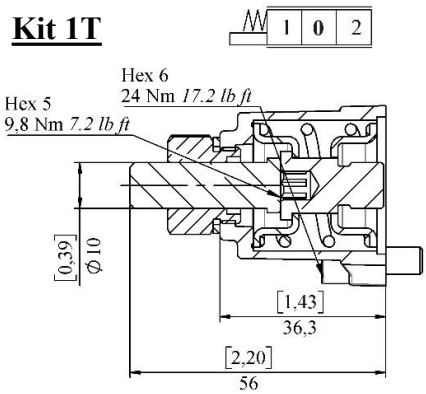
F1 = 100N ±9
F2 = 130N ±10

Kit 1Z



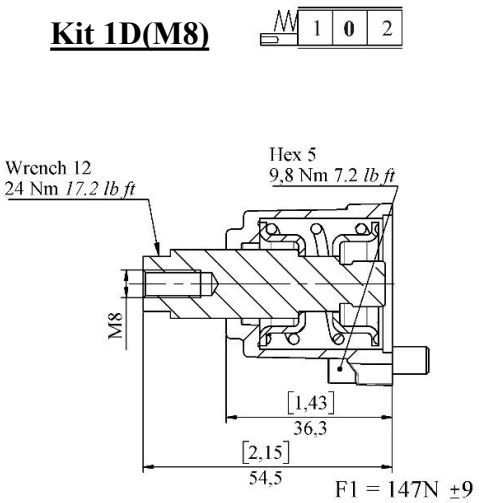
F1 = 147N ±9
F2 = 229N ±10

Kit 1T



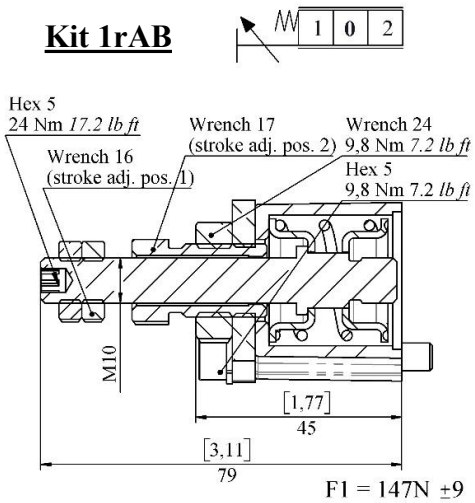
F1 = 147N ±9
F2 = 229N ±10

Kit 1D(M8)



F1 = 147N ±9
F2 = 229N ±10

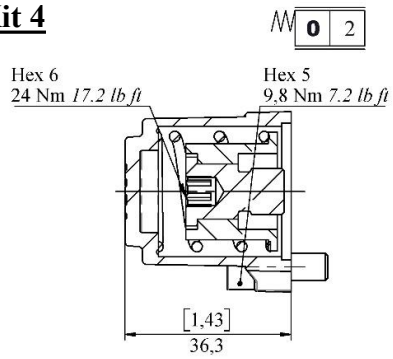
Kit 1rAB



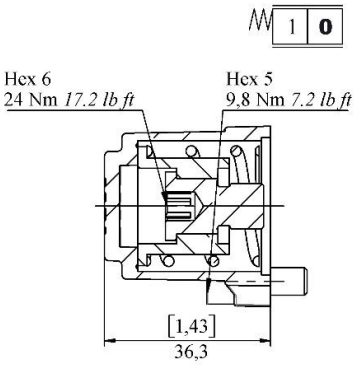
F1 = 147N ±9
F2 = 229N ±10

Spool positioners (B-side)

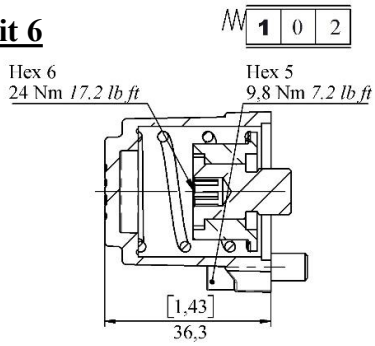
Kit 4



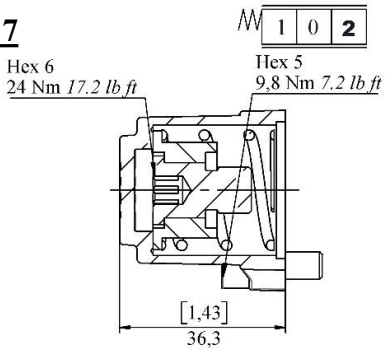
Kit 5



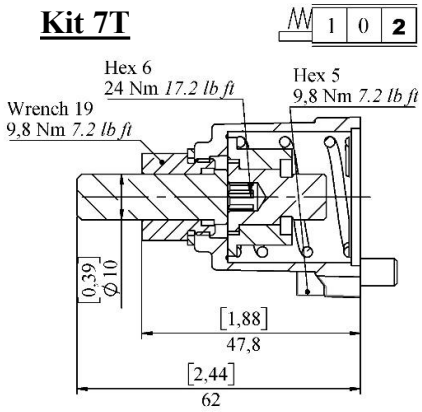
Kit 6



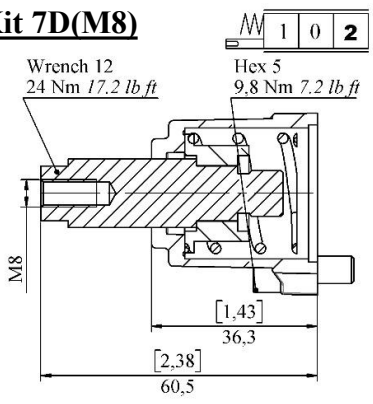
Kit 7



Kit 7T

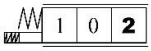


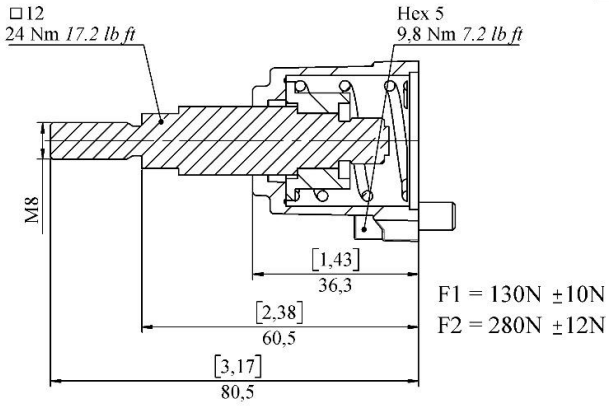
Kit 7D(M8)



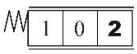
Spool positioners (B-side)

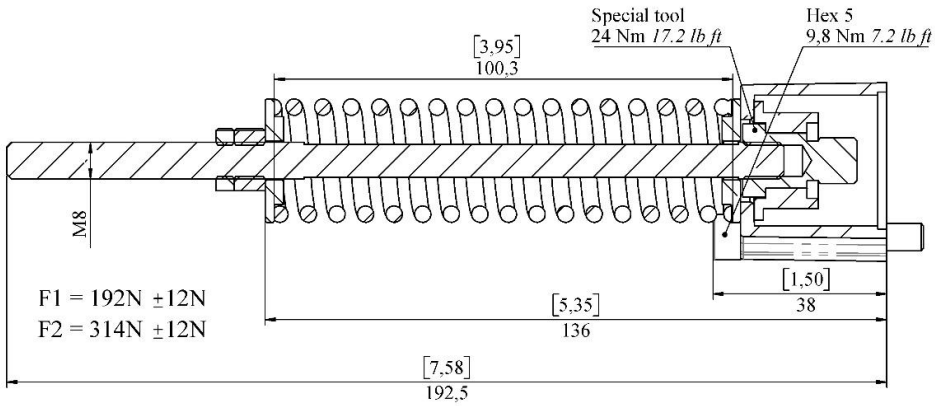
Kit 7Z



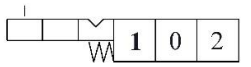


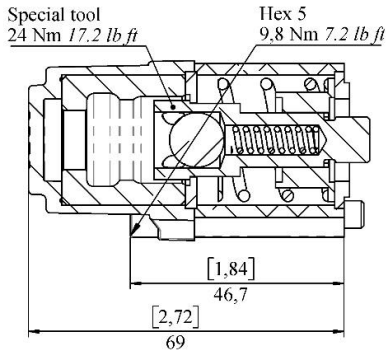
Kit 7zS1



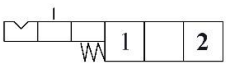


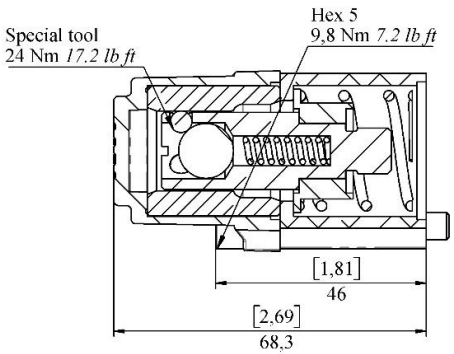
Kit 6B3





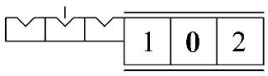
Kit 7B2

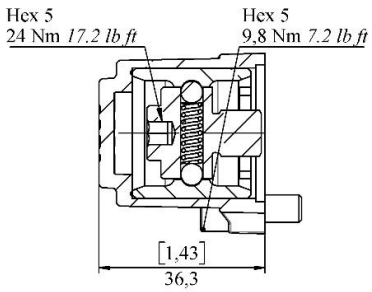




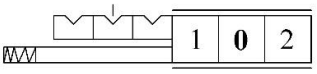
Spool positioners (B-side)

