CATALOGUE

DPC Series

Pre-compensated Load Sensing Sectional Valves

walvoil
FLUID POWER E|MOTION

Additional information
This catalogue shows the product in the most standard configurations.
Please contact Sales Dpt. for more detailed information or special request.

WARNING!
All specifications of this catalogue refer to the standard product at this date.
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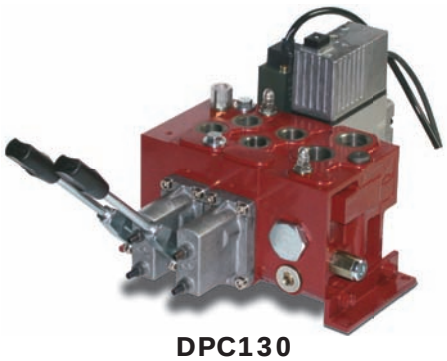
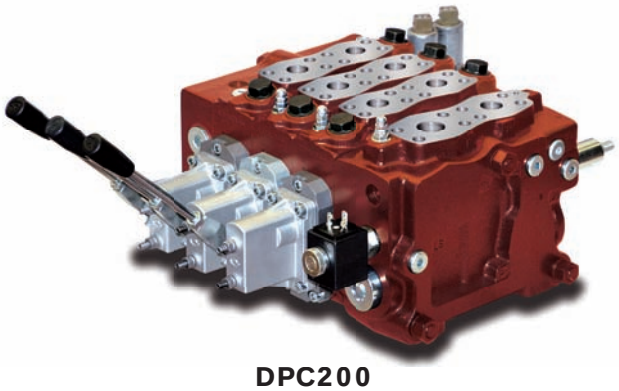
The DPC Series

The DPC Series is a family of open/closed center pre-pressure compensated sectional valves designed specifically for Mobile Applications. The DPC series provides exceptional controllability, efficiency and flexibility for applications requiring up to 240 l/min (*63.4 US gpm*) flow rate. DPC Series is available in two different sizes: DPC130 and DPC200.



DPC130



DPC200

The Load Sensing technology

Thanks to the use of specially designed pumps and control valves, the Load Sensing principle can be considered the most comprehensive means of creating a flexible hydraulic circuit that can adapt to the various operating conditions demanded by users. The main feature of this principle is that the flow rate to the user is proportional to the spool position under any operating condition, regardless of the resistance encountered by the user (pressure) and the number of levers activated (exceeding the pump's total flow rate, a condition here in after defined as saturation, is the only limitation).
Therefore, with the LS systems, there is a specific correspondence between the position of the control lever and the movement speed of the user, cylinder or hydraulic motor. This feature is particularly useful in the hydraulic handling machine sector (excavators, cranes, loaders, agricultural and forestry machinery) in which each movement phase has specific sequences that the operator must control using memorised movements.

Advantages and options

- Energy saving.
- Extension of parts service life.
- Lower energy dissipation.
- Noise reduction.
- Available to create a single-pump circuit (compared with the use of multiple-pump circuits in which each pump is dedicated to different actuators to be operated simultaneously).

Real energy savings can be obtained above all when the DPC directional valves operate together with variable displacement Load Sensing pumps. When the DPC valve is utilised with fixed displacement pumps, the previously mentioned movement independence and repeatability features are guaranteed, but energy savings will be limited.

For special options contact Sales Dept.

Working conditions

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm²/s - *46 cSt* viscosity at 40°C - *104°F* temperature.

		DPC130	DPC200
Nominal flow rating (open center circuit)	on inlet port with compensator @ stand-by (margin pressure)	150 l/min - *39.6 US gpm* @ 9 bar - *131 ps*	260 l/min - *68.7 US gpm* @ 11.5 bar - *167 ps*
	on working ports with compensator @ stand-by (margin pressure)	100 l/min - *26.4 US gpm* @ 7 bar - *102 ps*	200 l/min - *52.8 US gpm* @ 7 bar - *102 ps*
	on working ports without compensator @ stand-by (margin pressure)	130 l/min - *34.3US gpm* @ 9 bar - *131 ps*	240 l/min - *63.4 US gpm* @ 11.5 bar - *167 ps*
Max. pressure	inlet port **P**	315 bar (²) - *4500 psi* (²)	350 bar (¹) - *5100 psi* (¹)
	working ports **A** and **B**	315 bar (²) - *4500 psi* (²)	420 bar (¹) - *6100 psi* (¹)
Back pressure (max.)	on outlet port **T**	25 bar - *363 psi*	25 bar - *363 psi*
	on drain port **L**	2.5 bar - *36 psi*	2.5 bar - *36 psi*
Standard internal leakage A(B)->T	Δp=100 bar - *1450 psi*	16 cm³/min - *0.98 in³/min*	20 cm³/min - *1.22 in³/min*
	with port valves, Δp=100 bar - *1450 psi*	21 cm³/min - *1.28 in³/min*	25 cm³/min - *1.53 in³/min*
Fluid		Mineral oil	
Fluid temperature range	with seals NBR (BUNA-N)	from -20°C to 80°C - *from -4°F to 176°F*	
	with seals FPM (VITON)	from -20°C to 100°C - *from -4°F to 212°F*	
Viscosity	operating range	from 15 to 75 mm²/s - *from 15 to 75 cSt*	
	min.	12 mm²/s - *12 cSt*	
	max.	400 mm²/s - *400 cSt*	
Contamination level	max.	-/18/15 - ISO 4406 - *NAS 1638 class 9*	
Environmental temperature for working conditions	with mechanical devices	from -40°C to 60°C - *from -40°F to 140°F*	
	with hydraulic/pneumatic devices	from -30°C to 60°C - *from -22°F to 140°F*	
	with electric/electrohydraulic devices	from -20°C to 50°C - *from -4°F to 122°F*	

NOTES: (¹) According to NFPA T 2.6.1., fatigue rating verified for 1 million cycles on 6 sample valves with test Pressure = 1.23 x Max. pressure indicated - (²) Intermittent pressure at max. 250,000 cycles with specific internal testing.

Standard threads

REFERENCE STANDARD		BSP	UN-UNF	NPTF	Flange connection
THREAD ACCORDING TO		ISO 228/1 BS 2779	ISO 263 ANSI B1.1 unified	ANSI B1.20.3	ISO 6162 SAE J518
CAVITY DIMENSION ACCORDING TO	ISO	1179	11926		
	SAE		J1926	J476a	SAE J518 code 61 (3)
	DIN	3852-2 shape X or Y			ISO 6162-1 (4)

NOTEs (3): Standard pressure series - (4): For pressure up to 350 bar (*5100 psi*)

PORTS THREADING	DPC130		DPC200			
					Flange connection (bolts threading)	
	BSP	UN-UNF	BSP	UN-UNF	ISO 6162-1 type 1	SAE J518 code 61
Inlet **P**	G 3/4	1 1/16-12 (SAE 12)	G 1	1 5/16-12 (SAE 16)	DN 19 (M10)	3/4 (3/8-16 UNC)
Ports **A** and **B**	G 1/2	7/8-14 (SAE10)	G 1	1 5/16-12 (SAE 16)	DN 19 (M10)	3/4 (3/8-16 UNC)
Outlet **T**	G 3/4	1 1/16-12 (SAE 12)	G 1-1/4	1 5/8-12 (SAE 20)	DN 25 (M10)	1 (3/8-16 UNC)
Load Sensing **LS**	G 1/4	9/16-18 (SAE 6)	G 1/4	9/16-18 (SAE 6)		
Pilot **V1**	G 1/4	9/16-18 (SAE 6)	G 1/4	9/16-18 (SAE 6)		
Pilot **V2**	depends on inlet section type: see pages from 14 to 17 (5)		M14x1.5 (5)		see BSP threading	see UN-UNF threading
Drain **L**	G 1/4	7/16-20 (SAE 4)	G 1/4	7/16-20 (SAE 4)		
Pressure gauge **M**	G 1/4	9/16-18 (SAE 6)	G 1/4	9/16-18 (SAE 6)		
Hydraulic control ports	G 1/4	9/16-18 (SAE 6)	G 1/4	9/16-18 (SAE 6)		

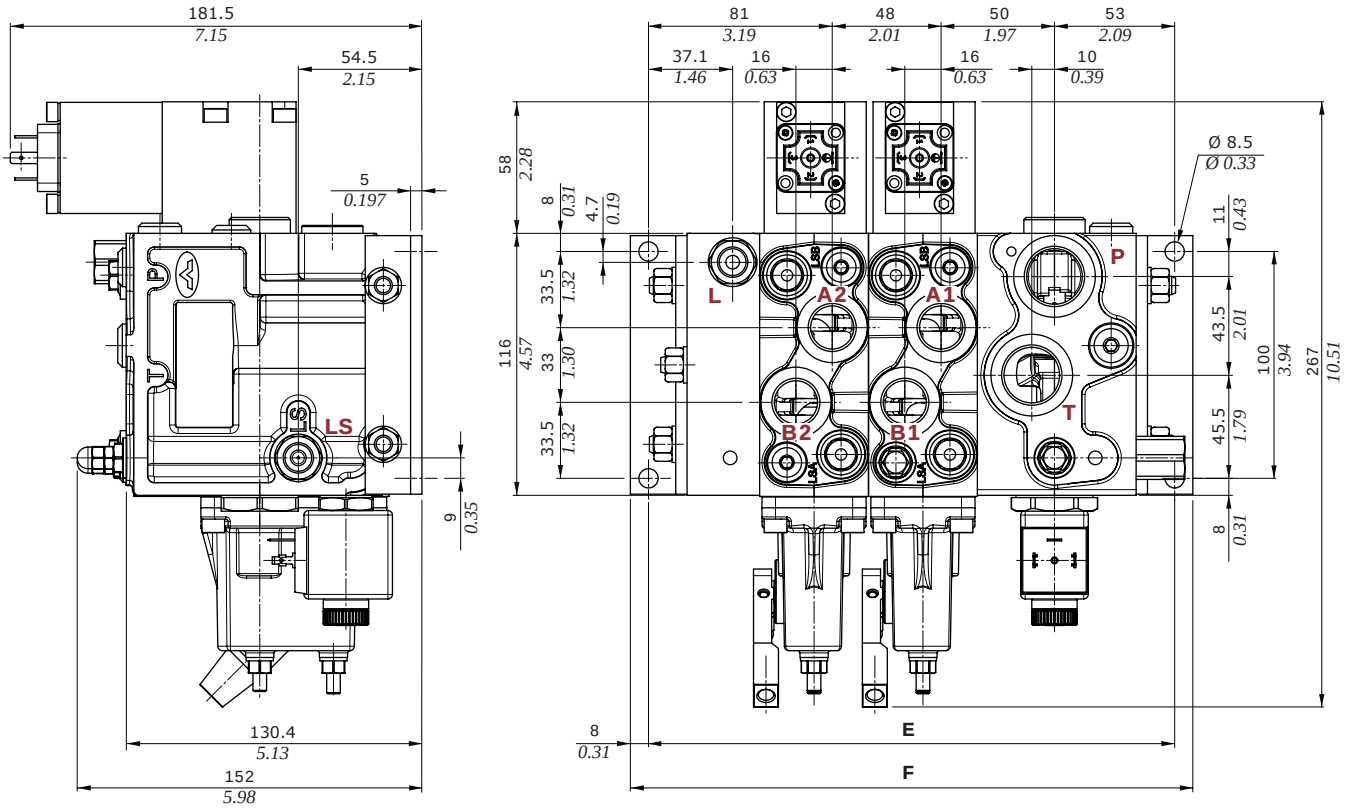
NOTE (5): ATTENTION! pilot port V2 requires dedicate joints, please see Inlet section pages.

Contents

DPC130

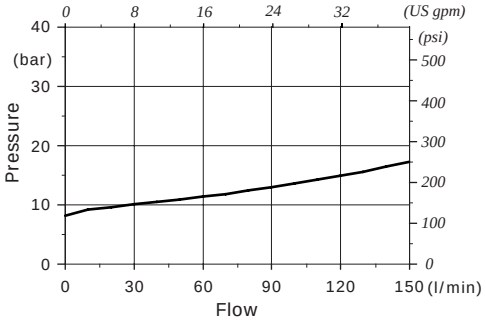
DPC200

Dimensional data and performance

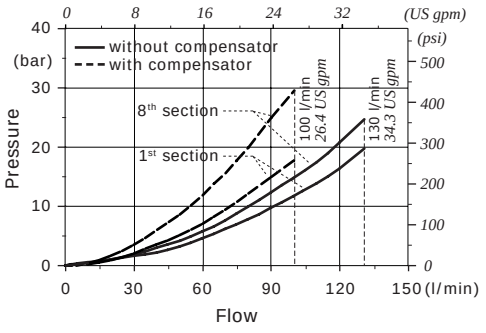


Type	E		F		Weight	
	mm	*in*	mm	*in*	Kg	*lb*
DPC130/1	184	*7.24*	200	*7.87*	12.4	*27.3*
DPC130/2	232	*9.13*	248	*9.76*	19.4	*42.8*
DPC130/3	280	*11.02*	296	*11.65*	25.3	*55.8*
DPC130/4	328	*12.91*	344	*13.54*	31.0	*68.3*
DPC130/5	376	*14.80*	392	*15.43*	36.5	*80.5*
DPC130/6	424	*16.69*	440	*17.32*	42.6	*93.9*
DPC130/7	472	*18.58*	488	*19.21*	48.7	*107.0*
DPC130/8	520	*20.47*	536	*21.10*	54.8	*121.0*
DPC130/9	568	*22.36*	584	*22.99*	60.9	*134.0*
DPC130/10	616	*24.25*	632	*24.88*	67.0	*148.0*

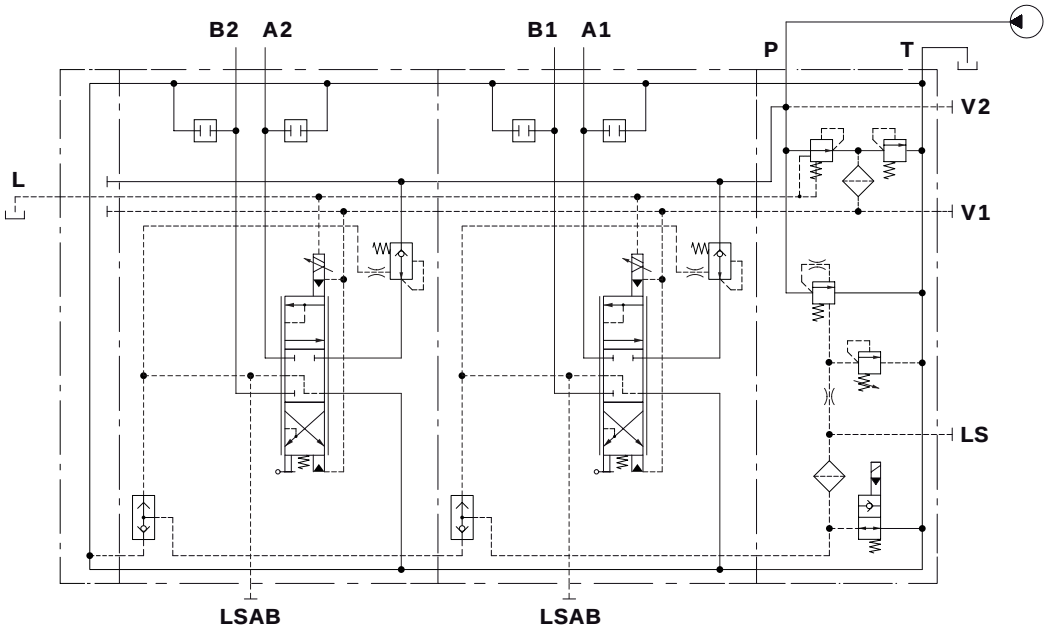
P⇒T Pressure drop inlet compensator (margin pressure)



A(B)⇒T pressure drop (standard spool @ max.stroke)

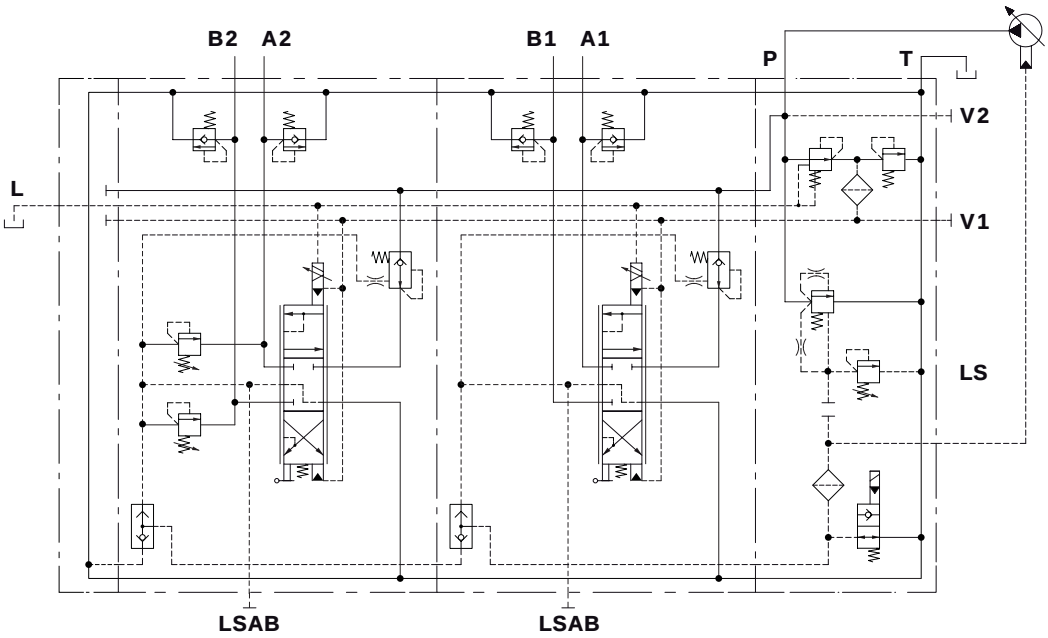


Open center configuration example



Open center circuit and one-side proportional electrohydraulic control with lever, with unloader valve and pressure reducing valve, port valves arrangement on all ports, LSAB port, internal pilot and external drain

Closed center configuration example

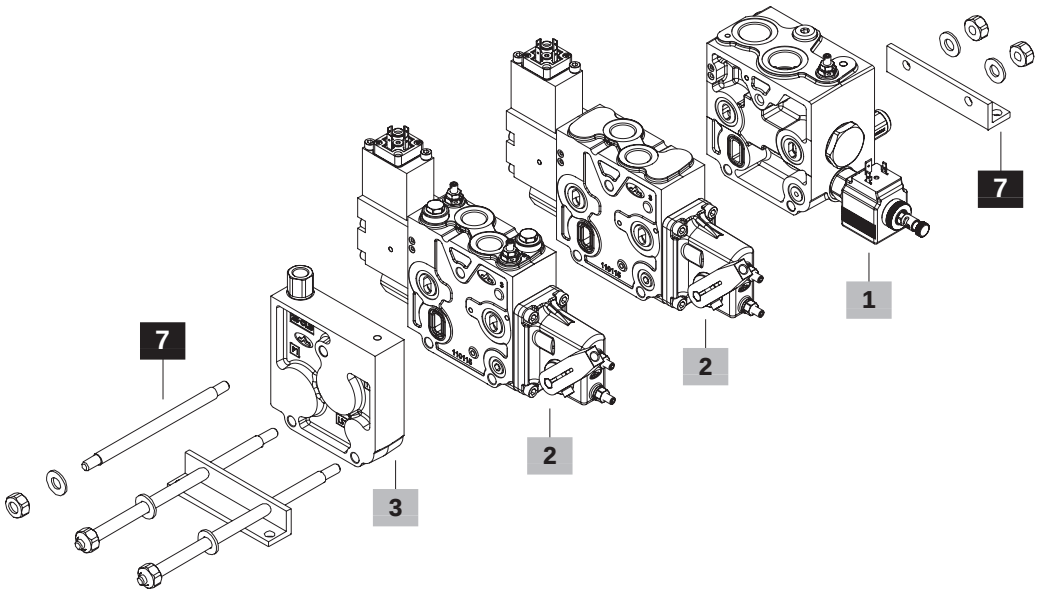


Closed center circuit and one-side proportional electrohydraulic control with lever, with unloader valve and pressure reducing valve, antishock and anticavitation valves on all ports, L.S. relief valves on 2th section, LSAB ports, internal pilot and external drain

Complete sections ordering codes

DPC130 / 2 / BR21-S220-ELP / C10-1S8EZ3L1 / C10-1S8EZ3L1 /..... / RF30 - ..... - 12VDC - <SB20 - CVN>

- DPC130: Valve type
- 2: Nr. of working sections
- 1
- 2
- 3
- 4
- 5
- 6
- CVN: The valve is supplied painted, as standard, with one coat of Primer black antirust paint



1 Inlet section * page 12

TYPE: **DPC130/BR-S200-DSK** CODE: 634200000
DESCRIPTION: With 3-way compensator, L.S. pressure relief valve, pressure reducing valve and selector for open/closed center circuit

Closed Center circuit

TYPE: **DPC130/BN21-S220** CODE: 634220003
DESCRIPTION: With 3-way compensator and L.S. pressure relief valve, without pressure reducing valve

TYPE: **DPC130/BR21-S220-ELP-12VDC** CODE: 634210001
DESCRIPTION: As previous, with pressure reducing valve, and 12VDC solenoid operated unloader valve

TYPE: **DPC130/BRF21-S250** CODE: 634250900
DESCRIPTION: Without compensator, with pressure reducing valve and L.S. pressure relief valve

TYPE: **DPC130/BRSO21(SF)-S220-ELN3-12VDC** CODE: 634240003
DESCRIPTION: Shut-off configuration, with pressure reducing valve and L.S. pressure relief valve

TYPE: **DPC130/BRS21-S220-ELP-12VDC** CODE: 634230003
DESCRIPTION: Copy-Spool with dumper configuration, with 3-way compensator, pressure reducing valve, L.S. pressure relief valve and 12VDC solenoid operated unloader valve

Open Center circuit

TYPE: **DPC130/BN11-S220** CODE: 634220004
DESCRIPTION: With 3-way compensator and L.S. pressure relief valve, without pressure reducing valve

TYPE: **DPC130/BR11-S220-ELP-12VDC** CODE: 634210002
DESCRIPTION: As previous, with pressure reducing valve, and 12VDC solenoid operated unloader valve

TYPE: **DPC130/BRS11-S220-ELP-12VDC** CODE: 634230002
DESCRIPTION: Copy-Spool with dumper configuration, with 3-way compensator, pressure reducing valve, L.S. pressure relief valve and 12VDC solenoid operated unloader valve

Complete sections ordering codes

2 Working section * page 20

With 2-way compensator

TYPE: **DPC130/C10-1S8EZ3L1-12VDC** CODE: 634110029
DESCRIPTION: With double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control with lever
TYPE: **DPC130/C22-1S8EZ3L1.UTUTSTST-12VDC**
CODE: 634110030
DESCRIPTION: As previous, arranged for port valves and L.S. relief valves
TYPE: **DPC130/C10-1S8ZR4FL1-12VDC** CODE: 634110031
DESCRIPTION: With double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control with simple diagnostic and programmability, ratiometric output, with lever
TYPE: **DPC130/C22-1S8ZR4FL1.UTUTSTST-12VDC**
CODE: 634110032
DESCRIPTION: As previous, arranged for port valves and L.S. relief valves
TYPE: **DPC130/C10-1S8ZR4PL1-12VDC** CODE: 634110033
DESCRIPTION: With double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control with simple diagnostic and programmability, absolute output, with lever
TYPE: **DPC130/C22-1S8ZR4PL1.UTUTSTST-12VDC**
CODE: 634110034
DESCRIPTION: As previous, arranged for port valves and L.S. relief valves

Without compensator

TYPE: **DPC130/D10-1S8EZ3L1-12VDC** CODE: 634120010
DESCRIPTION: With double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control with lever
TYPE: **DPC130/D20-1S8EZ3L1.UTUT-12VDC**
CODE: 634120011
DESCRIPTION: As previous, arranged for port valves
TYPE: **DPC130/D10-1S8ZR4FL1-12VDC** CODE: 634120012
DESCRIPTION: With double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control with simple diagnostic and programmability, ratiometric output, with lever
TYPE: **DPC130/D20-1S8ZR4FL1.UTUT-12VDC**
CODE: 634120013
DESCRIPTION: As previous, arranged for port valves
TYPE: **DPC130/D10-1S8ZR4PL1-12VDC** CODE: 634120014
DESCRIPTION: With double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control with simple diagnostic and programmability, absolute output, with lever
TYPE: **DPC130/D20-1S8ZR4PL1.UTUT-12VDC**
CODE: 634120015
DESCRIPTION: As previous, arranged for port valves
TYPE: **DPC130/CV10-1S8EZ3L1-12VDC** CODE: 634130001
DESCRIPTION: With load check valve, double acting spool for 60 l/min *(16 US gpm)*, proportional electrohydraulic control, with lever
TYPE: **DPC130/CV22-1S8EZ3L1.UTUTSTST-12VDC**
CODE: 634130002
DESCRIPTION: As previous, arranged for port valves and L.S. relief valves

3 Outlet section * page 38

For valve with mechanical control

TYPE: **DPC130/RF10** CODE: 634310001
DESCRIPTION: Without ports

For valve with hydraulic control

TYPE: **DPC130/RF20** CODE: 634310000
DESCRIPTION: Without ports, internal drain

For valve with electrohydraulic control

TYPE: **DPC130/RF30** CODE: 634310002
DESCRIPTION: Without ports, external drain L
TYPE: **DPC130/RC31** CODE: 634310012
DESCRIPTION: With ports P1 and T1 (plugged), external drain L
TYPE: **DPC130/RD31** CODE: 634310015
DESCRIPTION: With ports P1 and T1 (plugged), port LS1, external drain L

4 Valve threading

Specify only if it is different from BSP standard (see page 5).

5 Voltage

Specify the voltage of electric device

6 Pump stand-by

This option must be specified only if valve is configured for Closed Center circuit, without local compensation and if the value is different from 11.5 bar (*167 psi*)

7 Assembling kit

CODE	CODE	DESCRIPTION
With inlet sections type		
BR-BN-BRS-BRSO	**BRF**	
5TIR108185	5TIR108153	For 1 working section valve
5TIR108232	5TIR108201	For 2 working sections valve
5TIR108281	5TIR108249	For 3 working sections valve
5TIR108328	5TIR108297	For 4 working sections valve
5TIR108376	5TIR108339	For 5 working sections valve
5TIR108425	5TIR108393	For 6 working sections valve
5TIR108472	5TIR108440	For 7 working sections valve
5TIR108520	5TIR108488	For 8 working sections valve
5TIR108568	5TIR108536	For 9 working sections valve
5TIR108616	5TIR108584	For 10 working sections valve

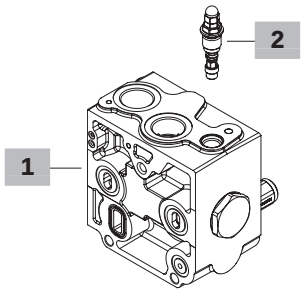
NOTE (*): *Codes are referred to **BSP** thread.*

Inlet section parts ordering codes

Valve setting (bar)

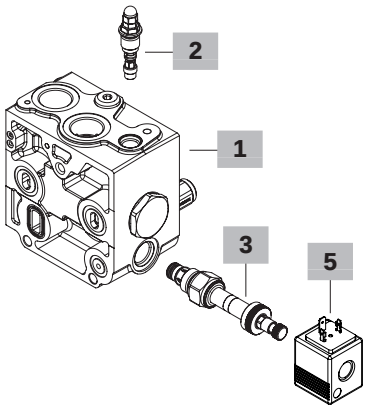
DPC130 / BN21 - S220 - .....

1 2 5



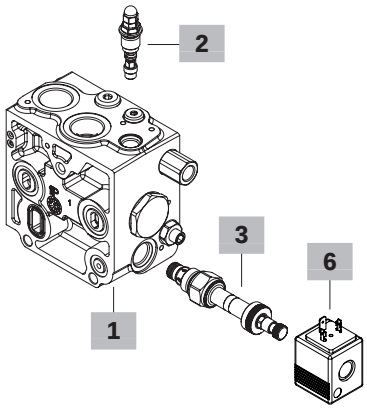
DPC130 / BR21 - S220 - ELP - ..... - 12VDC

1 2 3 5 6



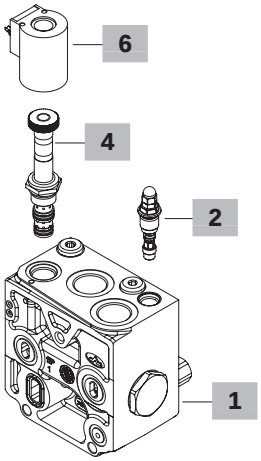
DPC130 / BRS21 - S220 - ELP - ..... - 12VDC

1 2 3 5 6



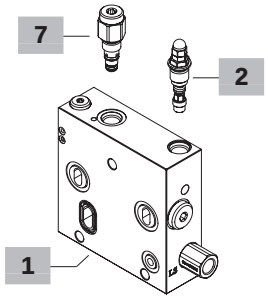
DPC130 / BRSO21(SF) - S220 - ELN3 - ..... - 12VDC

1 2 4 5 6

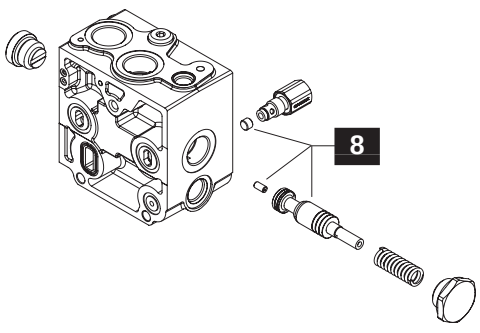


DPC130 / BRF21 - S250 - BSP

1 2 5



Circuit conversion kit



Inlet section parts ordering codes

1 Inlet section kit* page 14

Open Center circuit

TYPE: **DPC130/BN11** CODE: 5FIA630303
DESCRIPTION: With compensator, without pressure reducing valve
TYPE: **DPC130/BR11** CODE: 5FIA630301
DESCRIPTION: With compensator and pressure reducing valve
TYPE: **DPC130/BRS11** CODE: 5FIA630361
DESCRIPTION: Copy-Spool type, with compensator and pressure reducing valve

Closed Center circuit

TYPE: **DPC130/BN21** CODE: 5FIA630302
DESCRIPTION: Without compensator and pressure reducing valve
TYPE: **DPC130/BR21** CODE: 5FIA630300
DESCRIPTION: Without compensator, with pressure reducing valve
TYPE: **DPC130/BRSO21(SF)** CODE: 5FIA630371
DESCRIPTION: Shut-Off type, without compensator, with pressure reducing valve
TYPE: **DPC130/BRS21** CODE: 5FIA630360
DESCRIPTION: Copy-Spool type, without compensator, with pressure reducing valve
TYPE: **DPC130/BRF21** CODE: 5FIA630306
DESCRIPTION: Without compensator, with pressure reducing valve

2 L.S. relief valves page 19

Standard setting is referred to 10 l/min - *2.6 US gpm* flow.

TYPE	CODE	DESCRIPTION
LSD	XCAR126215	With blind nut, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126213	As previous, range 180-350 bar / *2600-5100 psi* std. setting 180 bar / *2600 psi*
LSH	XCAR126216	With locked arrangement, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126217	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
LSZ	5CAR126221	With anti-tamper cap, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	5CAR126219	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
ST	5KIT126210	Relief valve blanking plug

3 Solenoid operated unloading valve page 19

Needs coil type BER: see chapter 6

TYPE	CODE	DESCRIPTION
ELN	0EC08002031	Without emergency override
ELP	0EC08002033	With push-button emergency override
ELT	0EC08002035	With "twist & push" emergency override
ELV	0EC08002034	With screw type emergency override
LT	XTAP225320	Unloading valve blanking plug

4 Shut-Off pilot solenoid valve page 16

Needs coil type BT: see chapter 6

TYPE	CODE	DESCRIPTION
ELN3	0EJ08002035	Without emergency override
ELT3	0EJ08002042	With screw emergency override

5 Section threading

Specify only if it is different from BSP standard (see page 5).

6 Coil

TYPE	CODE	DESCRIPTION
12VDC	4SLE001200	12VDC coil type **BER,** ISO4400 connector (for unloading valve)
12VDC	4SL3000120	12VDC coil type **BT,** ISO4400 connector (for Shut-Off pilot valve)

For complete available coils list see page 68.

7 Pressure reducing valve page 18

CODE	DESCRIPTION
X219740033	Pressure reducing valve for BRF inlet section

8 Circuit conversion kit

These kits ara available only for BN and BR sections; not for BRS, BRSO and BRF sections.