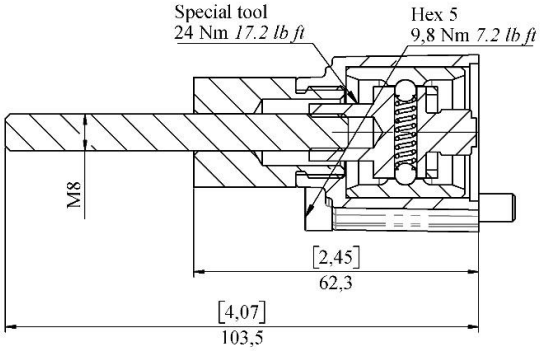
Kit 8



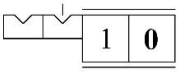


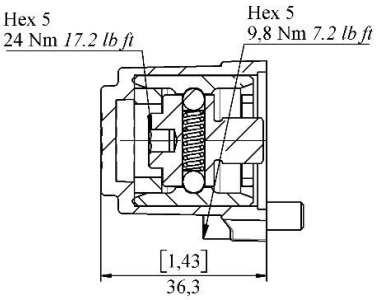
Kit 8Z



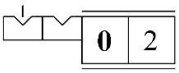


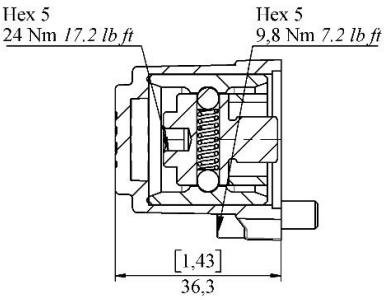
Kit 9



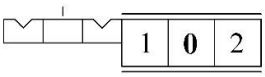


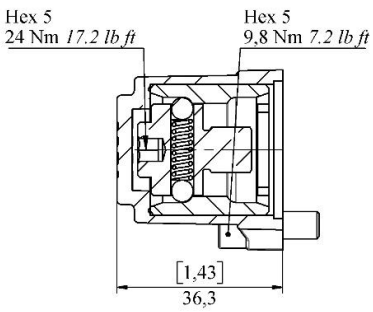
Kit 10



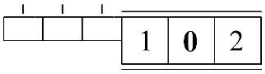


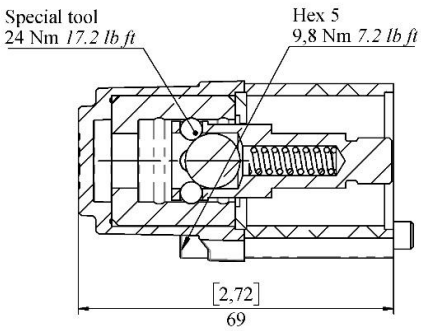
Kit 11





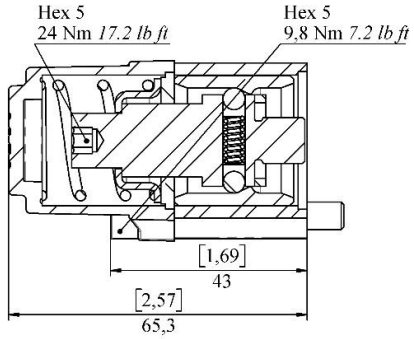
Kit 8F

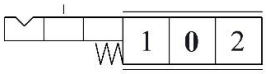




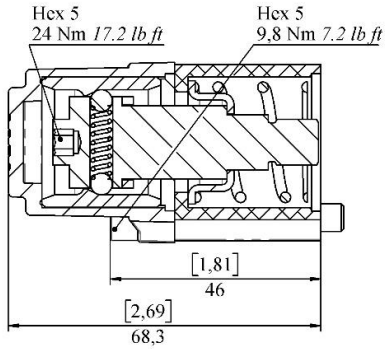
Spool positioners (B-side)

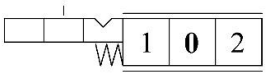
Kit 2: *3 position, spring return from pos. 2 to pos. 0 and detent in pos. 1*



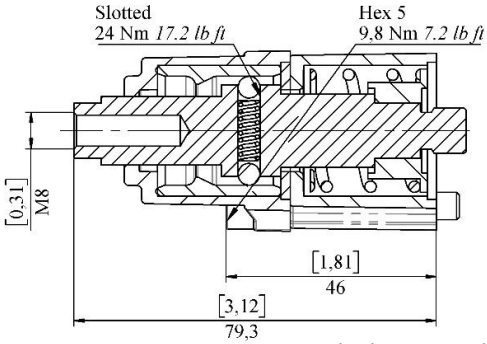


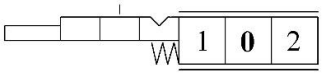
Kit 3: *3 position, spring return from pos. 1 and detent in pos. 2*



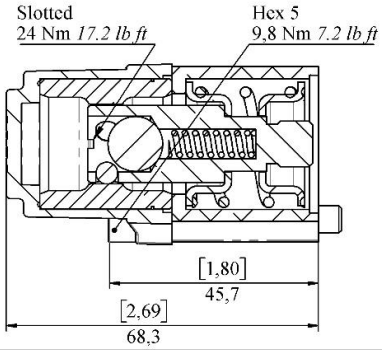


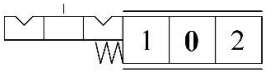
Kit 3D(M8): *3 position, spring return from pos. 1 and detent in pos. 2 and pin with thread M8 for dual control*





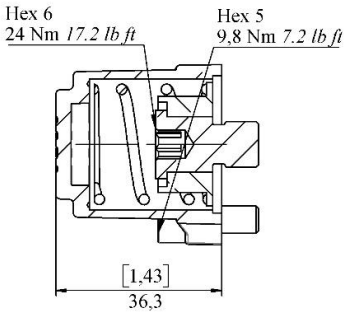
Kit 11B: *2 position, with detent in both positions and spring return to neutral from either direction*

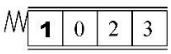




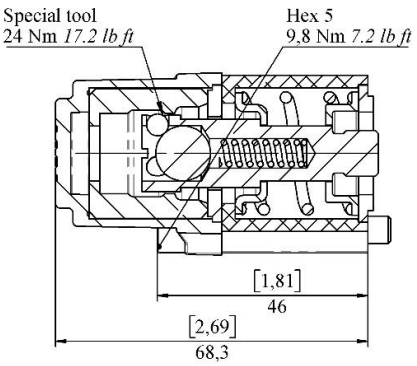
Particular spool positioners kits for regenerative spools

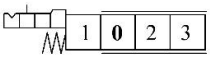
Kit 6 for Us





Kit 17

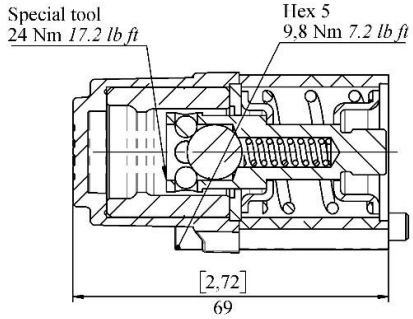


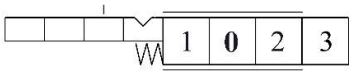


Regen can be used only on standard configuration valve with left inlet (with respect to the lever)

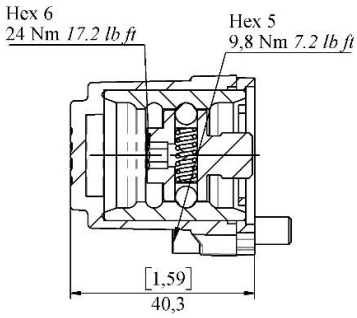
Particular spool positioners kits for floating spool L (float when spool IN)

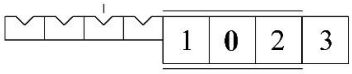
Kit 12: *four position, return to neutral from 1 and 2 and detent in float*



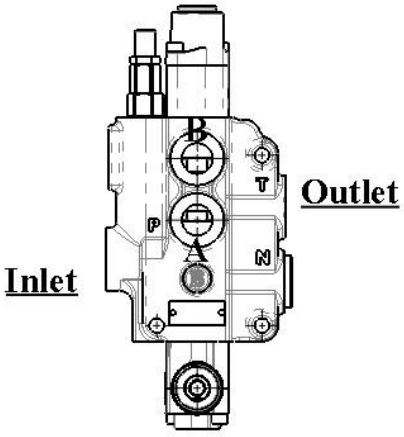


Kit 13: *four position detent*

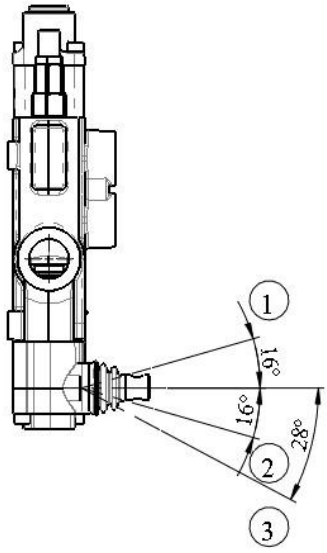




Limitations of floating sections for Z80 for kits 12 and 13



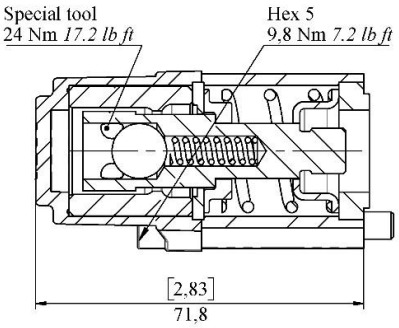
Z80/L12KZ1-G

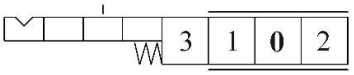


*Floating spool **IN** (L12 and L13) can be used only on standard configuration valve with left inlet (with respect to the lever)*

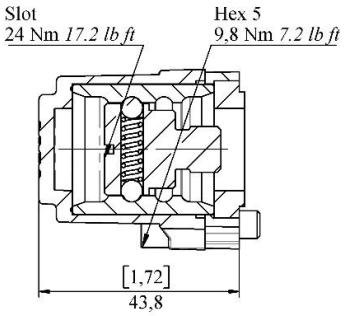
Particular spool positioners kits for floating spool K (float when spool OUT)

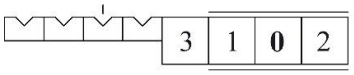
Kit 16: *four position, return to neutral from 1 and 2 and detent in float*



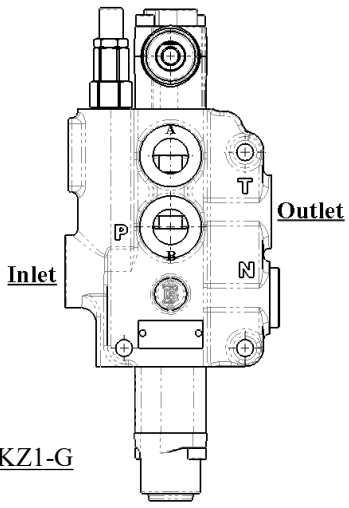


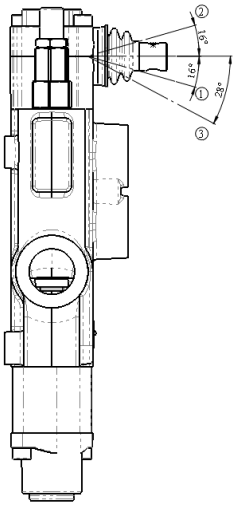
Kit 15: *four position detent*





Limitations of floating sections for Z80 for kits 16 and 15



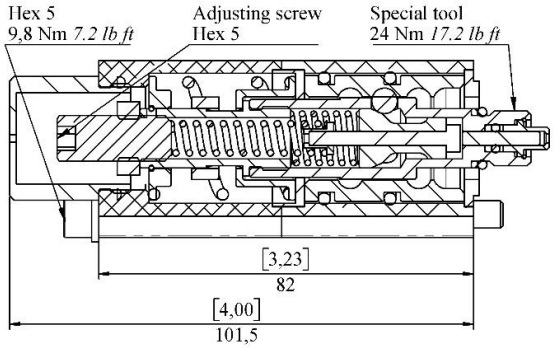


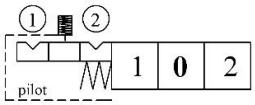
Z80R/K16KZ1-G

Floating spool OUT (K16 and K13) can be used only on "R" configuration valve with right inlet (with respect to the lever)

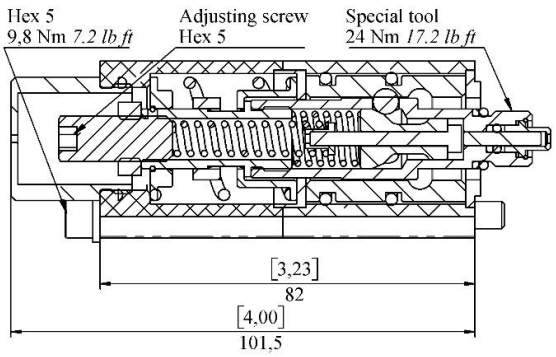
Particular spool positioners kits for pressure release kits (kick out)

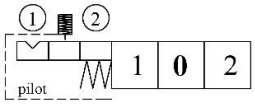
Kit 31: *3 position with detent and pressure release from pos. 1 and pos. 2*



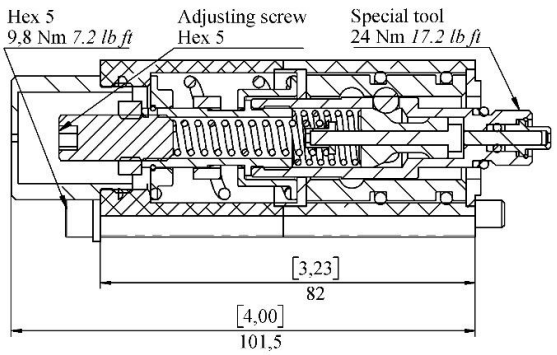


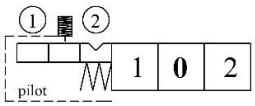
Kit 32: *3 position with detent and pressure release from pos. 1 and spring return from pos. 2*





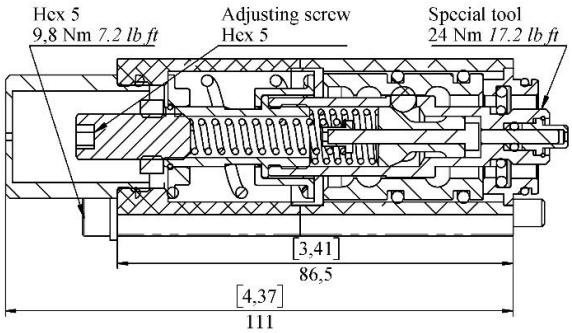
Kit 33: *3 position with detent and pressure release from pos. 2 and spring return from pos. 1*

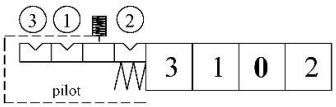




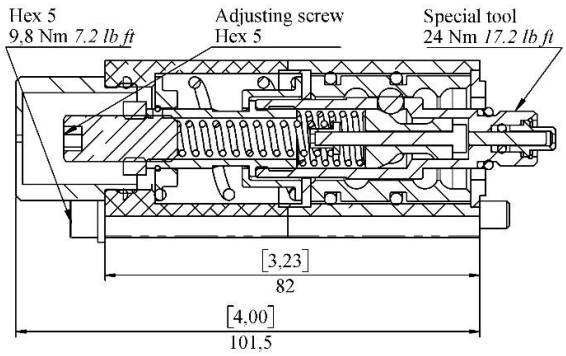
Particular spool positioners kits for pressure release kits (kick out)

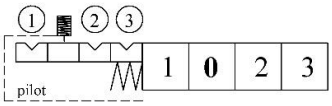
Kit 46: *four position, pressure release from pos. 1 and pos. 2 to pos. 0, float spool out; can be used only on "R" valve (right inlet)*



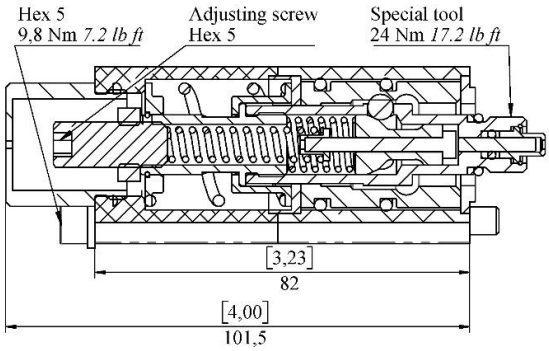


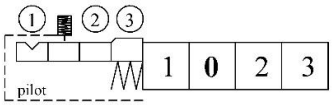
Kit 42: *four position, pressure release from pos. 1 and pos. 2 to pos. 0, float spool in; can be used only on standard valve (left inlet)*





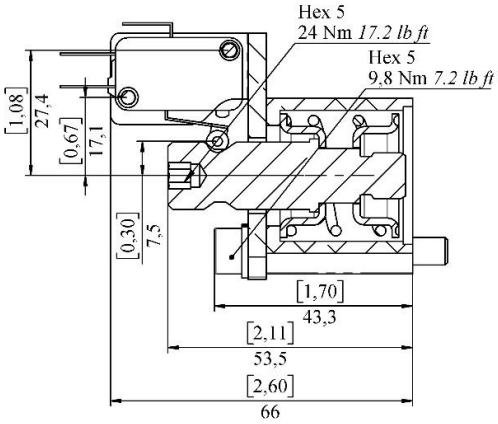
Kit 1732: *four position, pressure release from pos. 1 and spring return from pos. 2 (soft stop) and pos. 3 (regenerative position); can be used only on standard valve (left inlet)*