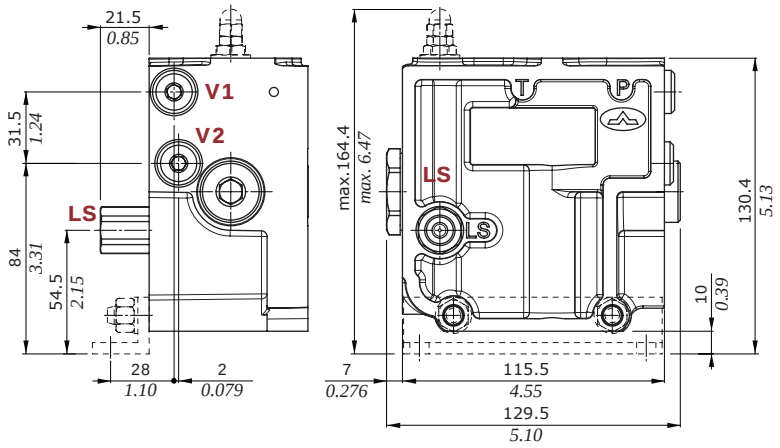
CODE	DESCRIPTION
5KIT130300	Kit for circuit conversion from Open Center to Closed Center
5KIT130310	Kit for circuit conversion from Closed Center to Open Center

NOTE (*): *Codes are referred to **BSP** thread.*

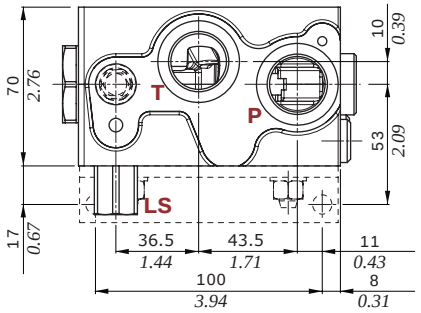
Inlet section

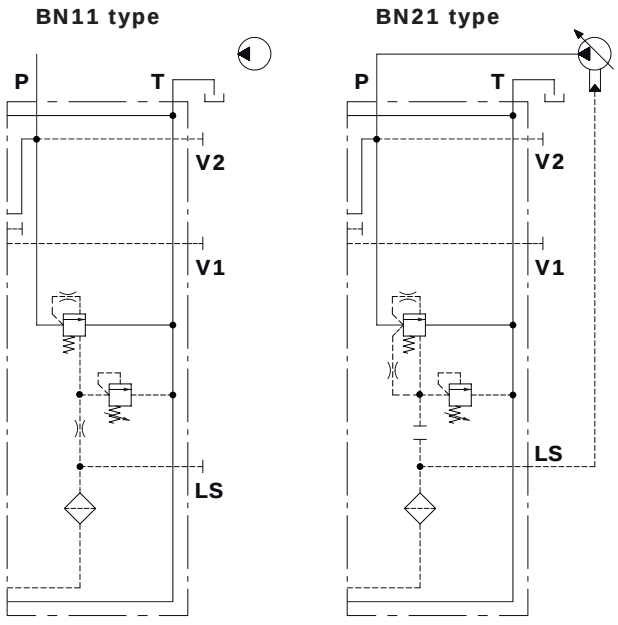
Dimensions and hydraulic circuit

Example of BN section



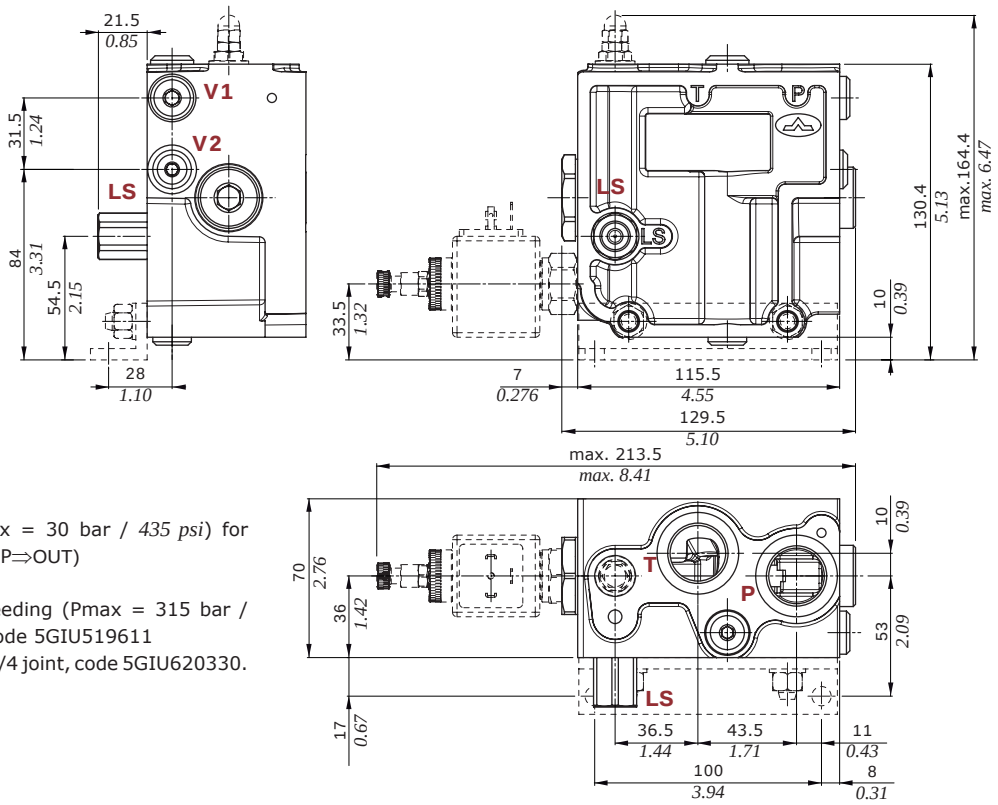
Auxiliary ports specification
V1 = G1/4 pilot pressure port for electrohydraulic controls feeding (Pmax = 315 bar / *4600 psi)* (P⇒IN)
V2 = G1/4 pressure gauge connection





Dimensions and hydraulic circuit

Example of BR section



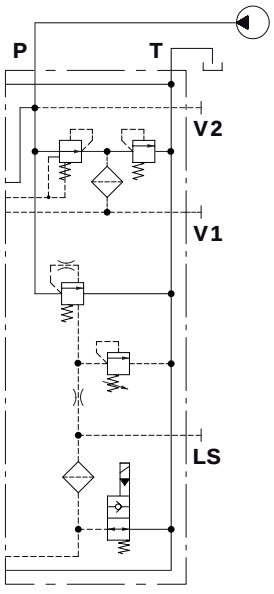
Auxiliary ports specification

V1 = G1/4 pilot pressure port (Pmax = 30 bar / *435 psi*) for hydraulic pilot control valves feeding (P⇒OUT)

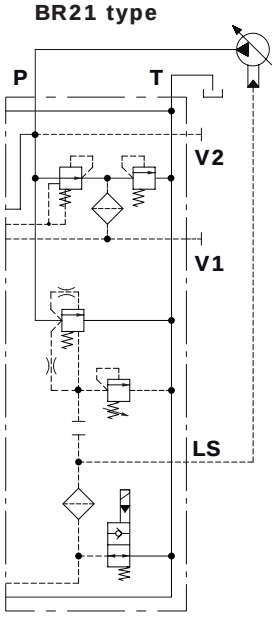
V2 = M14x1.5 pilot pressure port for:

- electrohydraulic controls optional feeding (Pmax = 315 bar / *4600 psi)* (P⇒IN); needs G1/4 joint, code 5GIU519611
- pressure gauge connection; needs G1/4 joint, code 5GIU620330.

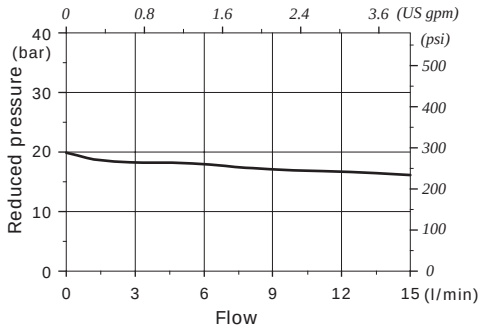
BR11 type



BR21 type



Pressure reducing valve diagram
Reduced pressure vs. Flow

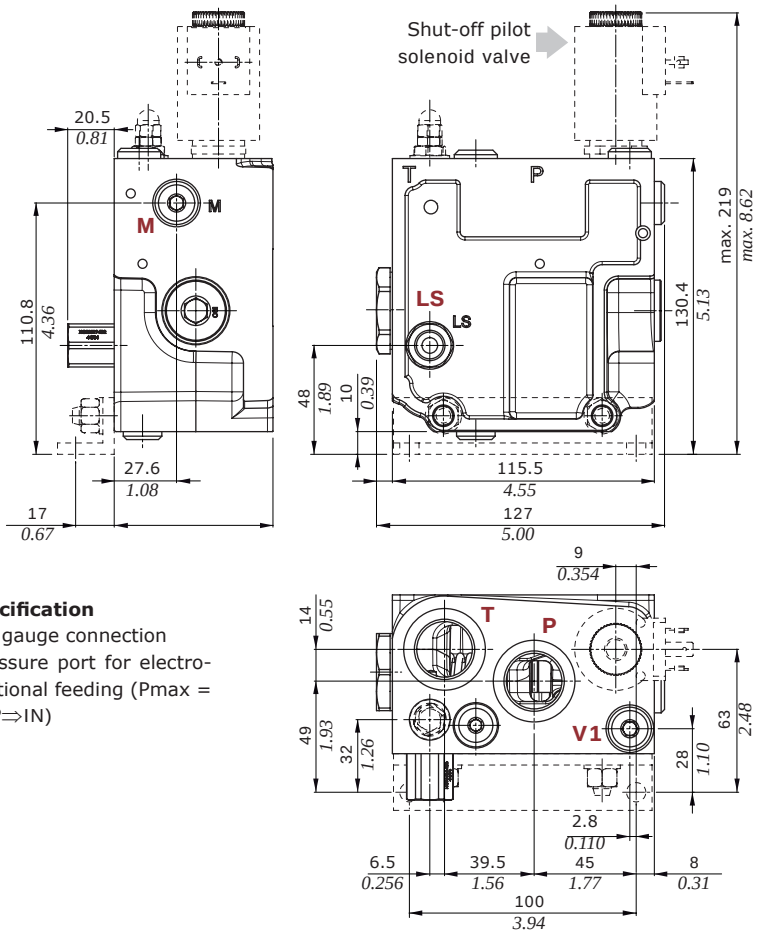


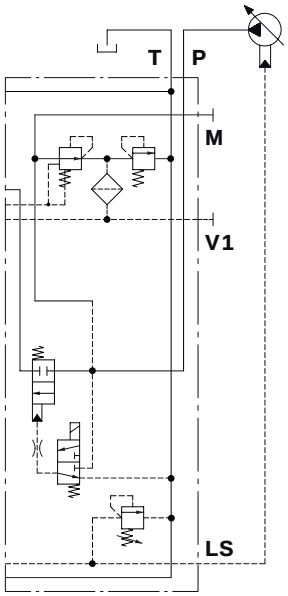
Inlet section

Dimensions and hydraulic circuit

Example of BRSO21 section

For pressure reducing valve features, see page 15



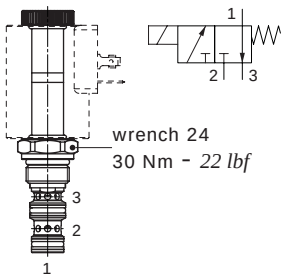


Auxiliary ports specification

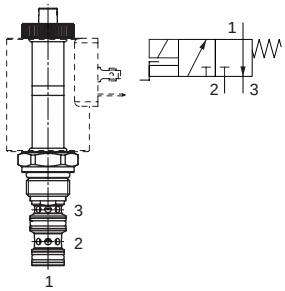
M = G1/4 pressure gauge connection

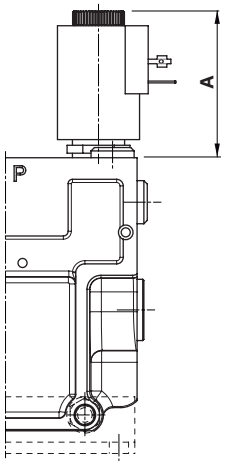
V1 = G1/4 pilot pressure port for electro-hydraulic controls optional feeding (Pmax = 315 bar / *4600 psi)* (P⇒IN)

Pilot solenoid valve type ELN3
without emergency



Pilot solenoid valve type ELT3
screw type emergency





Features

Max. flow . . . . . : 3 l/min - *0.80 US gpm*
Max. pressure. . . . . : 350 bar - *5100 psi*
Internal leakage . . . . . : 10 cm³/min @ 210 bar
0.61 in³/min @ 3050 psi

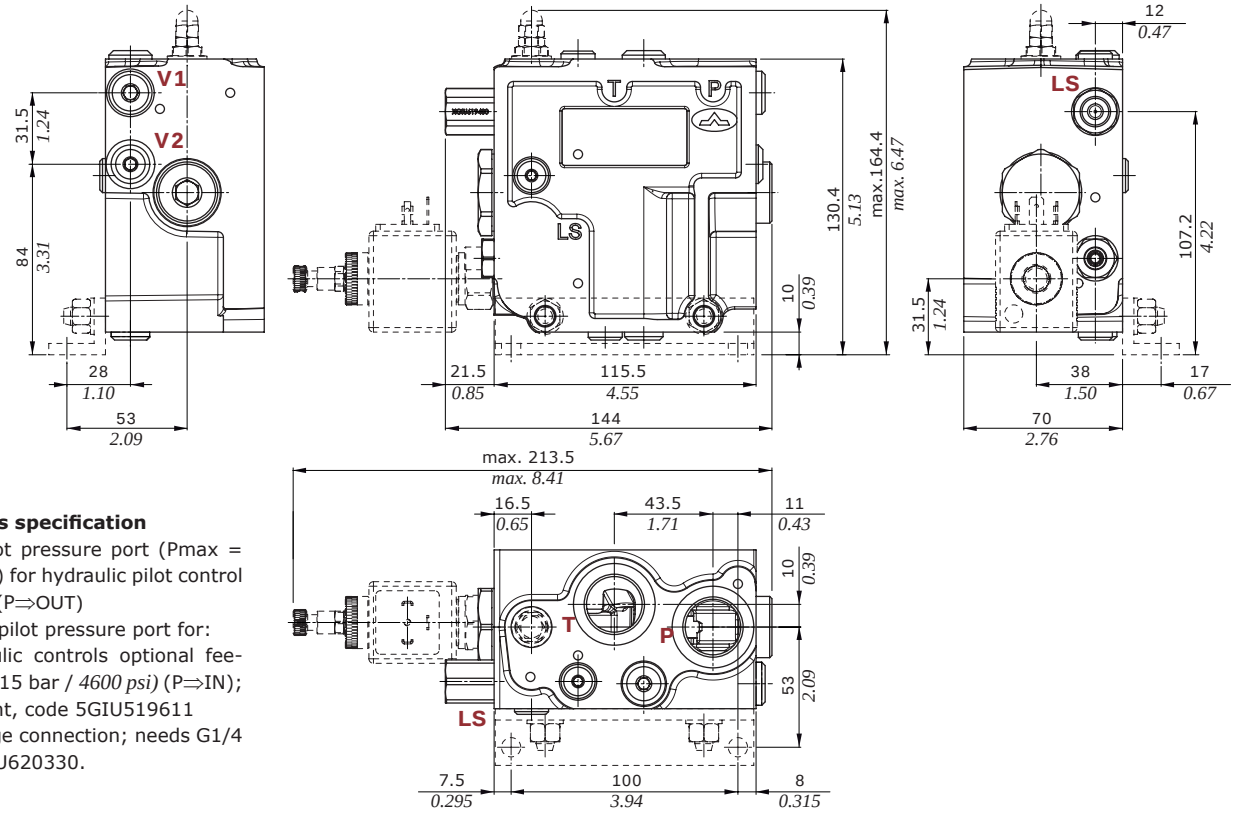
For coil features and options see coil **BT** at page 68.

Valve type	Dim. A	
	mm	*in*
ELN3	65.5	*2.58*
ELT3	88.5	*3.48*

Dimensions and hydraulic circuit

Example of BRS section

For pressure reducing valve features, see page 15



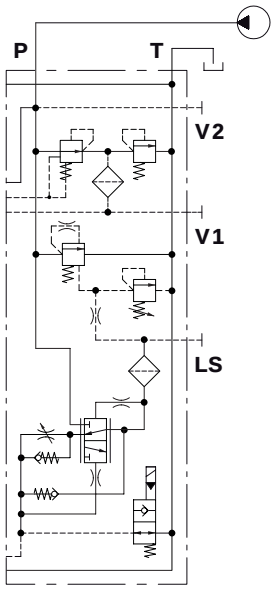
Auxiliary ports specification

V1 = G1/4 pilot pressure port (Pmax = 30 bar / *435 psi*) for hydraulic pilot control valves feeding (P⇒OUT)

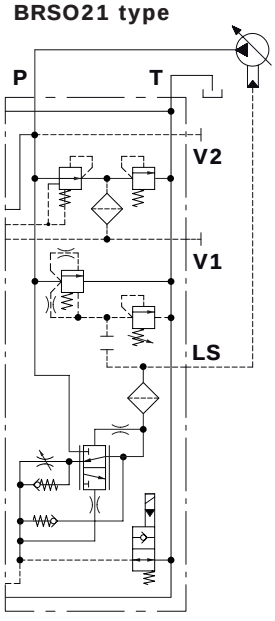
V2 = M14x1.5 pilot pressure port for:

- electrohydraulic controls optional feeding (Pmax = 315 bar / *4600 psi)* (P⇒IN); needs G1/4 joint, code 5GIU519611
- pressure gauge connection; needs G1/4 joint, code 5GIU620330.