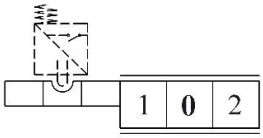




Particular spool positioners kits for microswitch

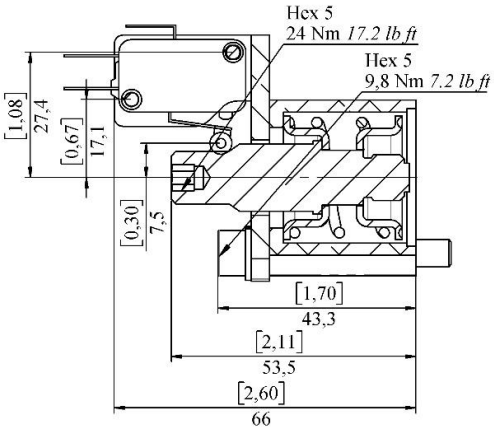
Kit 1E for *double acting spool A or D*

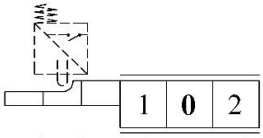




For double acting spool A

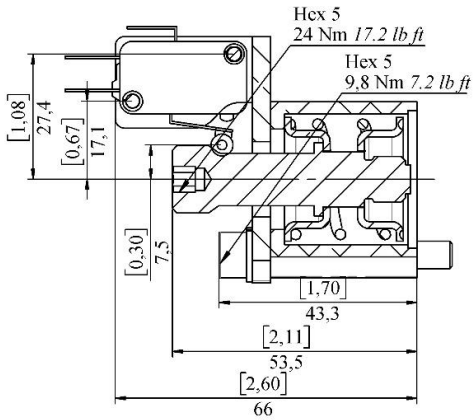
Kit 1E for *single acting spool B*

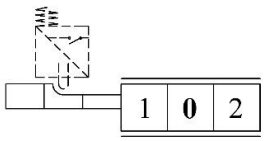




For single acting spool B

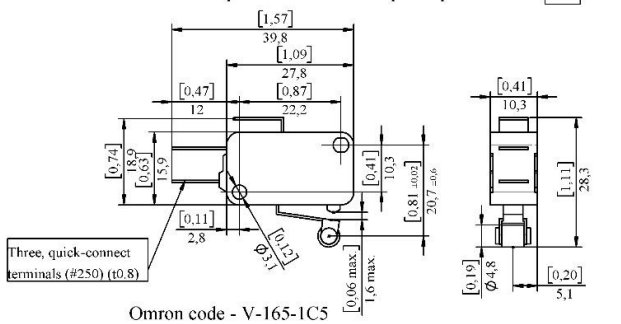
Kit 1E for *single acting spool C*





For single acting spool C

Microswich specification for spool positioner 1E

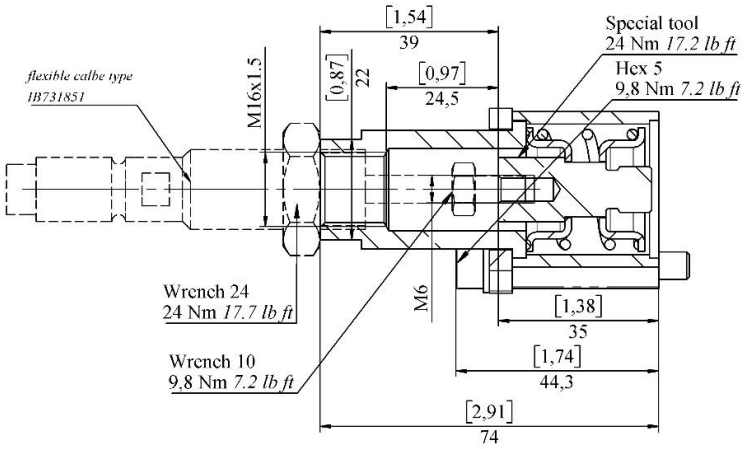


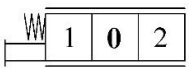
Omron code - V-165-1C5

Needs a special bracket to be assembled with spool positioners

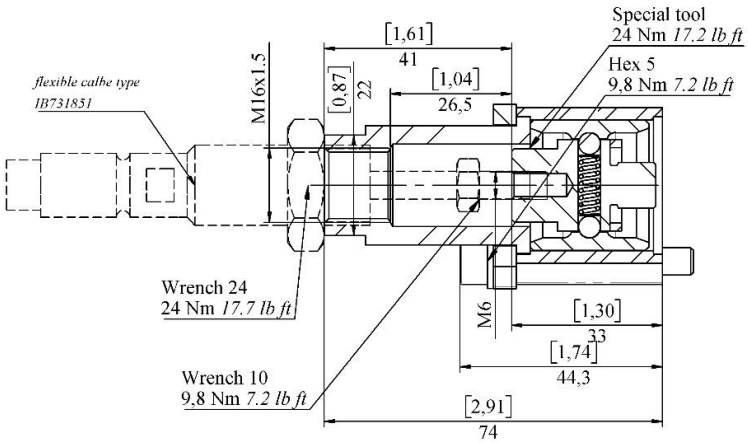
Spool positioner for flexible cable connection (side B)

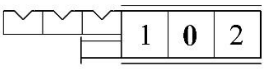
Kit 1V2





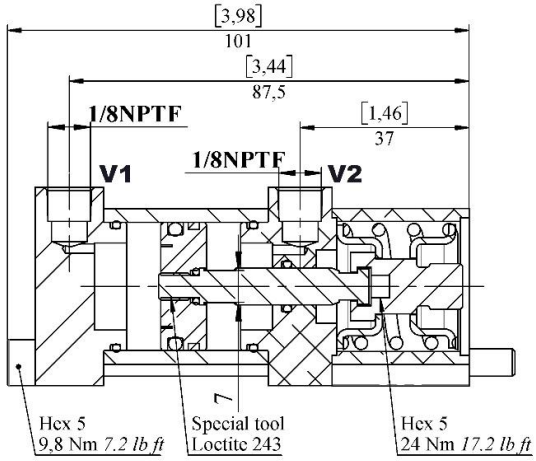
Kit 8V2

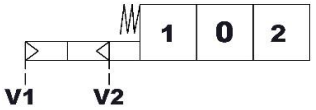




More information regarding controls, cable lengths, and ordering codes see page for flexible cable control V1 (Side A)

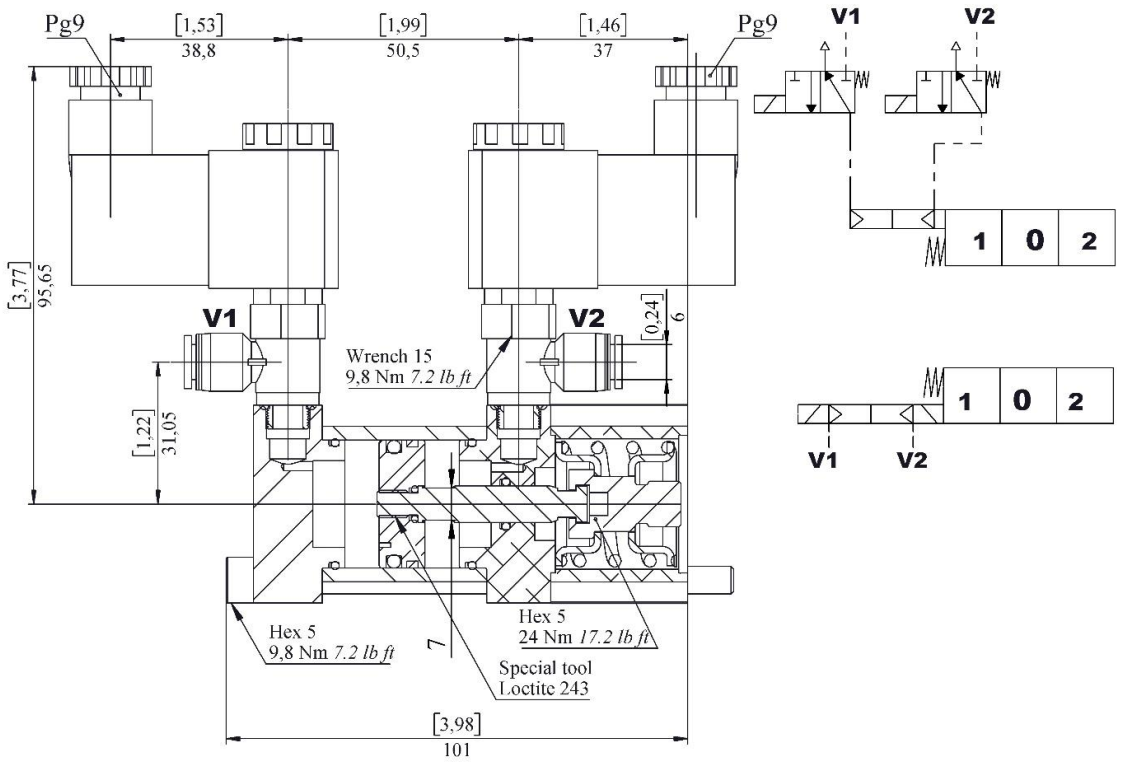
ON/OFF Pneumatic kit - 1P



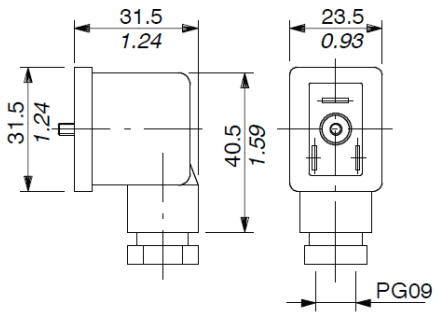


Operating features		
Pilot pressure	min	6 bar / *87 psi*
	max.	10 bar / *145 psi*

ON/OFF Electro pneumatic kit - 1PE



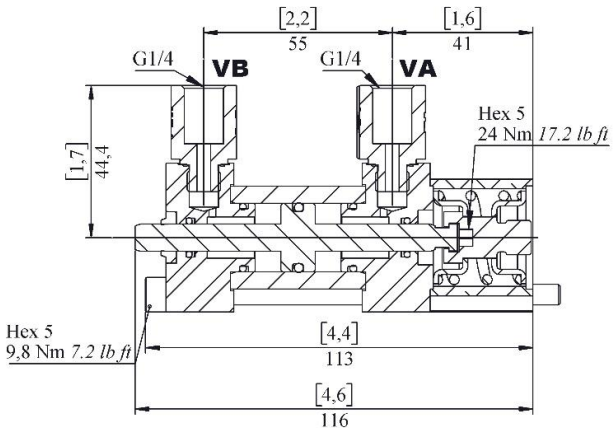
Connector specifications:

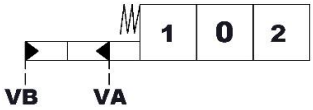


Operating features		
Pilot pressure	min	6 bar / *87 psi*
	max.	10 bar / *145 psi*
COIL specifications		
Nominal voltage tolerance		±10 %
Power rating		4,8 W
Nominal current		0,4 A - 12 VDC
		0,2 A - 24 VDC
Coil insulation		Class F
Weather protection		IP65
Duty cycle		100%

Connector is always included in 1EP control

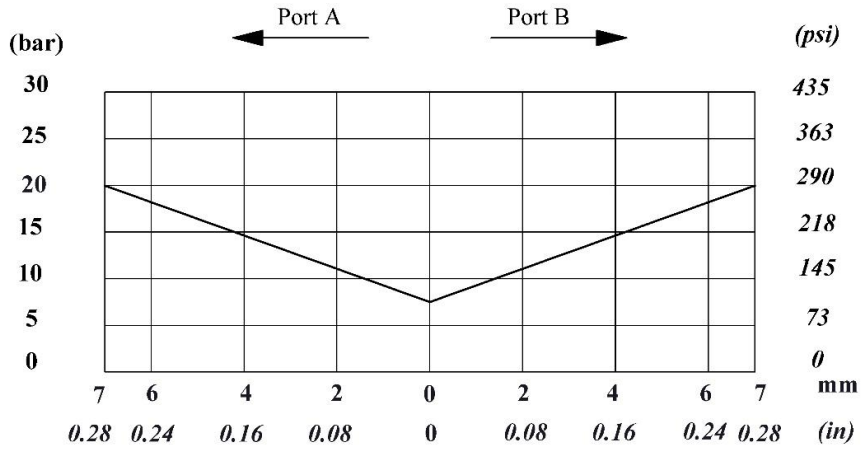
Proportional hydraulic, single side kit - 1H





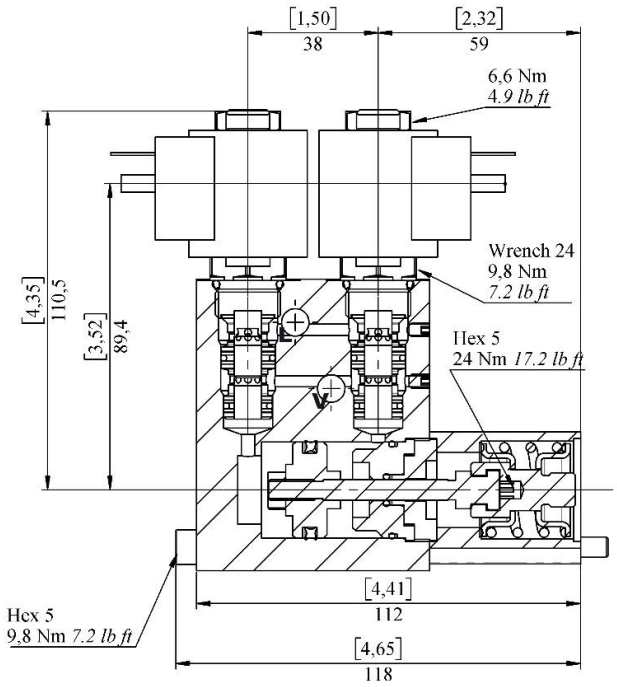
Operating features	
Pilot pressure	max. 50 bar / *725 psi*

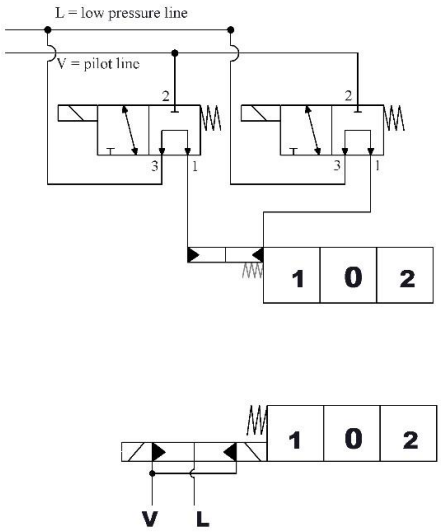
Pilot pressure - stroke diagram



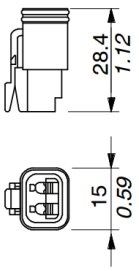
ON/OFF electro-hydraulic kit - 1ED3

With spring return to neutral position

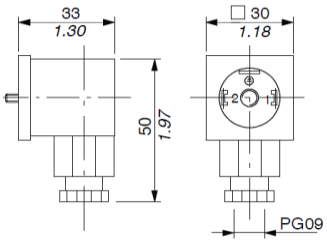




Connector specifications
2 poles, type Deutsch DT06-2S
Male housing with female ends



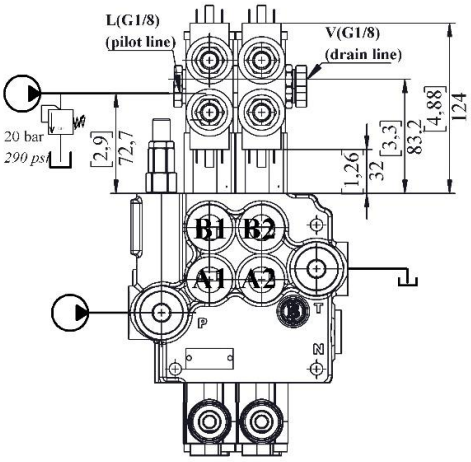
Connector specifications
2P+T according to
ISO 4400 / EN175301-803

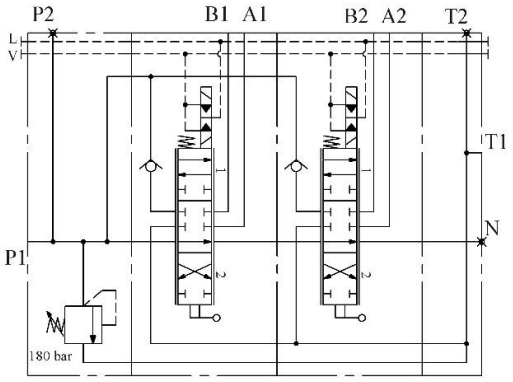


Operating features		
Pilot pressure	min	10 bar / *145 psi*
	max.	50 bar / *725 psi*
Back pressure on drain L	max.	25 bar / *360 psi*

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



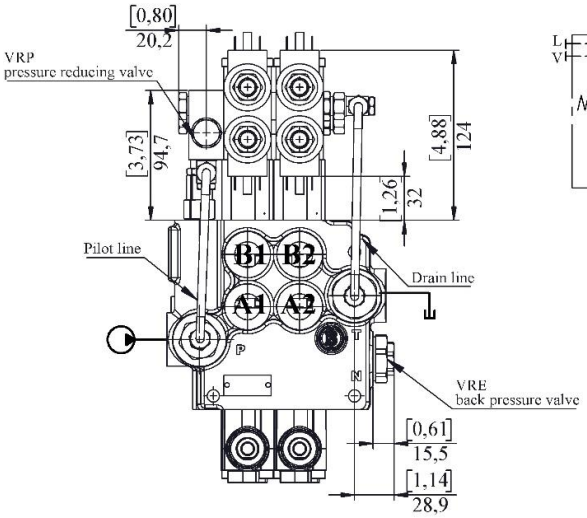


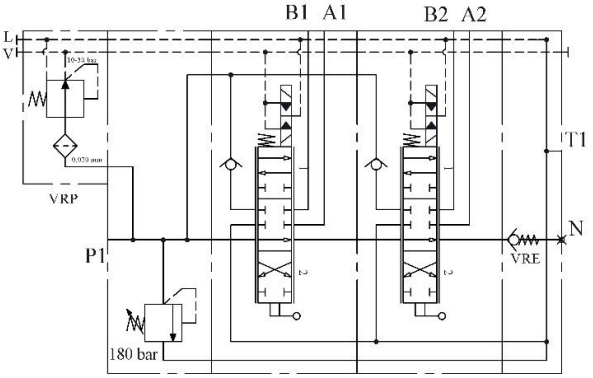
Description example:

2Z80/1/2x(A1ED3KZ1)-12V-G

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

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



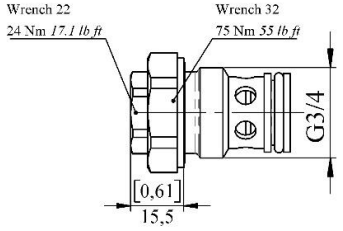


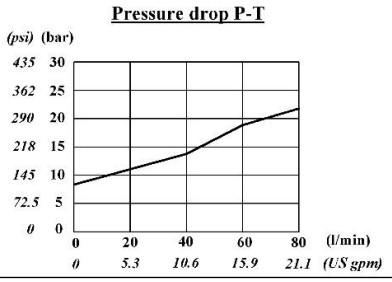
Description example:

2Z80/1/VRP/2x(A1ED3KZ1)-VRE-12V-G

Back pressure valve (VRE) specifications

Valve is assembled on the bypass flow port N to provide pilot pressure to the actuator