BRSO11 type



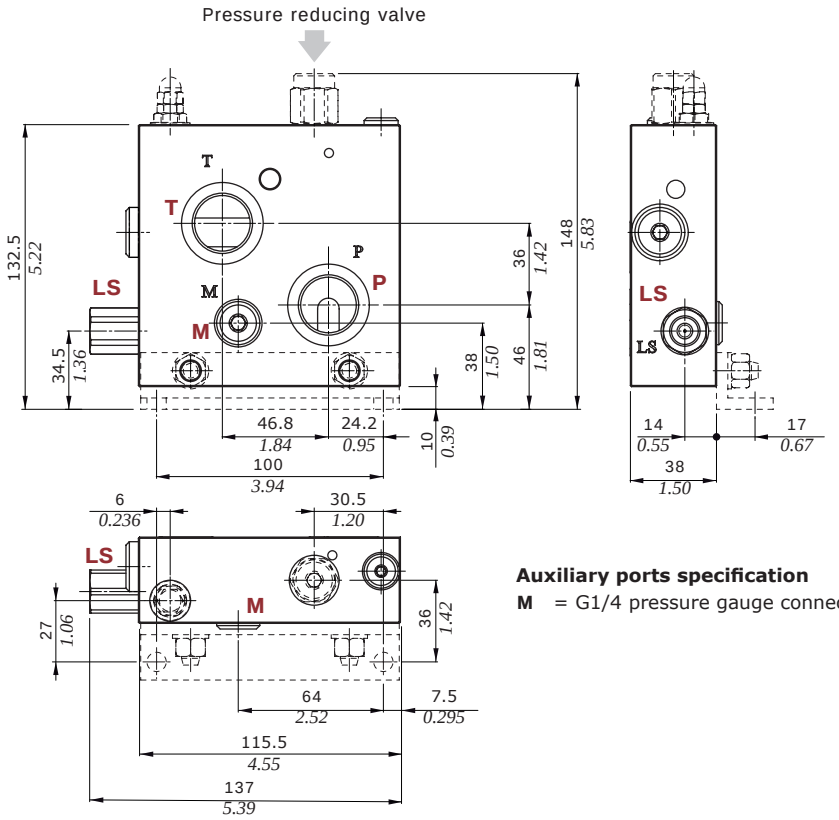
BRSO21 type

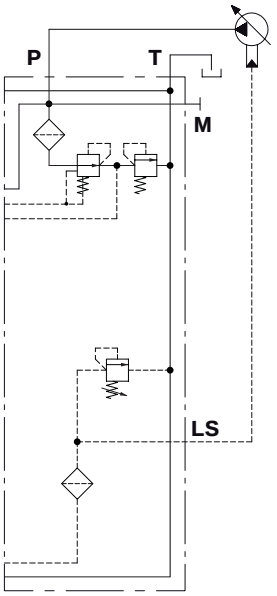


Inlet section

Dimensions and hydraulic circuit

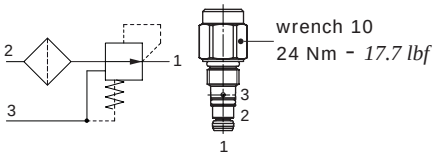
Example of BRS section





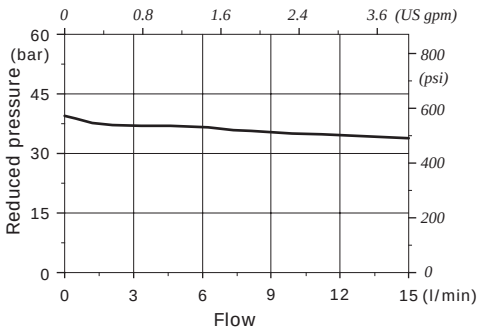
Auxiliary ports specification
M = G1/4 pressure gauge connection

Pressure reducing valve



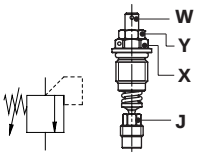
Features
Reduced press. range . : from 3.5 to 35 bar
: *from 50 to 500 psi*
Max. inlet pressure . . . : 380 bar - *5500 psi*
Nominal flow . . . . . : 15 l/min - *4 US gpm*

Pressure reducing valve diagram
Reduced pressure vs. Flow

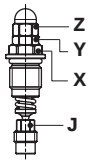


L.S. pressure relief valve

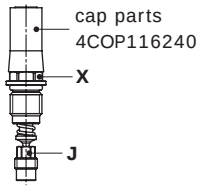
Type LSH
with lock arrangement



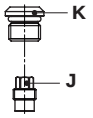
Type LSD
with blind nut

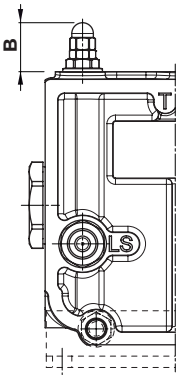


Type LSZ
with anti-tamper cap



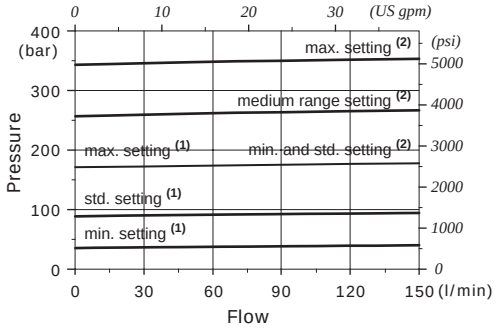
Type ST
valve blanking plug





Pressure vs. flow diagram

(1) = valve range 40-180 bar (*580-2600 psi*)
(2) = valve range 180-350 bar (*2600-5000 psi*)

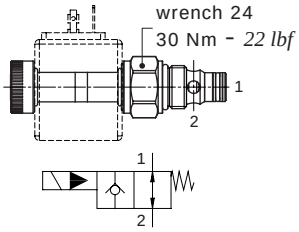


X = wrench 13 / 42 Nm - *31 lbf*
Y = wrench 10 / 9.8 Nm - *7.2 lbf*
W = allen wrench 3
Z = wrench 10 / 9.8 Nm - *7.2 lbf*
J = wrench 7 / 24 Nm - *17.7 lbf*
K = allen wrench 5 / 24 Nm - *17.7 lbf*

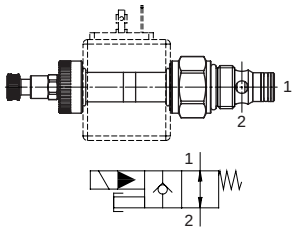
Valve type	Dim. B	
	mm	*in*
LSD	21.5	*0.85*
LSH	17	*0.67*
LSZ	34	*1.34*

Solenoid operated unloading valve

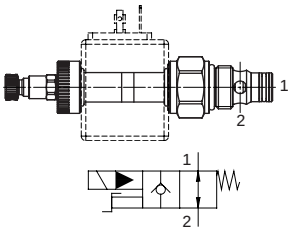
Type ELN: without emergency



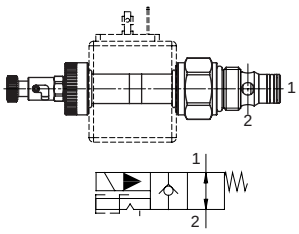
Type ELP: push button type



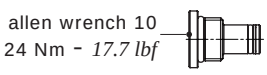
Type ELV: screw type



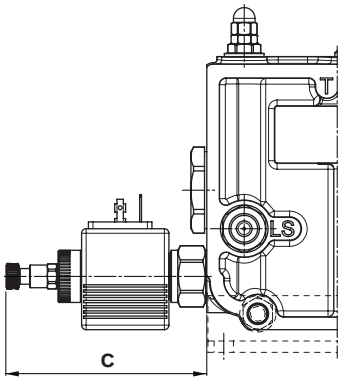
Type ELT: "push & twist" type



LT: valve blanking plug



On BR and BRS section



Valve type	Dim. C	
	mm	*in*
ELN	65.5	*2.58*
ELP	88.5	*3.48*
ELV	88.5	*3.48*
ELT	91	*3.58*

Features

Max. flow . . . . . : 40 l/min - *10.6 US gpm*
Max. pressure. . . . . : 380 bar - *5500 psi*
Internal leakage . . . . . : 0.25 cm³/min @ 210 bar
0.015 in³/min @ 3050 psi

For coil features and options see coil **BER** at page 68.

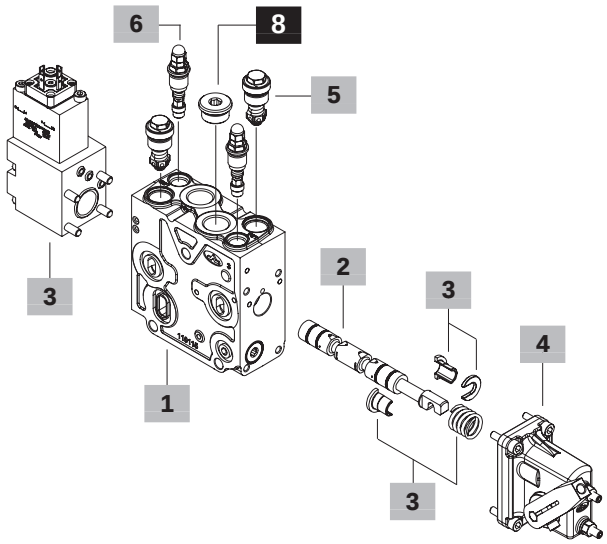
Working and outlet section parts ordering codes

Valve setting (bar)
port A port B port A port B

DPC130/C22-1S-8EZ3 L 1 . U100U320.S250S250-.....-12VDC

1 2 3A 4 5 6 7 3
3B

Lever position: see page 36



1 Working section kit* page 22

With compensator

TYPE: **DPC130/C10** CODE: 5EL6301310
DESCRIPTION: Without valves arrangement
TYPE: **DPC130/C13** CODE: 5EL6301313
DESCRIPTION: As previous with additional upper L.S. port
TYPE: **DPC130/C20** CODE: 5EL6301320
DESCRIPTION: With port valves arrangement
TYPE: **DPC130/C24** CODE: 5EL6301330
DESCRIPTION: As previous with additional upper L.S. port
TYPE: **DPC130/C21** CODE: 5EL6301321
DESCRIPTION: Arranged for port valves and one L.S. relief valve
TYPE: **DPC130/C23** CODE: 5EL6301323
DESCRIPTION: As previous with additional upper L.S. port
TYPE: **DPC200/C22** CODE: 5EL6301322
DESCRIPTION: Arranged for port valves and two L.S. relief valves
TYPE: **DPC130/F10** CODE: 5EL6304310
DESCRIPTION: For floating circuit, without port valves arrangement
TYPE: **DPC130/F20** CODE: 5EL6304320
DESCRIPTION: For floating circuit, with port valves arrangement
TYPE: **DPC130/CM23** CODE: 5EL6301325A
DESCRIPTION: For regenerative circuit, arranged for port valves and one L.S. relief valve

Without compensator

TYPE: **DPC130/D10** CODE: 5EL6302310
DESCRIPTION: Without valves arrangement
TYPE: **DPC130/D20** CODE: 5EL6302320
DESCRIPTION: With port valves arrangement
TYPE: **DPC130/D21** CODE: 5EL6302321
DESCRIPTION: Arranged for port valves and one L.S. relief valve
TYPE: **DPC130/G20** CODE: 5EL6305320
DESCRIPTION: For floating circuit, with port valves arrangement
TYPE: **DPC130/DM23** CODE: 5EL6302350
DESCRIPTION: For regenerative circuit, arranged for port valves and one L.S. relief valve

Without compensator, with check valve

TYPE: **DPC130/CV10** CODE: 5EL6301316
DESCRIPTION: Without valves arrangement
TYPE: **DPC130/CV13** CODE: 5EL6301314
DESCRIPTION: As previous with additional upper L.S. port
TYPE: **DPC130/CV20** CODE: 5EL6301324
DESCRIPTION: With port valves arrangement
TYPE: **DPC130/CV21** CODE: 5EL6301326
DESCRIPTION: Arranged for port valves and one L.S. relief valve
TYPE: **DPC130/CV23** CODE: 5EL6301328
DESCRIPTION: As previous with additional upper L.S. port
TYPE: **DPC200/CV22** CODE: 5EL6301327
DESCRIPTION: Arranged for port valves and two L.S. relief valves
TYPE: **DPC130/FV20** CODE: 5EL6304325
DESCRIPTION: For floating circuit, with port valves arrangement
TYPE: **DPC130/CVM23** CODE: 5EL6301350
DESCRIPTION: For regenerative circuit, arranged for port valves and one L.S. relief valve

NOTE (*): *Codes are referred to **BSP** thread.*

2 Spool page 25

Flow is referred to 7 bar (*102 psi*) stand-by (margin pressure)

TYPE	CODE	DESCRIPTION
Double acting with A and B closed in neutral position		
1C	3CU4010005	5 l/min (*1.3 US gpm*) flow
1D	3CU4010010	10 l/min (*2.6 US gpm*) flow
1V	3CU4010025	25 l/min (*6.6 US gpm*) flow
1Q	3CU4010040	40 l/min (*10.6 US gpm*) flow
1S	3CU4010060	60 l/min (*15.9 US gpm*) flow
1N	3CU4010080	80 l/min (*21.1 US gpm*) flow
1P	3CU4010100	100 l/min (*26.4 US gpm*) flow
Double acting with A and B to tank in neutral position		
2C	3CU4024005	5 l/min (*1.3 US gpm*) flow
2D	3CU4024010	10 l/min (*2.6 US gpm*) flow
2V	3CU4024025	25 l/min (*6.6 US gpm*) flow
2Q	3CU4024040	40 l/min (*10.6 US gpm*) flow
2S	3CU4024060	60 l/min (*15.9 US gpm*) flow
2N	3CU4024080	80 l/min (*21.1 US gpm*) flow
2P	3CU4024100	100 l/min (*26.4 US gpm*) flow
Double acting with A and B partially to tank in neutral position		
2HC	3CU4025005	5 l/min (*1.3 US gpm*) flow
2HD	3CU4025010	10 l/min (*2.6 US gpm*) flow
2HV	3CU4025025	25 l/min (*6.6 US gpm*) flow
2HQ	3CU4025040	40 l/min (*10.6 US gpm*) flow
2HS	3CU4025060	60 l/min (*15.9 US gpm*) flow
2HN	3CU4025080	80 l/min (*21.1 US gpm*) flow
2HP	3CU4025100	100 l/min (*26.4 US gpm*) flow
Single acting on A, B plugged: needs G1/2 plug		
3V	3CU4031025	25 l/min (*6.6 US gpm*) flow
3Q	3CU4031040	40 l/min (*10.6 US gpm*) flow
3S	3CU4031060	60 l/min (*15.9 US gpm*) flow
3N	3CU4031080	80 l/min (*21.1 US gpm*) flow
3P	3CU4031100	100 l/min (*26.4 US gpm*) flow
Double acting with A and B closed in neutral position, 4 positions, floating in 4th pos. with spool out: needs sections type F, G or FV, positioner and controls type 13		
5V	3CU4041025	25 l/min (*6.6 US gpm*) flow
5Q	3CU4041040	40 l/min (*10.6 US gpm*) flow
5S	3CU4041060	60 l/min (*15.9 US gpm*) flow
5N	3CU4041080	80 l/min (*21.1 US gpm*) flow

Working and outlet section parts ordering codes

2 Spool (continued) page 25

Double acting with A and B closed in neutral position, 3 positions, regenerative in 3rd pos. with spool out: needs sections type CM, DM or CVM, dedicated controls type 8 with reduced stroke

8F	3CU4033070	50-70 l/min flow (port A-port B) (*13.2-18.5 US gpm*)

Double acting with A and B closed in neutral position, 4 positions, regenerative in 4th pos. with spool out: needs sections type CM, DM or CVM, dedicated controls type 13

8Y	3CU4044070	70 l/min (*18.5 US gpm*) flow

3B Electrohydraulic controls

TYPE	CODE	DESCRIPTION
Proportional controls without on-board electronic..... **page 29**		
Standard type		
8EZ3-12VDC	5V08130780	With ISO4400 connector
8EZ3-24VDC	5V08130781	With ISO4400 conNector
8EZ4-12VDC	5V08130880	With flying leads
8EZ4-24VDC	5V08130881	With flying leads
8EZ4D-12VDC	5V08130886	With Deutsch connector
8EZ4D-24VDC	5V08130887	With Deutsch connector
Standard type, for floating circuit (**spool type 5**)		
13EZ3-12VDC	5V13130780	With ISO4400 connector
13EZ3-24VDC	5V13130781	With ISO4400 connector
Standard type, for 3 positions regenerative circuit (**spool type 8F**)		
8EZ3CR-12VDC	5V08130798	With ISO4400 connector
8EZ3CR-24VDC	5V08130799	With ISO4400 connector
Standard type, for 4 positions regenerative circuit (**spool type 8Y**)		
13EZ3-12VDC	5V13130783	With ISO4400 connector
13EZ3-24VDC	5V13130784	With ISO4400 connector
With integrated connectors		
8EZ3T-12VDC	5V08130874	With AMP connector
8EZ3T-24VDC	5V08130875	With AMP connector
8EZ34-12VDC	5V08130872	With Deutsch connector
8EZ4-24VDC	5V08130873	With Deutsch connector
Proportional controls with on-board electronic..... **page 33**		
With absolute output signal (0.5-4.5 V)		
8ZW3F-12VDC	5V0814090A	With flying leads
8ZW3F-24VDC	5V0814091A	With flying leads
8ZW3FD-12VDC	5V0814090D	With Deutsch connector
8ZW3FD-24VDC	5V0814091D	With Deutsch connector
With ratiometric output signal (25%-75% Vbb)		
8ZW3P-12VDC	5V08140902	With flying leads
8ZW3P-24VDC	5V08140910	With flying leads
8ZW3PD-12VDC	5V08140905	With Deutsch connector
8ZW3PD-24VDC	5V08140913	With Deutsch connector
With feedback and absolute output signal (0.5-4.5 V)		
8ZR4F-12VDC	5V0813090A	With flying leads
8ZR4F-24VDC	5V0813091A	With flying leads
8ZR4FD-12VDC	5V0813090D	With Deutsch connector
8ZR4FD-24VDC	5V0813091D	With Deutsch connector
With feedback and ratiometric output signal (25%-75% Vbb)		
8ZR4P-12VDC	5V08130902	With flying leads
8ZR4P-24VDC	5V08130910	With flying leads
8ZR4PD-12VDC	5V08130905	With Deutsch connector
8ZR4PD-24VDC	5V08130913	With Deutsch connector

NOTE (*): *Codes are referred to **BSP** thread.*

3A "A" side spool control kit page 27

TYPE	CODE	DESCRIPTION
Mechanical positioners		
7FT	5V07130000	With friction and center pos. feeling
8	5V08130000	3 position, spring return to neutral position
13	5V13130000	For floating circuit (**spool type 5**), 4 pos., detent in 4th position, with spring return to neutral position
Proportional hydraulic controls		
8IM	5V08130780	Range 5-15 bar (*73-218 psi*)

4 "B" side spool control kit page 36

TYPE	CODE	DESCRIPTION
L	5LEV130712	Aluminium lever box
LN	5LEV130701	Aluminium lever box, without lever
LZ	5LEV130731	Aluminium lever box, with anti-tamper screw caps
LG	5LEV130806	Cast iron lever box

5 Port valves page 37

TYPE	CODE	DESCRIPTION
UT	XTAP522442	Valve blanking plug
C	5KIT410000	Anticavitation valve

Fixed setting antishock and anticavitation valves: setting is referred to 10 l/min (*2.6 US gpm*)

TYPE: **U 100** (100 = setting (bar)) CODE: 5KIT330 100 (100 = setting (bar))

SETTING:

50 bar (*725 psi*)	63 bar (*914 psi*)	80 bar (*1150 psi*)
100 bar (*1450 psi*)	110 bar (*1590 psi*)	125 bar (*1800 psi*)
140 bar (*2050 psi*)	150 bar (*2150 psi*)	160 bar (*2300 psi*)
175 bar (*2550 psi*)	190 bar (*2750 psi*)	200 bar (*2900 psi*)
210 bar (*3050 psi*)	230 bar (*3350 psi*)	240 bar (*3500 psi*)
250 bar (*3600 psi*)	260 bar (*3750 psi*)	270 bar (*3900 psi*)
280 bar (*4050 psi*)	290 bar (*4200 psi*)	300 bar (*4350 psi*)
310 bar (*4500 psi*)	320 bar (*4650 psi*)	340 bar (*4950 psi*)
360 bar (*5200 psi*)	400 bar (*5800 psi*)	420 bar (*6100 psi*)

6 L.S. port relief valves page 37

Standard setting is referred to 10 l/min - *2.6 US gpm* flow.

TYPE	CODE	DESCRIPTION
LSD	XCAR126215	With blind nut, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126213	As previous, range 180-350 bar / *2600-5100 psi* std. setting 180 bar / *2600 psi*
LSH	XCAR126216	With locked arrangement, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126217	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
LSZ	5CAR126221	With anti-tamper cap, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	5CAR126219	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
ST	5KIT126210	Relief valve blanking plug

7 Section threading

Specify only if it is different from BSP standard (see page 5).

8 Plug for single acting spool*

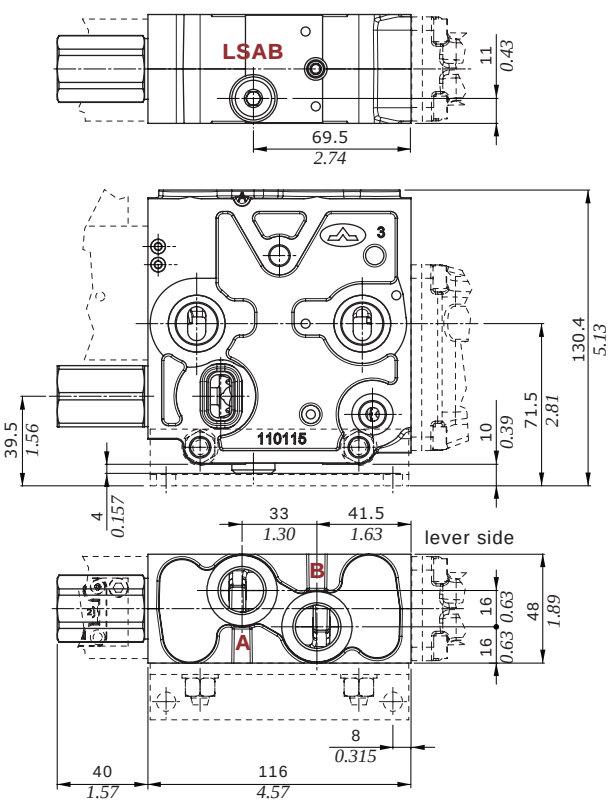
CODE	DESCRIPTION
3XTAP727180	G1/2 plug

Working section

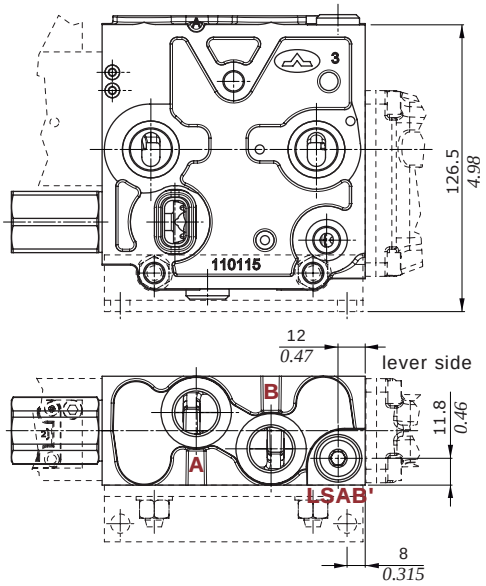
Dimensions and hydraulic circuit

With compensator

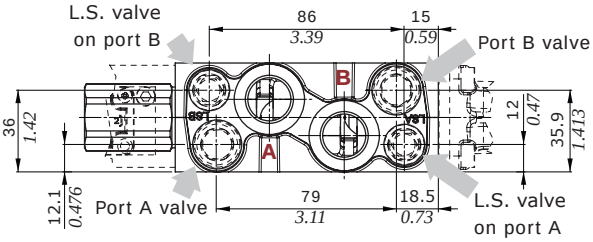
Type C10
without port valves



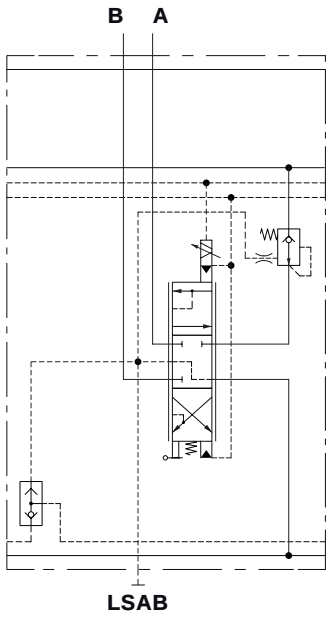
Type C13
without port valves with upper L.S port



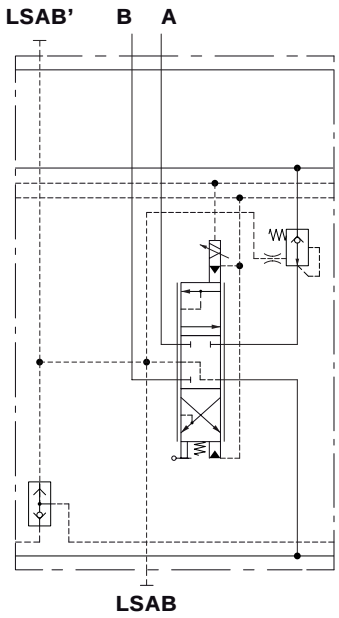
Type C22
with arrangement for port valves and L.S. relief valve



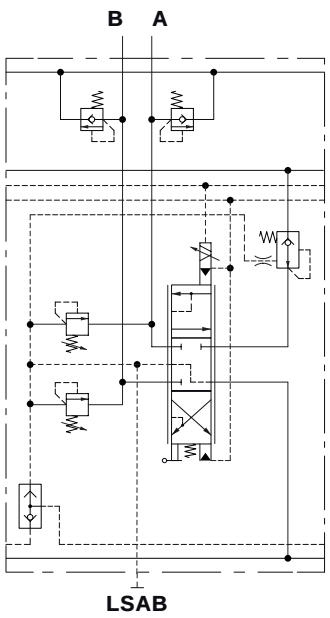
Type C10



Type C13



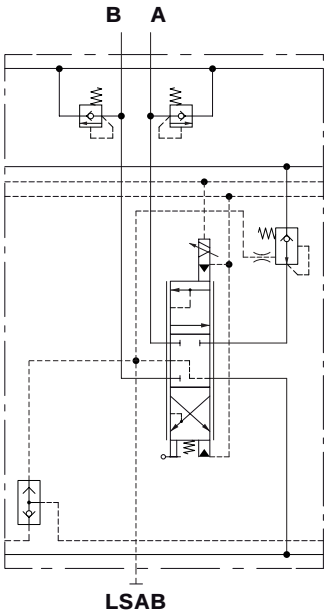
Type C22



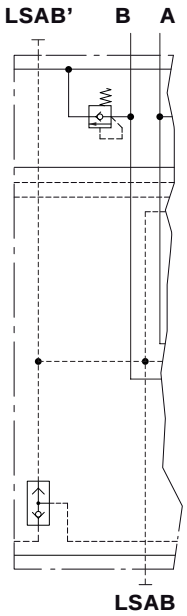
Dimensions and hydraulic circuit

With compensator

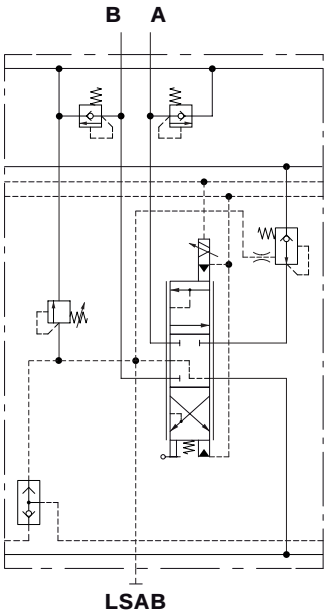
Type C20
with port valves arrangement



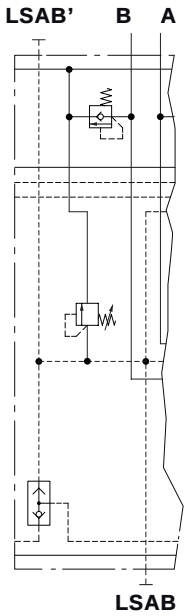
Type C24
As type C20 with upper L.S. port



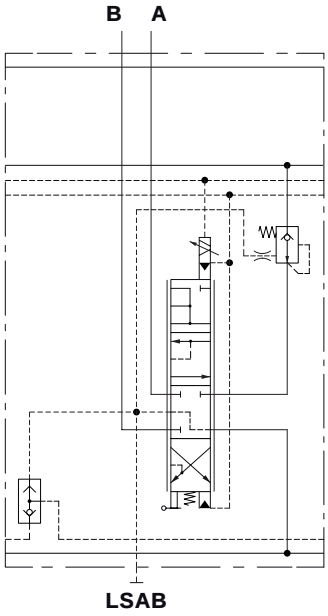
Type C21
with arrangement for port valves and one L.S. relief valve



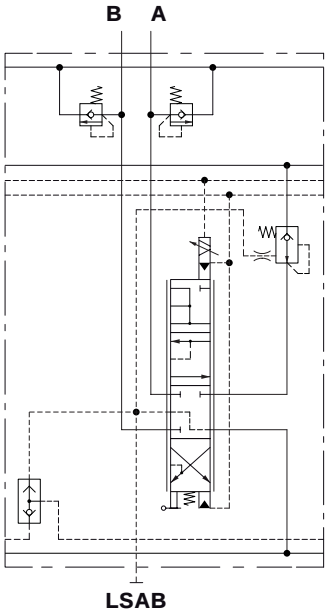
Type C23
As type C21 with upper L.S. port



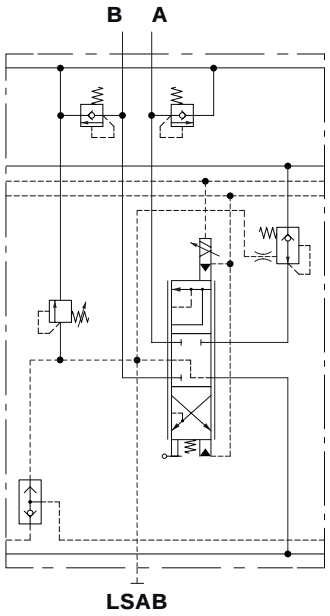
Type F10
for floating circuit without port valves arrangement



Type F20
for floating circuit with port valves arrangement



Type CM23
for regenerative circuit with arrangement for port valves and one L.S. relief valve

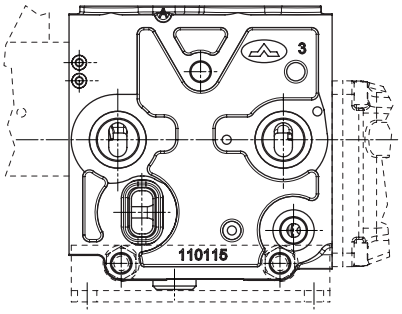


Working section

Dimensions and hydraulic circuit

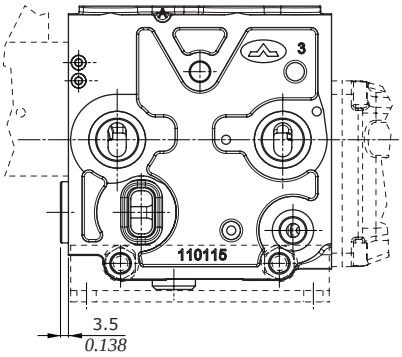
Without compensator

Dimensions are the same of types with compensator.
See page 20 for section configuration list, and pages 22-23 for circuit representation.

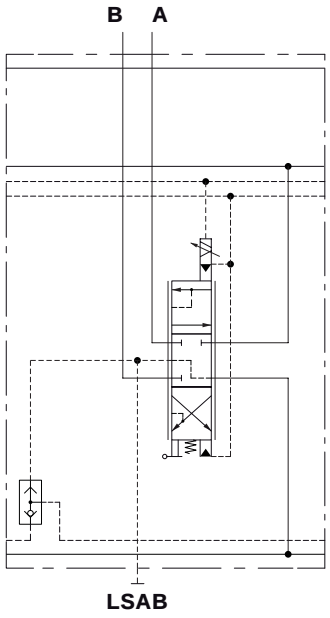


Without compensator, with check valve

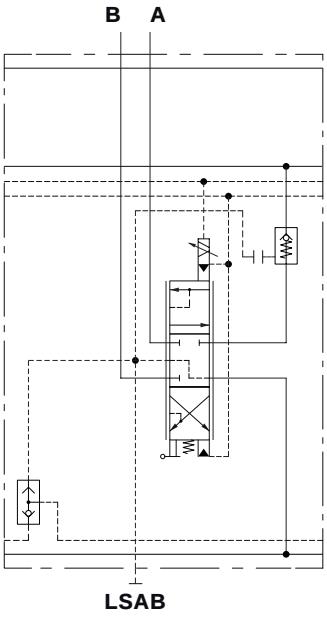
Dimensions are the same of types with compensator.
See page 20 for section configuration list, and pages 22-23 for circuit representation.



Type D10
without port valves arrangement



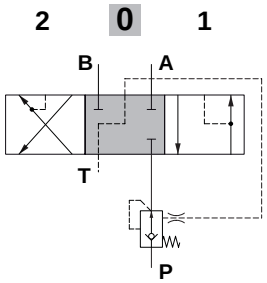
Type CV10
without port valves arrangement



Working section

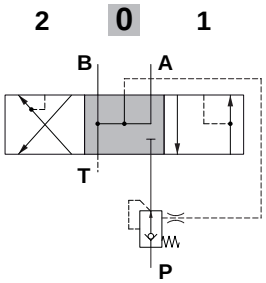
Spools

Spool type 1
A, B closed in neutral position



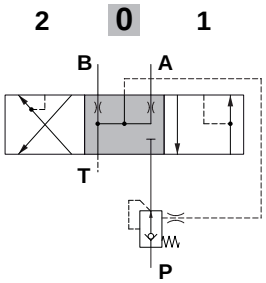
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

Spool type 2
A, B open to tank in neutral pos.