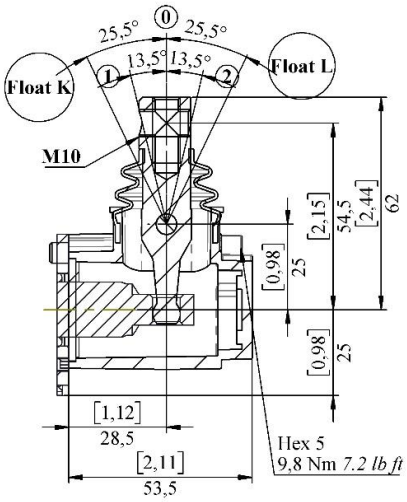


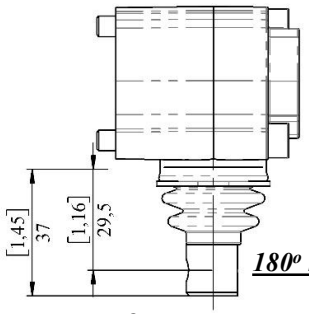


Lever control (Side A) – *aluminum cap, with protection booth lever pivot box*

1 | 0 | 2

Type KZ & KZe



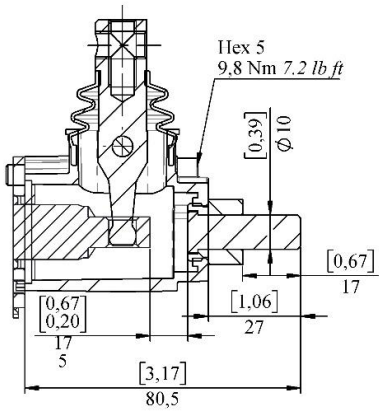


180º rotated – KZ0

Float L &K only available in certain configuration refer to pages – 19 & 20

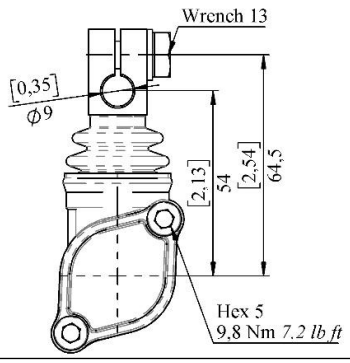
Kit KZT

1 | 0 | 2



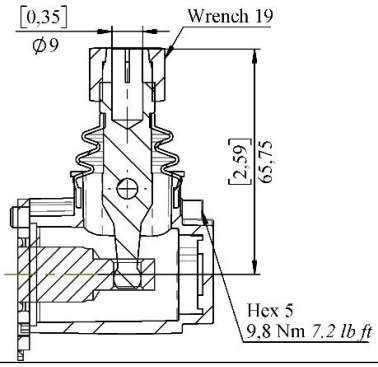
Type KI

1 | 0 | 2



Type KY

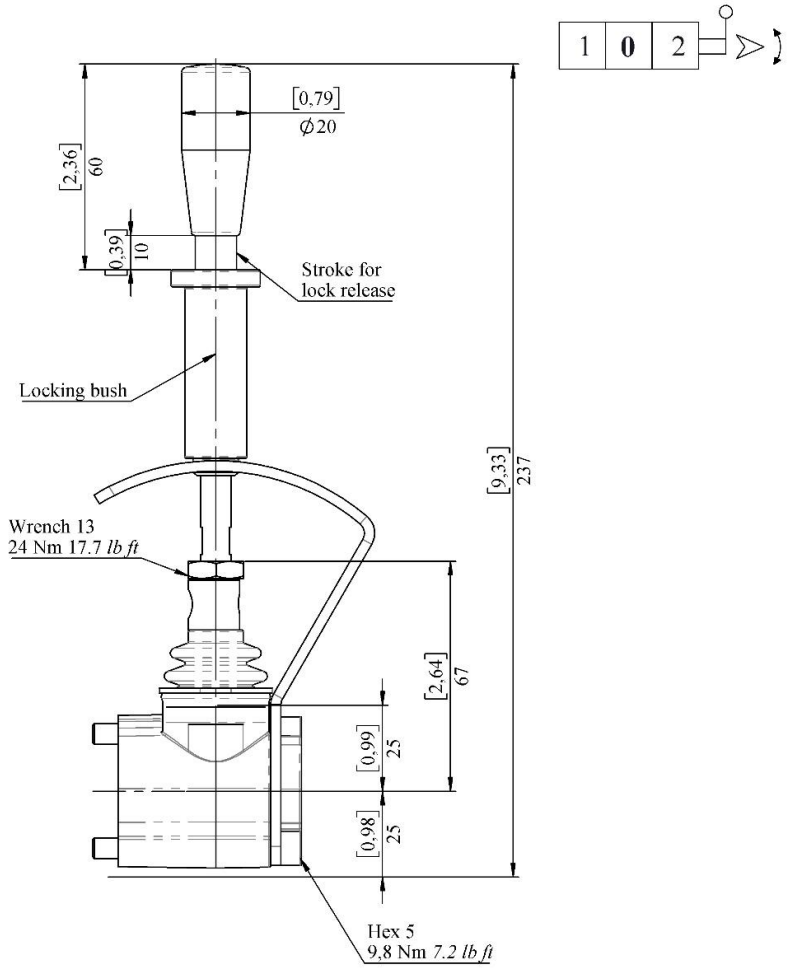
1 | 0 | 2



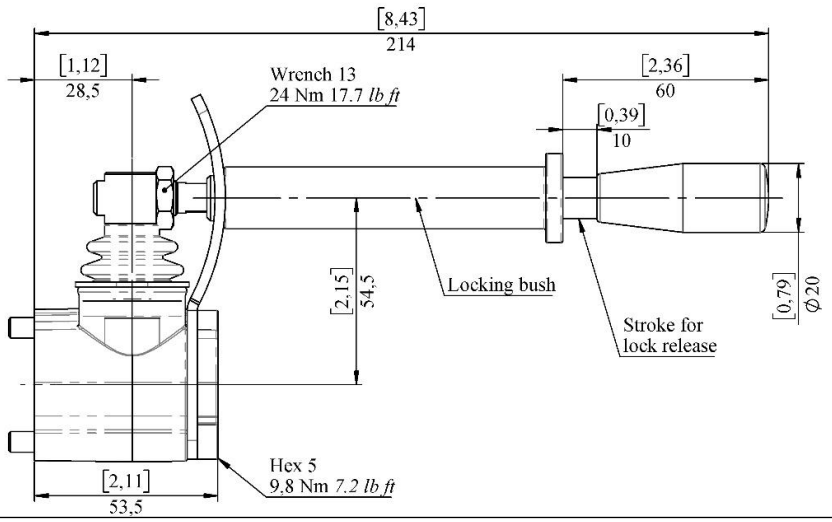
Special lever controls (side A)

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

Type KZV

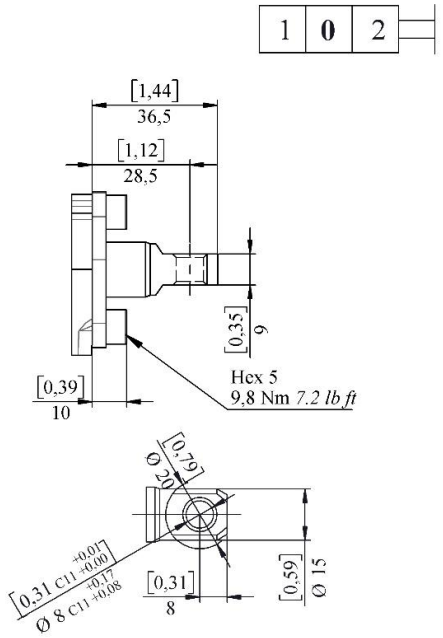


Type KZH



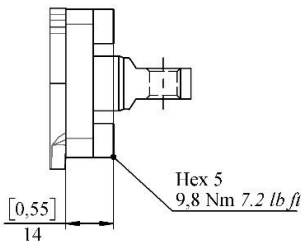
Other control arrangements (side A)