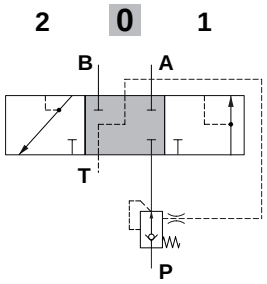
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

Spool type 2H
A, B partially to tank in neutral pos.



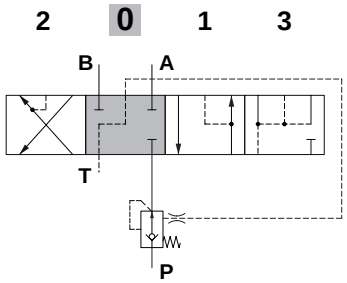
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

Spool type 3
single acting on A



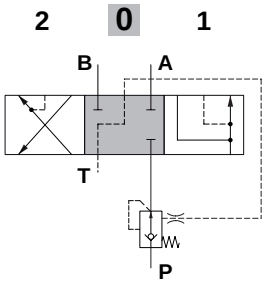
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

Spool type 5
floating in 4th position (pos.3)



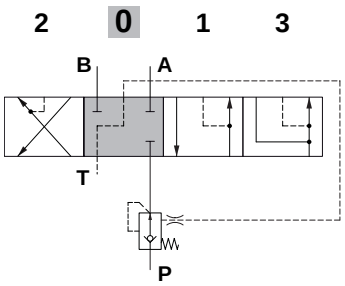
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*
position 3: + 12 mm *(+ 0.47 in)*

Spool type 8F
regenerative in 2nd position (pos.1)



Spool stroke
position 1: + 6 mm *(+ 0.24 in)*
position 2: - 6 mm *(- 0.24 in)*

Spool type 8Y
regenerative in 4th position (pos.3)



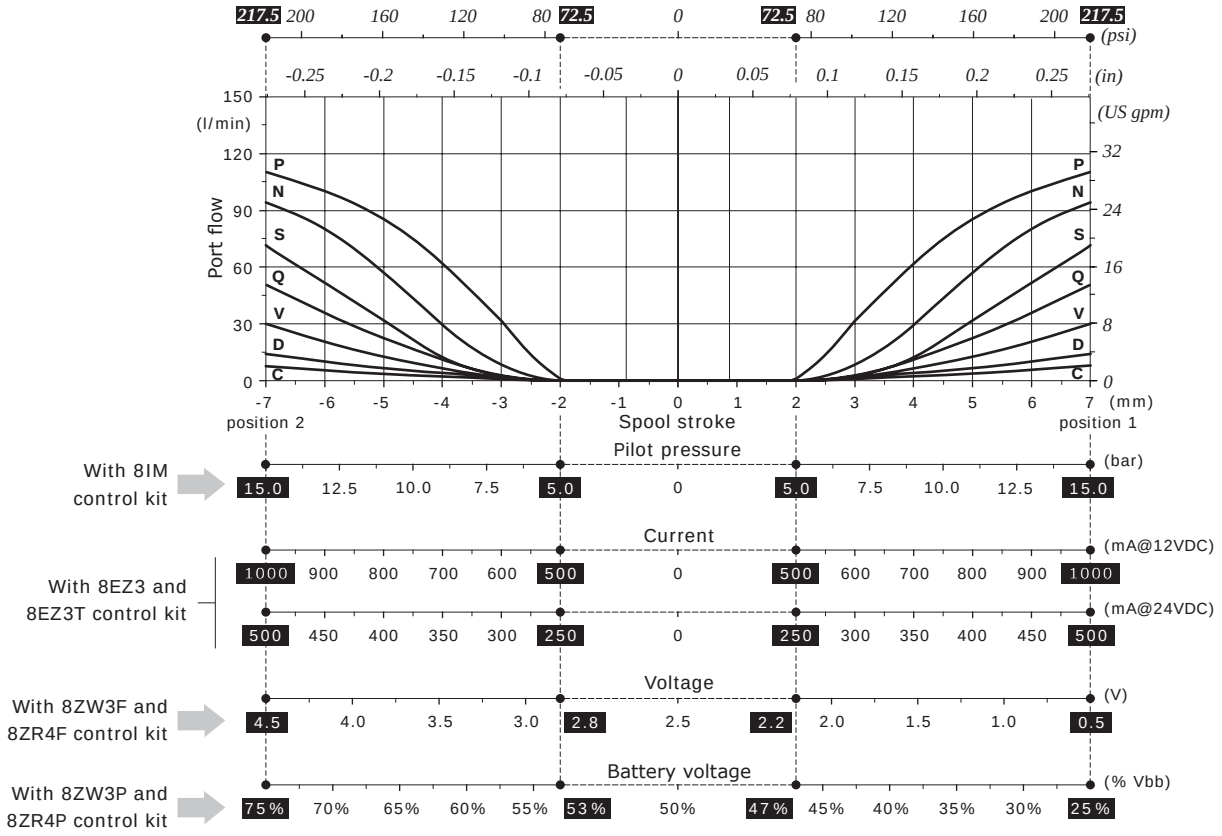
Spool stroke
position 1: + 4.5 mm *(+ 0.18 in)*
position 2: - 4.2 mm *(- 0.17 in)*
position 3: + 7.8 mm *(+ 0.31 in)*

Working section

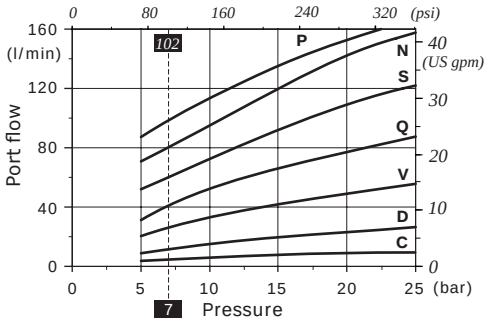
Spools

Following curves are detected with standard spools, connecting P⇒A⇒B⇒T and P⇒B⇒A⇒T ports without flow multiplication. Customized spools with backpressure or flow multiplication may require different force, pressure and pilot current for operation.

Metering curves
Compensated working section - 3 positions spools
Qin = 150 l/min (*39.6 US gpm*)



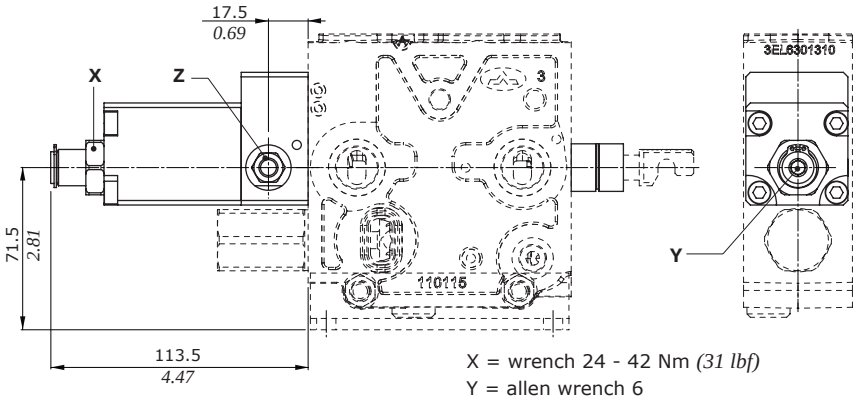
Non-compensated working section
Spool flow vs. Stand-by pressure (margin pressure)



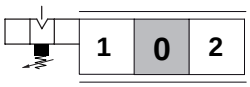
Spool nominal flow @ 7 bar *(102 psi)* stand-by (margin pressure)
C = 5 l/min (*1.3 US gpm*)
D = 10 l/min (*2.6 US gpm*)
V = 25 l/min (*6.6 US gpm*)
Q = 40 l/min (*10.6 US gpm*)
S = 60 l/min (*15.9 US gpm*)
N = 80 l/min (*21.1 US gpm*)
P = 100 l/min (*26.4 US gpm*)

"A" side spool control kit

With friction and center position feeling: type 7FT

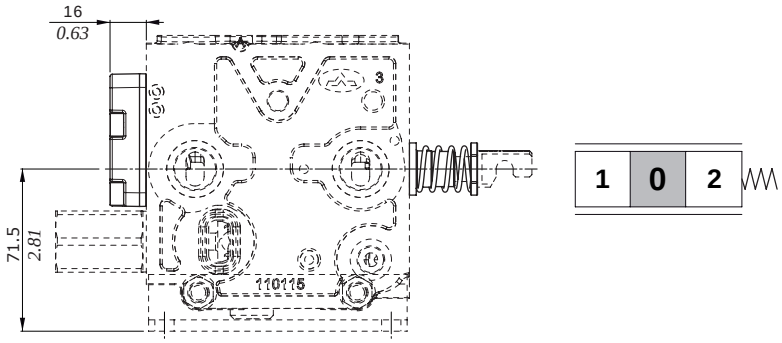


X = wrench 24 - 42 Nm *(31 lbf)*
Y = allen wrench 6
Z = wrench 13 - 24 Nm *(17.7 lbf)*

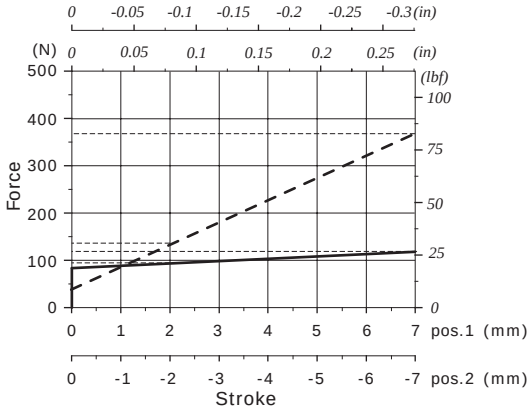


Features
Friction load adjusting . . . . : 20-150 N *(4.5-34 lbf)*
Friction load std. setting . . : 100 N *(22.5 lbf)*
Center tap (more than load) : 100 N *(22.5 lbf)*

With spring return to neutral position: type 8



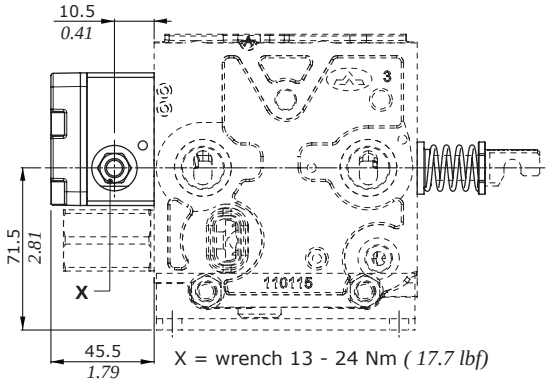
Force vs. Stroke diagram



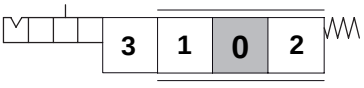
—— = 93.4 N @ 2 mm *(21 lbf @ 0.079 in)*
118 N @ 7 mm *(26.5 lbf @ 0.28 in)*
– – = 132 N @ 2 mm *(29.6 lbf @ 0.079 in)*
368 N @ 7 mm *(82.7 lbf @ 0.28 in)*

With detent in 4th position (pos.3), for floating circuit: type 13

Need working sections type F, G or FV and floating circuit spools type 5.



X = wrench 13 - 24 Nm *(17.7 lbf)*

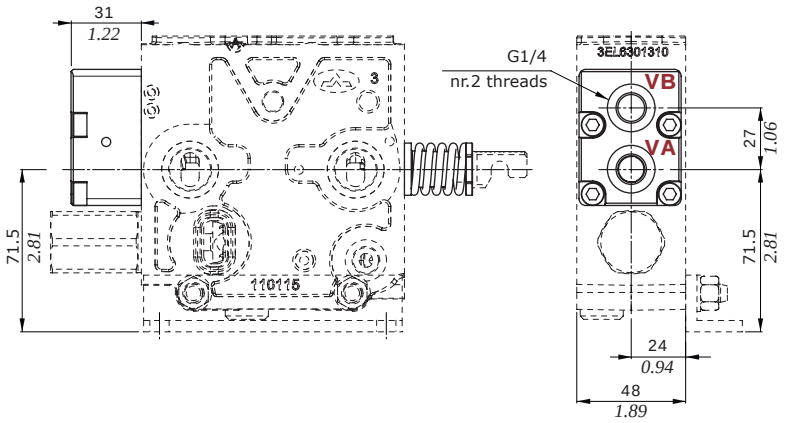


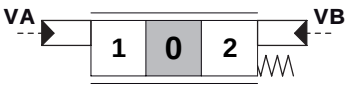
Features
Detent force (±10%). . . . . : 310 N *(70 lbf)*
Release force (±10%) . . . . : 110 N *(24.7 lbf)*

Working section

"A" side spool control kit

Proportional hydraulic controls

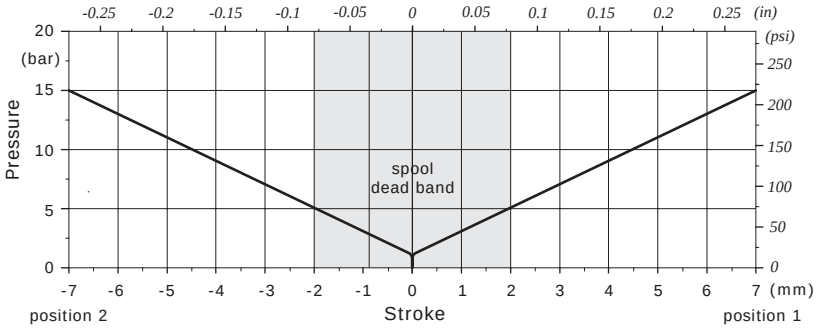




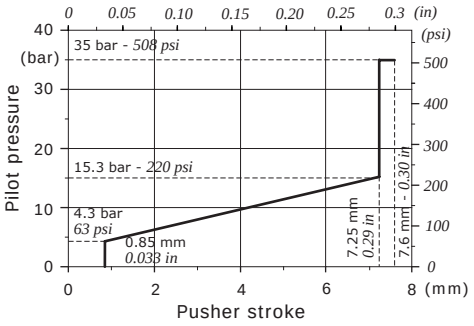
Features

Max. pressure. . . . . : 50 bar (*725 psi*)

Stroke vs. Pressure diagram



Suggested pressure control curve: type 020



Electrohydraulic controls: without on-board electronic

Following specifications are measured with:
- mineral oil of 46 mm²/s - *46 cSt* viscosity at 40°C - *104°F* temperature,
- 20°C - *60°F* environmental temperature,
- standard spools, connecting P⇒A⇒B⇒T ports without flow multiplication,
- 12 VDC and 24 VDC nominal voltage with tolerance ± 10%.

Specifications		Standard spool control type		Regenerative spool control type		Floating spool control type
		8EZ3	8EZ3T	8EZ3CR	(8Y)13EZ3	13EZ3
Electric specifications						
Coil impedance	12 VDC	6.7 Ω	4.7 Ω	6.7 Ω	6.7 Ω	6.7 Ω
	24 VDC	24.7 Ω	20.8 Ω	24.7 Ω	24.7 Ω	24.7 Ω
Max. operating current	12 VDC	1.79 A	1.50 A	1.79 A	1.79 A	1.79 A
	24 VDC	0.97 A	0.75 A	0.97 A	0.97 A	0.97 A
No load current consumption		-	-	-	-	-
Hysteresis max. (1)	external drain	10%	10%	10%	10%	10%
Time response	from 0 ⇒ 100% and from 100% ⇒ 0 of stroke	< 150 ms	< 150 ms	< 150 ms	< 150 ms	< 150 ms
Min. flow control signal	12 VDC	500 mA	500 mA	560 mA	560 mA	220 mA
	24 VDC	250 mA	250 mA	280 mA	280 mA	110 mA
Max. flow control signal	12 VDC	1000 mA	1000 mA	800 mA	800 mA	560 mA
	24 VDC	500 mA	500 mA	400 mA	400 mA	280 mA
Min. Regenerative flow control signal	12 VDC	-	-	-	1100 mA	-
	24 VDC	-	-	-	550 mA	-
Max. Floating/ Regenerative flow control signal	12 VDC	-	-	-	1300 mA	900 mA
	24 VDC	-	-	-	650 mA	450 mA
Dither frequency	high frequency	150 Hz (200 mA)	100 Hz (200 mA)	150 Hz (200 mA)		
Insertion		100%		100%		
Coil insulance		Class F (155°C - *311°F*)	Class H (180°C - *356°F*)	Class F (155°C - *311°F*)		
Connector type		ISO4400 Flying leads Deutsch DTM	AMP JPT Deutsch DT	ISO4400		
Weather protection (connector)		IP65 (type ISO4400) IP69K (type DTM)	IP65 (type JPT) IP69K (type DT)	IP65		
Hydraulic specifications						
Max. pressure		50 bar (*725 psi*)		50 bar (*725 psi*)		
Max. back pressure		2.5 bar (*36 psi*)		2.5 bar (*36 psi*)		

Note (1) For the calculation rules see "Appendix A" on page 71.

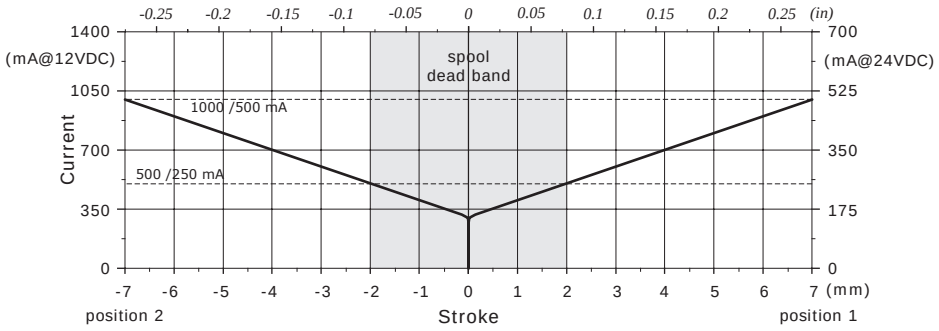
Listed electrohydraulic controls need CED100X or CED400X electronic control unit; for information contact Sales Department.

Working section

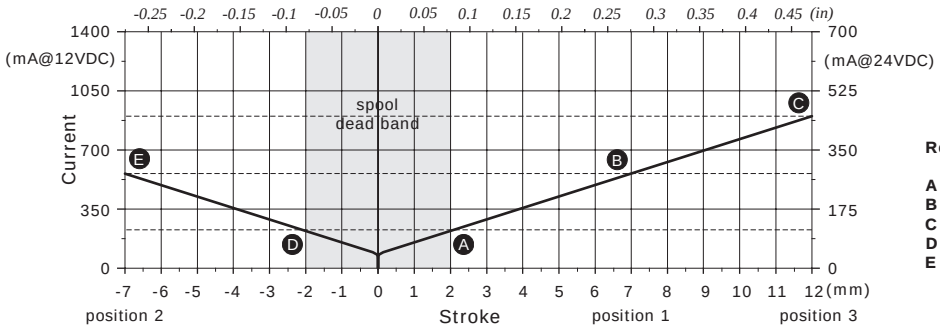
Electrohydraulic controls: without on-board electronic

Spool stroke vs. pilot current diagrams

Types 8EZ3 - 8EZ4 - 8EZ4D - 8EZ3T

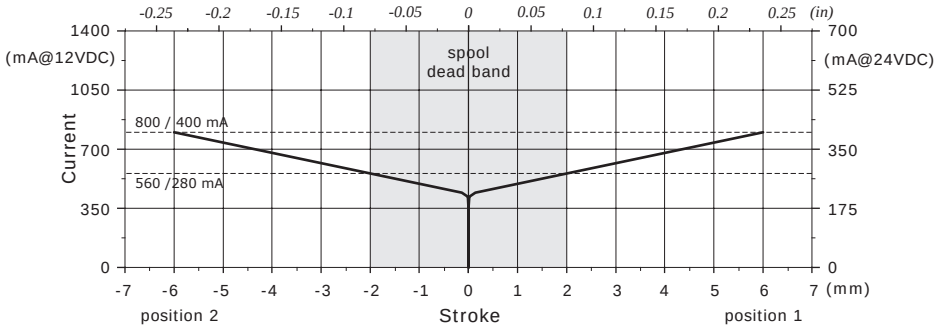


Types 13EZ3 - 13EZ4: for floating circuit

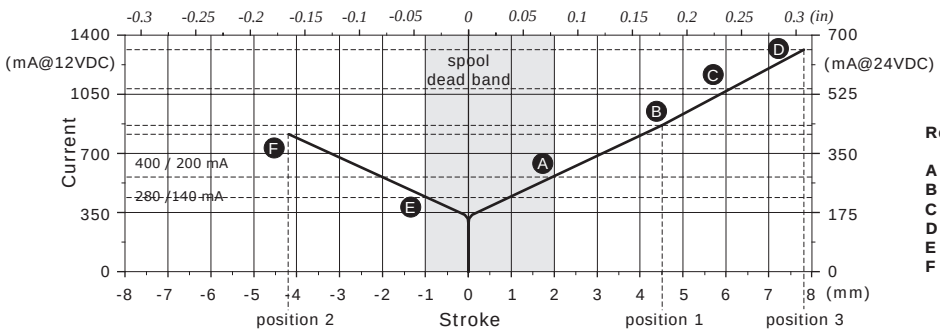


Ref.	Current (mA) 12VDC	24VDC	Stroke mm *(in)*
A	220	110	2 *(0.079)*
B	560	280	7 *(0.276)*
C	900	450	12 *(0.472)*
D	220	110	-2 *(-0.079)*
E	560	280	-7 *(-0.276)*

Type 8EZ3CR: for regenerative circuit



Type (8Y)13EZ3: for regenerative circuit



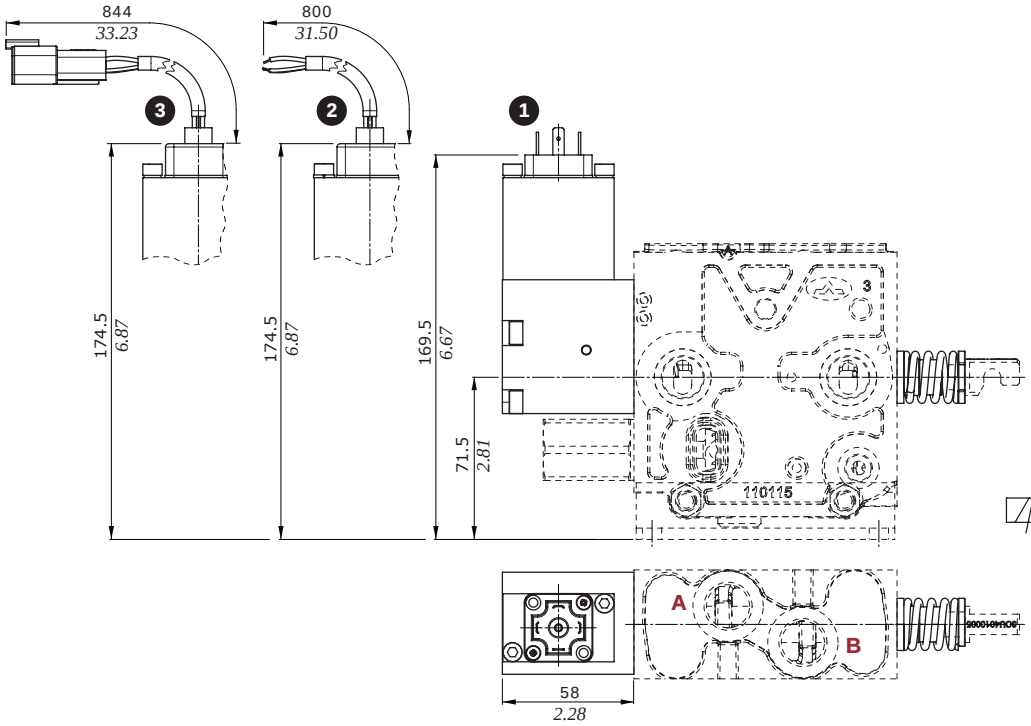
Ref.	Current (mA) 12VDC	24VDC	Stroke mm *(in)*
A	560	280	2 *(0.079)*
B	850	425	4.5 *(0.177)*
C	1100	550	6 *(0.236)*
D	1300	650	7.8 *(0.307)*
E	440	210	-1 *(-0.039)*
F	800	405	-4.2 *(-0.165)*

Electrohydraulic controls: without on-board electronic

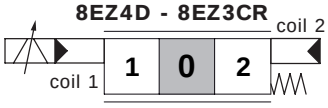
Proportional controls, types 8EZ - 13EZ

Control Types

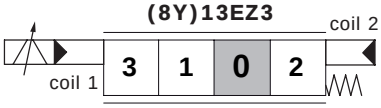
1 : With ISO4400 connector - mating connector code: 2X1001030
2 : With flying leads
3 : With Deutsch DTM04 connector - mating connector Deutsch DTM06 code: 5CON140025



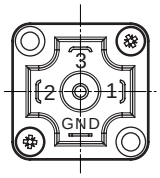
Types
8EZ3 - 8EZ4
8EZ4D - 8EZ3CR



Types
13EZ3 - 13EZ4
(8Y)13EZ3

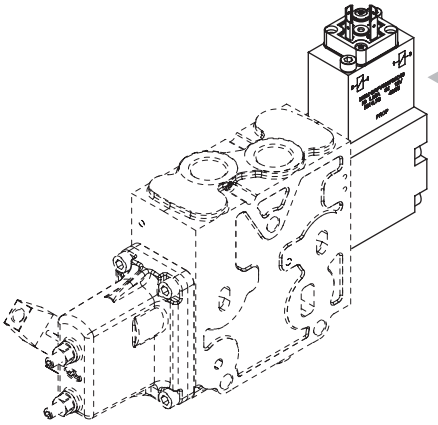


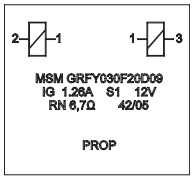
ISO4400 connector



Deutsch DTM04 connector

Connectors pin	Wire colour	Function
1	blue	common (-)
2	red	Coil 2 - Port B
3	green	Coil 1 - Port A
4	-	Plugged





Magnet must be assembled with this side (printed side) facing the section side without O-ring seating

Working section

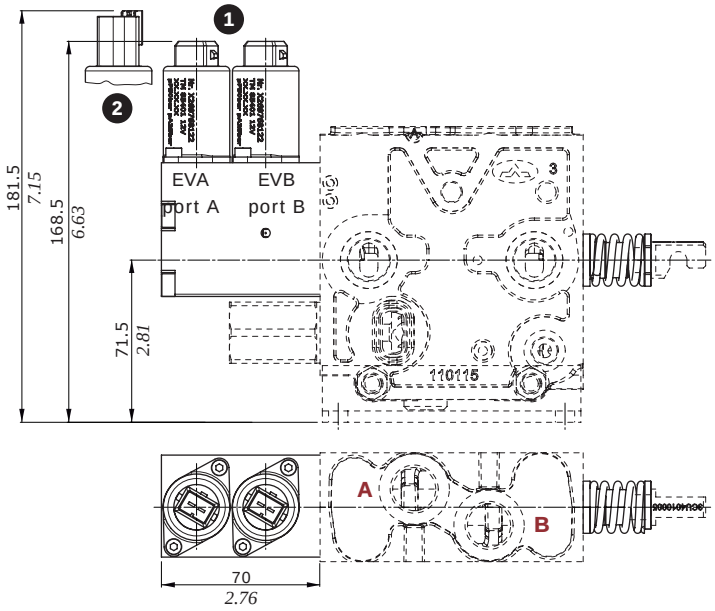
Electrohydraulic controls: without on-board electronic

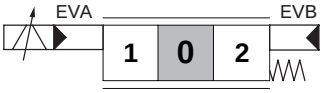
Proportional control type 8EZ3T

Control Types

1 : With AMP JPT connector - mating connector AMP JPT, code: 5CON003

2 : With Deutsch DT04 connector - mating connector Deutsch DT06-2S code: 5CON140031





Electrohydraulic controls: with on-board electronic

Following specifications are measured with:
- mineral oil of 46 mm²/s - *46 cSt* viscosity at 40°C - *104°F* temperature,
- 20°C - *60°F* environmental temperature,
- standard spools, connecting P⇒A⇒B⇒T ports without flow multiplication,
- 12 VDC and 24 VDC nominal voltage with tolerance ± 10%.

Specifications		Spool control type			
		8ZW3F	8ZW3P	8ZR4F	8ZR4P
Electric specifications					
Coil impedance	12 VDC	-	-	-	-
	24 VDC	-	-	-	-
Max. operating current	12 VDC	-	-	-	-
	24 VDC	-	-	-	-
No load current consumption		< 150 mA	< 150 mA	< 150 mA	< 150 mA
Hysteresis max. (1)	external drain	10%	10%	< 1%	< 1%
Time response	from 0 ⇒ 100% and from 100% ⇒ 0 of stroke	< 150 ms	< 150 ms	< 150 ms	< 150 ms
Min. flow control signal	12 VDC	2.2 V (port A) 2.7 V (port B)	47% (port A) 53% (port B)	2.2 V (port A) 2.7 V (port B)	47% (port A) 53% (port B)
	24 VDC				
Max. flow control signal	12 VDC	0.5 V (port A) 4.5 V (port B)	25% (port A) 75% (port B)	0.5 V (port A) 4.5 V (port B)	25% (port A) 75% (port B)
	24 VDC				
Float flow control signal	12 VDC	-	-	-	-
	24 VDC	-	-	-	-
Dither frequency	high frequency	-	-	-	-
Insertion		100%		100%	
Coil insulance		Class F (155°C - *311°F*)		Class F (155°C - *311°F*)	
Connector type		Flying leads - Deutsch DTM		Flying leads - Deutsch DTM	
Weather protection (connector)		IP69K (type DTM)		IP69K (type DTM)	
Hydraulic specifications					
Max. pressure		50 bar (*725 psi*)		50 bar (*725 psi*)	
Max. back pressure		2.5 bar (*36 psi*)		2.5 bar (*36 psi*)	

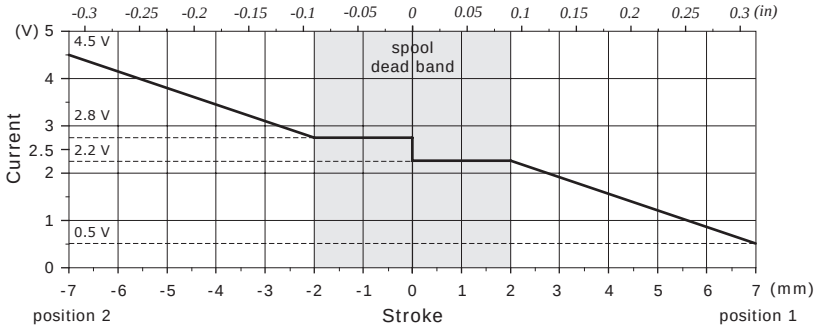
Note (1) For the calculation rules see "Appendix A" on page 71.

Working section

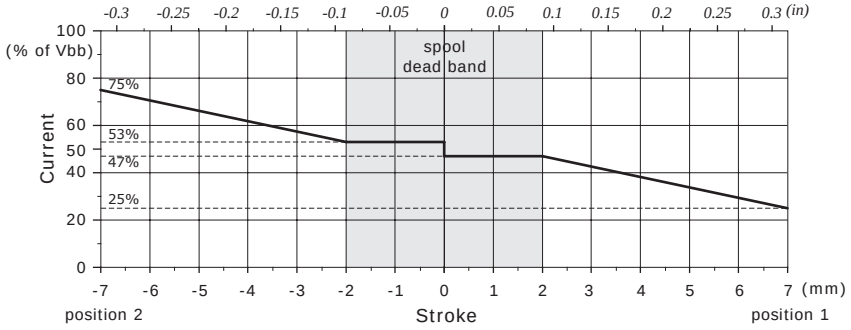
Electrohydraulic controls: with on-board electronic

Spool stroke vs. pilot current diagrams

Types 8ZW3F - 8ZR4F



Types 8ZW3P - 8ZR4P

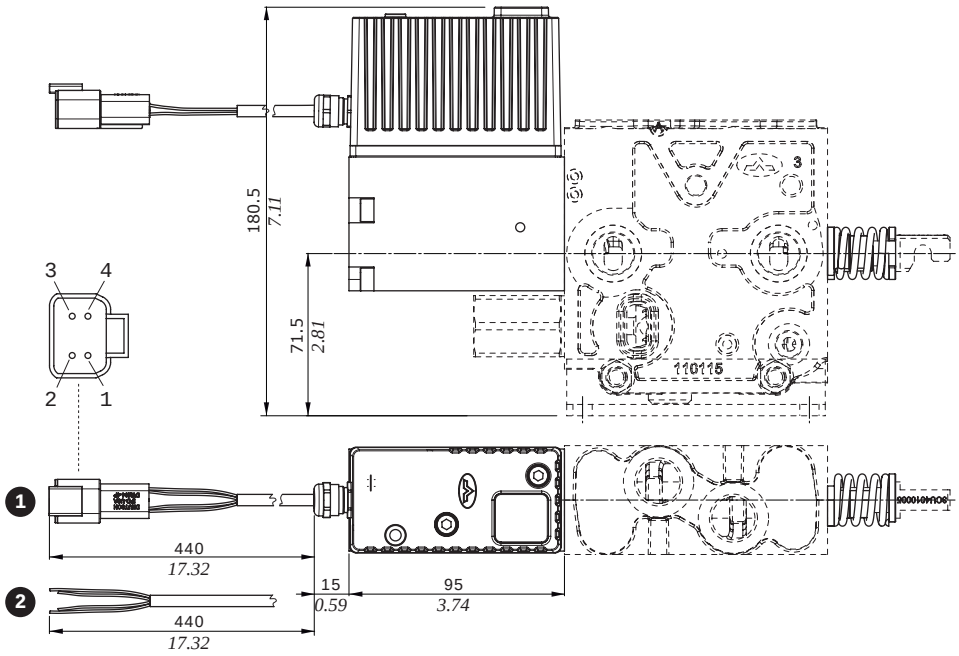


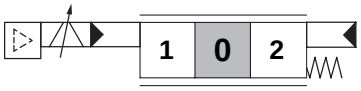
Electrohydraulic controls: with on-board electronic