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



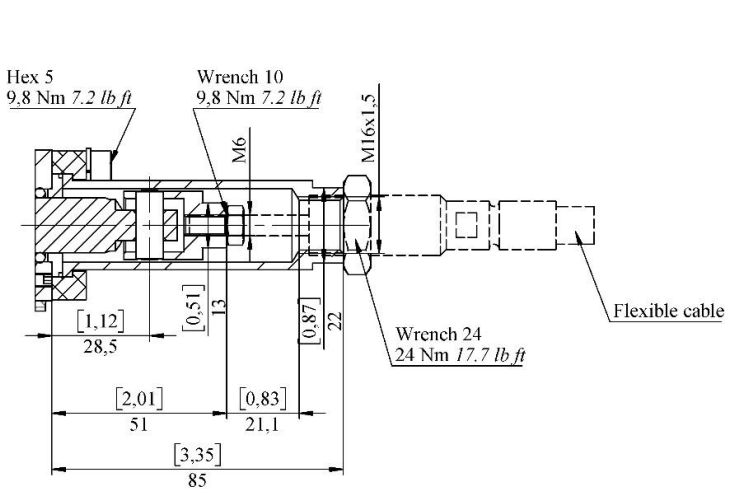
Type SLP



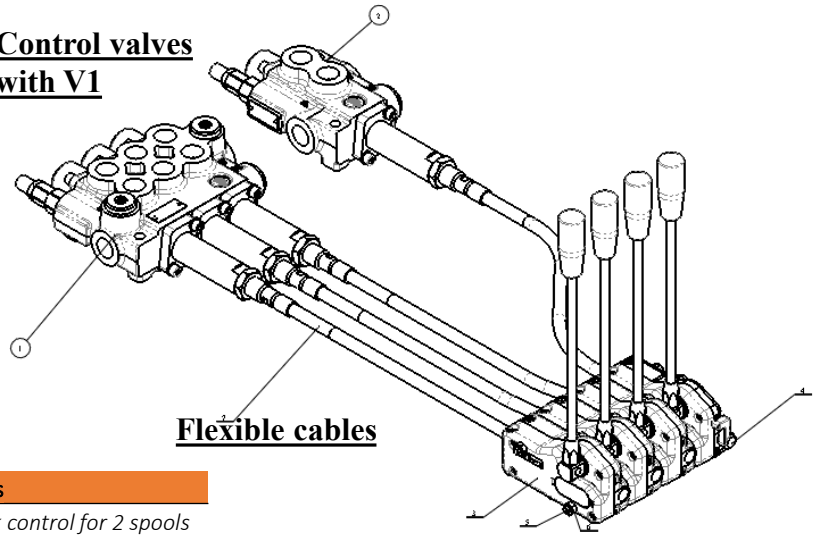


Mechanical control with dust-proof plate

Cable remote control – V1



Control valves with V1

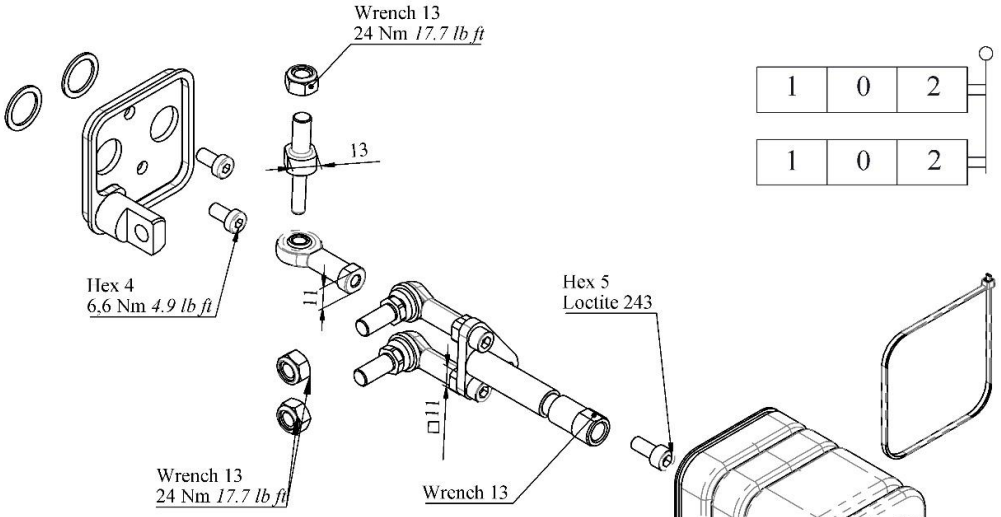


Flexible cables

Remote controls

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 opitons code + length	
IT-731133	*1.00 m*
IT-731134	*1.50 m*
IT-731135	*2.00 m*
IT-731136	*2.50 m*
IT-731137	*3.00 m*
IT-731138	*3.50 m*
IT-731139	*4.00 m*

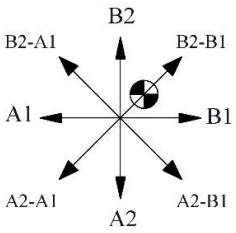
Mechanical joystick for two section control



There are different types of hand levers, with different end executions - cylindrical handle, ball type handle, etc. has to be specified with order.

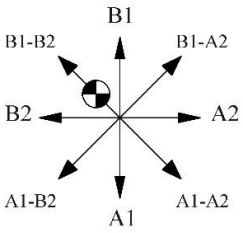
Type j+1

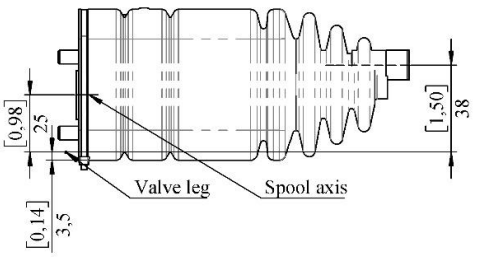
Pivot is above right



Type j+2

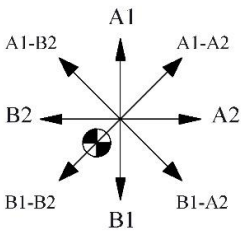
Pivot is above left





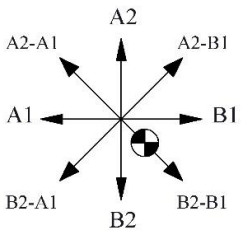
Type j+3

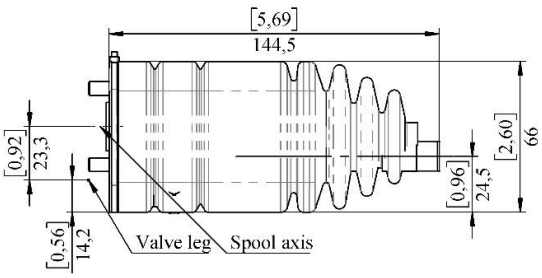
Pivot is bottom left



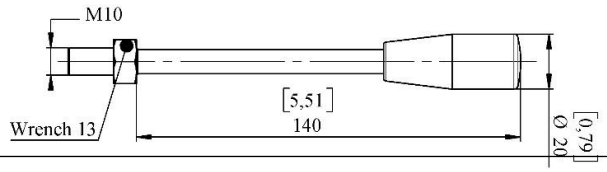
Type j+4

Pivot is bottom right





Standard hand lever dimensions



Example order code with standard lever:

2Z80/1/(A1A1)(ju+3)-G

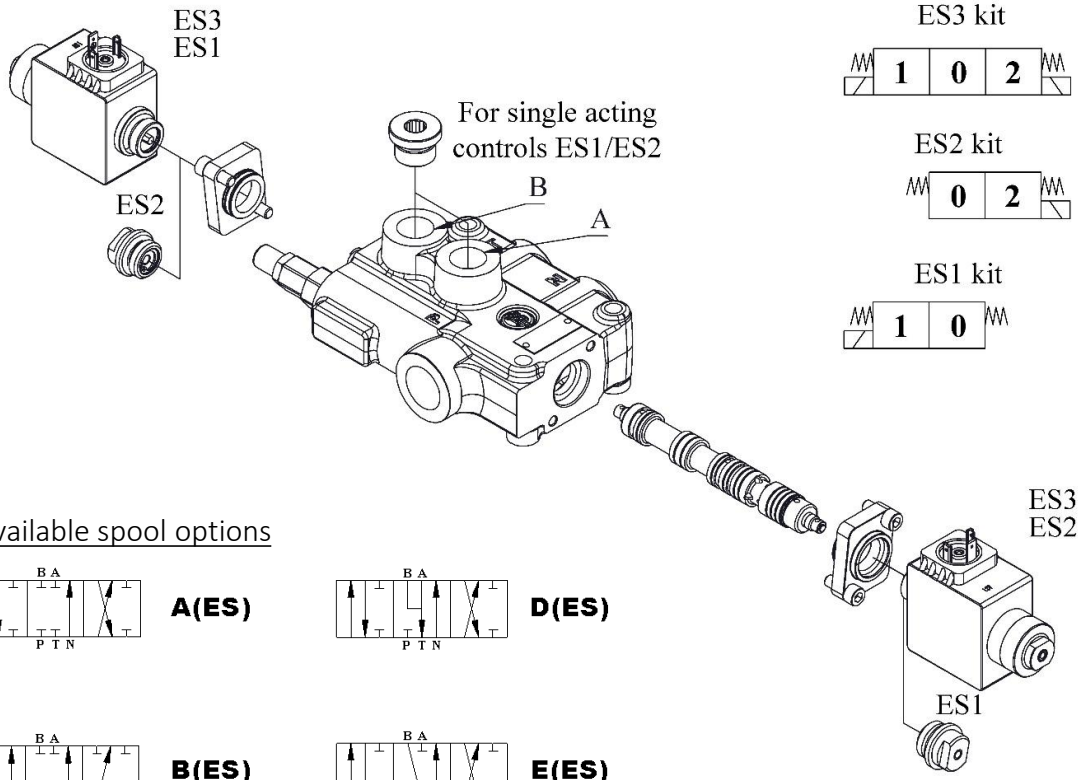
alternative (same as)

2Z80/1/(2xA1)(ju+3)-G

Complete control – single acting ON/OFF solenoid control

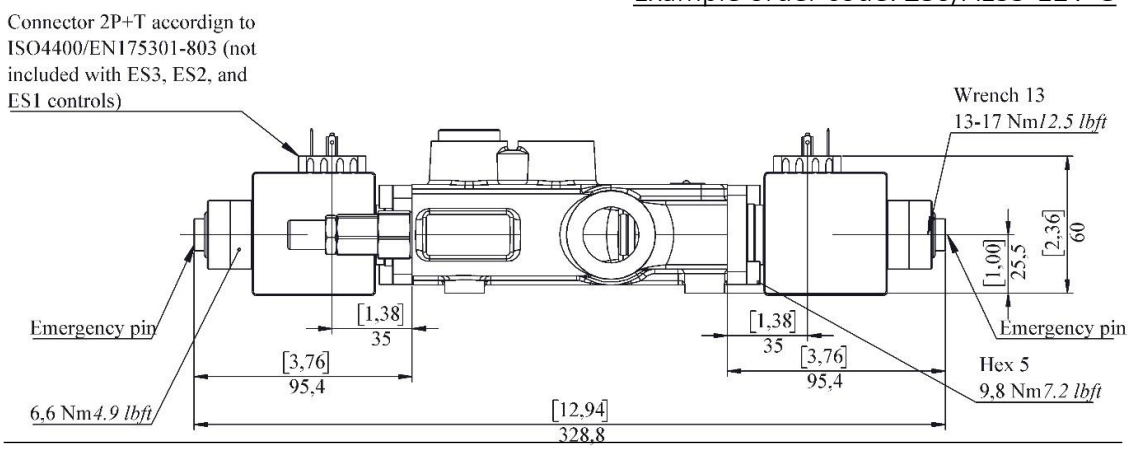
Complete control – ES3 / ES2 / ES1

Direct control by two single acting solenoid with spring return to neutral position (ES3) or one single acting solenoid (ES1 or 2); available for 1 to 6 spools, including valve bodies with individual check valves (both parallel and tandem version).

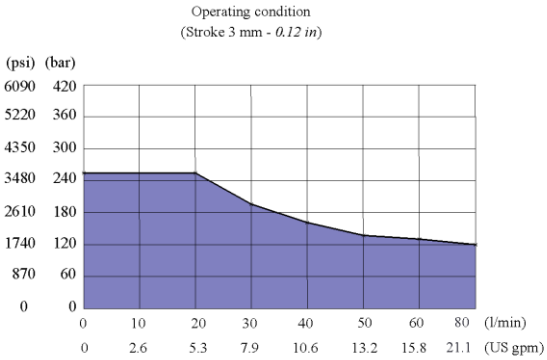


Available spool options

Example order code: Z80/AES3-12V-G



Complete control – single acting ON/OFF solenoid control



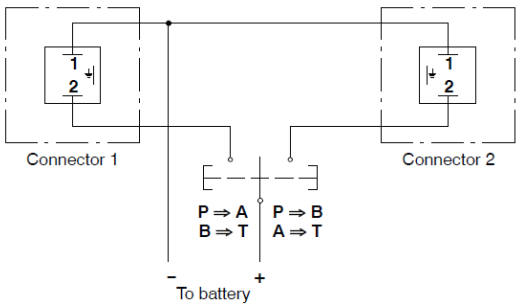
Operating features

Internal leakage (min.) A(B) to T Δp = 100 bar (1450 psi) fluid and valve at 40 oC (104 oF)	min. 15 cm^3/min *0.91 in^3/min*

COIL specifications

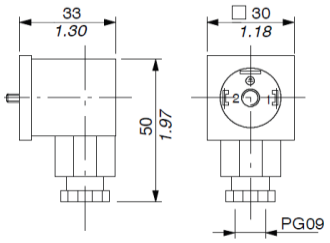
Nominal voltage tolerance	±10 %
Power rating	60 W
Current	5 A - 12 VDC
	2.5 A - 24 VDC
Weather protection	IP65
Coil insulation	Class H
Duty cycle	100%

Electric wiring example

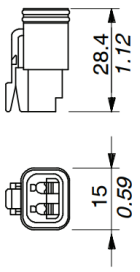


Connector specifications per type of coils available

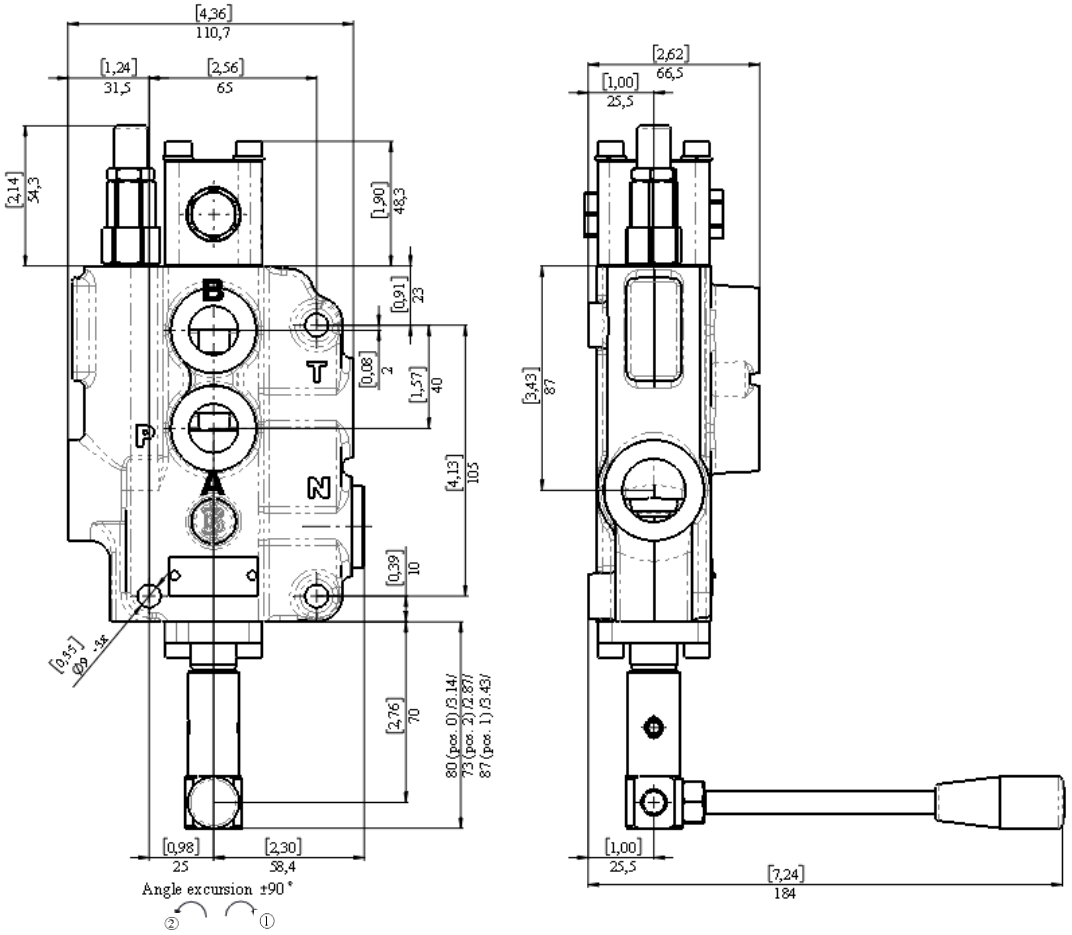
2P+T according to ISO 4400 / EN175301-803

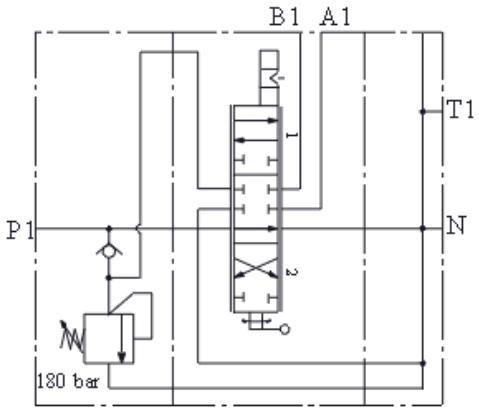


Connector specifications 2 poles, type Deutsch DT06-2S Male housing with female ends



Complete control – Rotary control A26



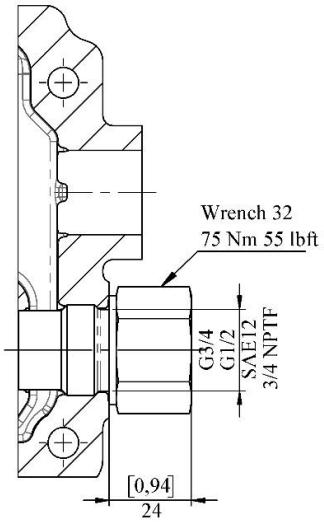


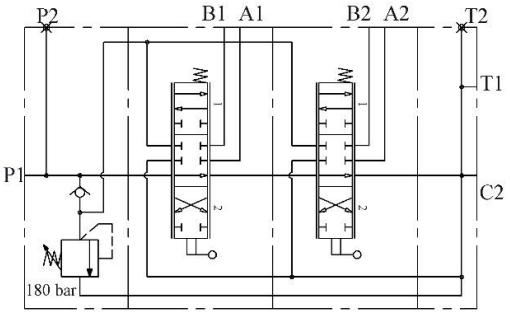
Example order code: Z80/AmL26-G

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

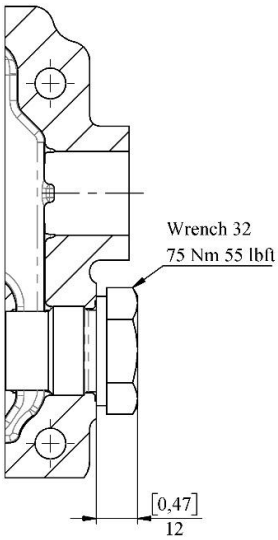
C2 - with carry-over (high pressure carry over)

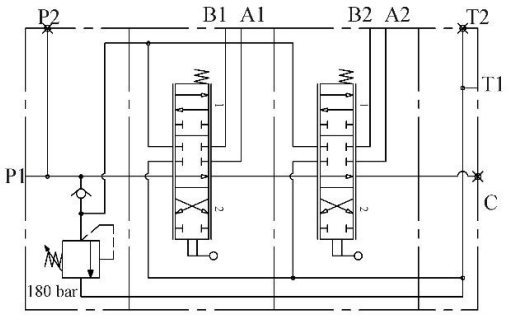




Example order code 02Z80/2x(A1KZ1)-C2-G

C – closed center





Example order code: 02Z80/2x(A1KZ1)-C-G

Notes