Proportional controls type 8ZW3 (all configurations)

Control Types

1 : With Deutsch DTM04 connector - mating connector Deutsch DTM06 code: 5CON140025
2 : With flying leads



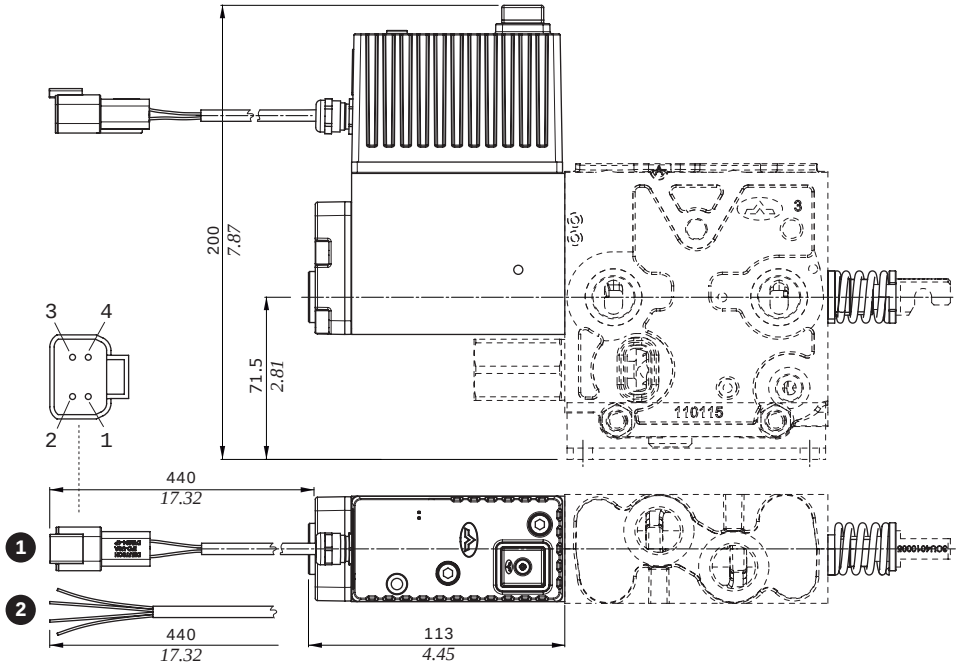


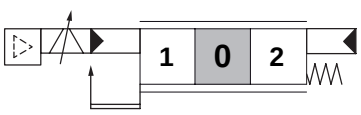
Pin	Wire colour	Function
1	white	RS232 RX joystick
2	brown	Vbb
3	yellow	GND
4	green	RS232 TX

Proportional controls type 8ZR4 with feedback (all configurations)

Control Types

1 : With Deutsch DTM04 connector - mating connector Deutsch DTM06 code: 5CON140025
2 : With flying leads



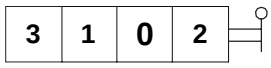


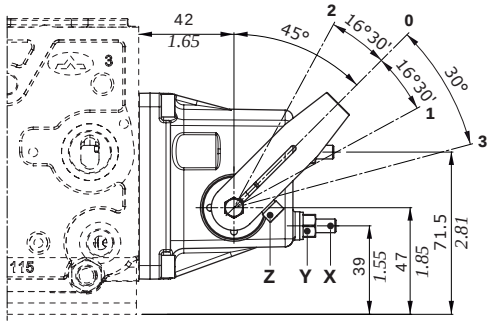
Pin	Wire colour	Function
1	white	Joystick
2	brown	Vbb
3	yellow	GND
4	green	Alarm

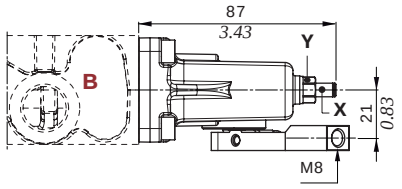
Working section

"B" side spool control kit

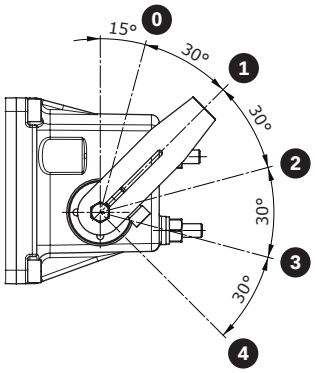
Aluminium lever box; type L





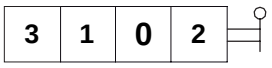


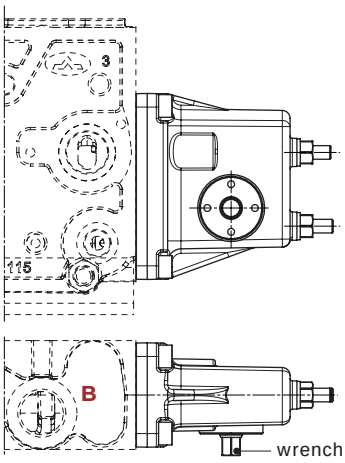
X = allen wrench 3
Y = wrench 10
9.8 Nm - *7.2 lbf*
Z = allen wrench 4
6.6 Nm - *4.9 lbf*



Lever assembly position
See page 20 for specification in working section description

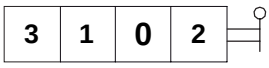
Aluminium lever box, without lever; type LN

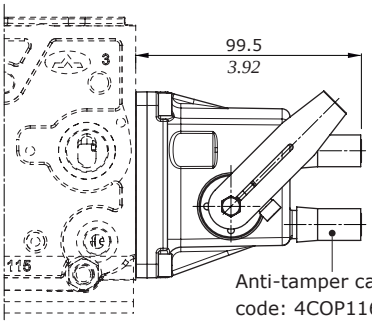




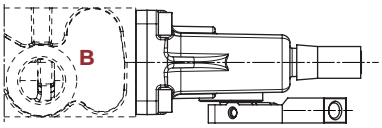
Dimensions are the same of type **L**

Alum. lever box, with anti-tamper cap; type LZ

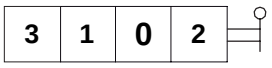


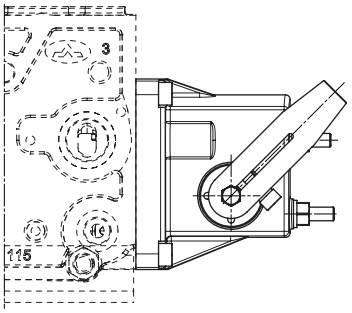


Other dimensions and lever positions are the same of type **L**

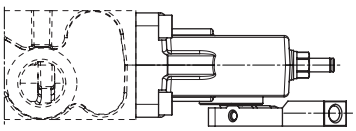


Cast iron lever box; type LG

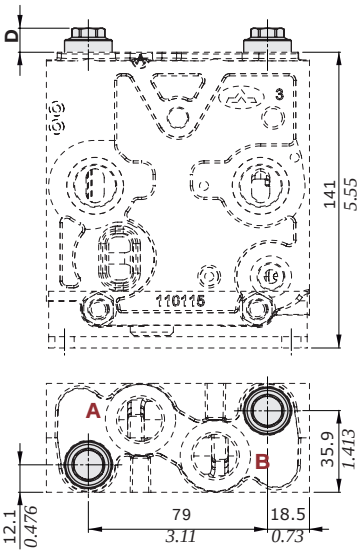




Dimensions and lever positions are the same of type **L**

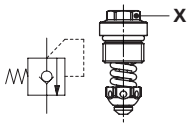


Port valves

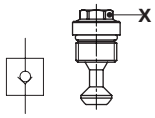


Valve type	Dim. D	
	mm	*in*
U	10.5	*0.41*
C	10.5	*0.41*
UT	7.5	*0.30*

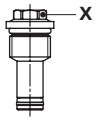
Type U
antishock valve



Type C
anticavitation valve

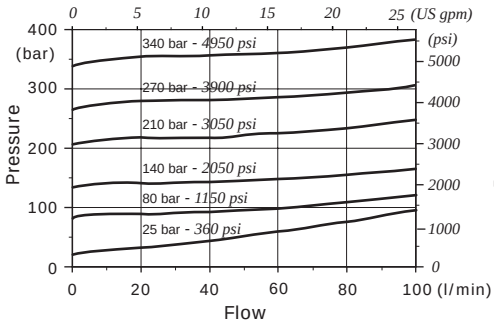


Type UT
valve blanking plug

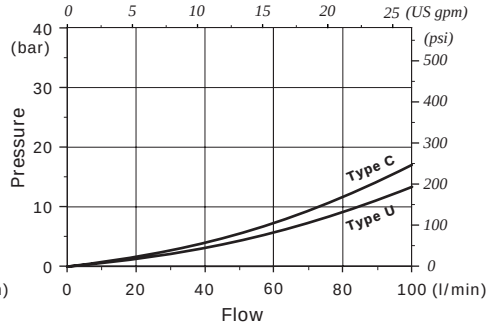


X = wrench 13
24 Nm - *17.7 lbf*

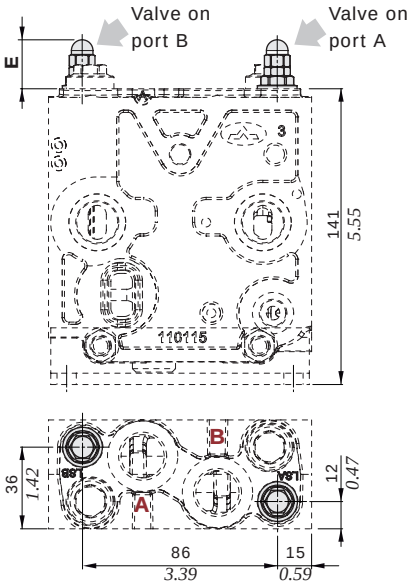
Type U, setting example
(10 l/min - *2.6 Us gpm*)



Types U-C, pressure drop
(in anticavitation)

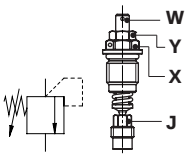


L.S. port relief valves

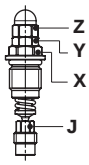


Valve type	Dim. E	
	mm	*in*
LSD	21.5	*0.85*
LSH	17	*0.67*
LSZ	34	*1.34*

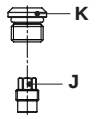
Type LSH
with lock arrangement



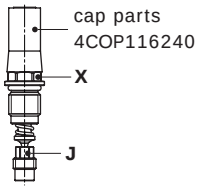
Type LSD
with blind nut



Type ST
valve blanking plug

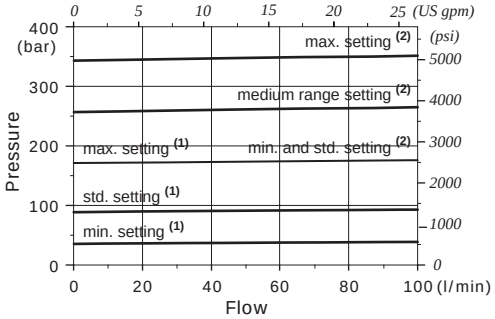


Type LSZ
with anti-tamper cap



X = wrench 13 / 42 Nm - *31 lbf*
Y = wrench 10 / 9.8 Nm - *7.2 lbf*
W = allen wrench 3
Z = wrench 10 / 9.8 Nm - *7.2 lbf*
J = wrench 7 / 24 Nm - *17.7 lbf*
K = allen wrench 5 / 24 Nm - *17.7 lbf*

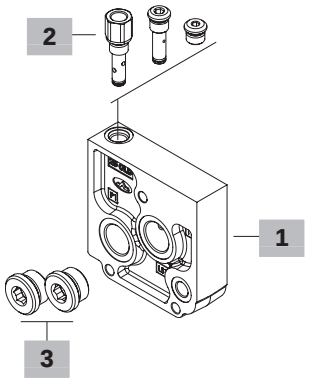
Pressure vs. flow diagram
(1) = valve range 40-180 bar (*580-2600 psi*)
(2) = valve range 180-350 bar (*2600-5000 psi*)



Outlet section parts ordering codes

DPC130/RD 3 1 - .....

1 2 3 4



1 Outlet section body * page 39 .

TYPE	CODE	DESCRIPTION
RF	3FIA731000	Without ports
RC	3FIA731310	With ports P1 and T1
RD	3FIA731320	With ports P1, T1 and LS1

2 Drain options page 39

TYPE	CODE	DESCRIPTION
1	XTAP517460	Internal drain; to use with mechanical controls
2	XTAP217160	Internal drain; to use with hydraulic controls
3	XCAR119611*	External drain G1/4; for electrohydralic controls

3 Ports options *

TYPE	CODE	DESCRIPTION
0	-	Without ports; for RF section
1	3XTAP732200	G3/4 plug (nr.2); ports P1 and T1 pluggd
2	3XTAP732200	G3/4 plug (nr.1); port P1 plugged and T1 open
3	3XTAP732200	G3/4 plug (nr.1); port P1 open and T1 plugged
4	-	Ports P1 and T1 open

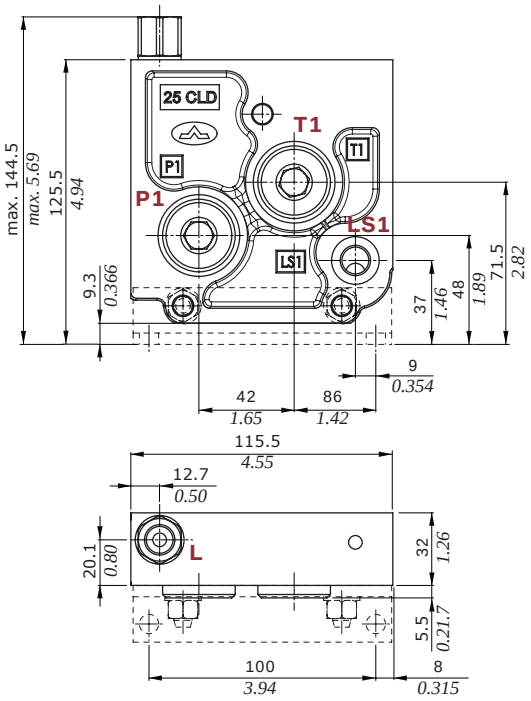
4 Section threading

Specify only if it is different from BSP standard (see page 5).

NOTE (*): *Codes are referred to **BSP** thread.*

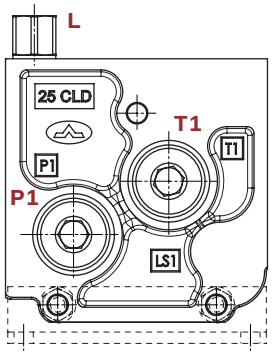
Dimensions and hydraulic circuit

Type RD31
With ports P1, T1 (plugged) and LS1.
External drain

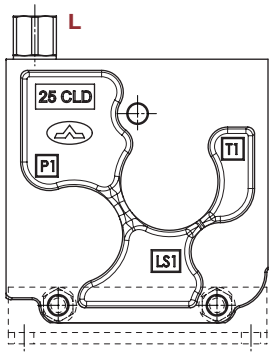


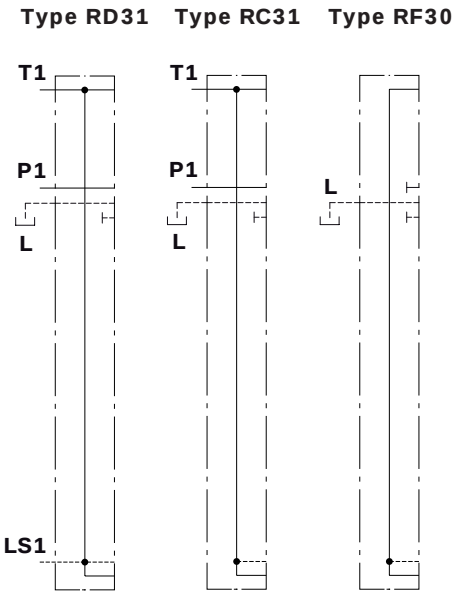
Note: The port LS1 must not be plugged (in case it's not used it has to be connected to tank).

Type RC31
With ports P1, T1 (plugged).
External drain

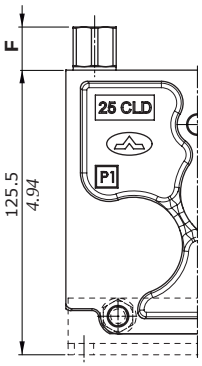


Type RF30
Without ports, external drain



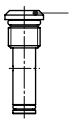


Drain options



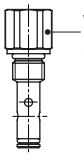
Option	Dim. F	
	mm	*in*
1	3.5	*0.138*
2	3.5	*0.138*
3	19	*0.75*

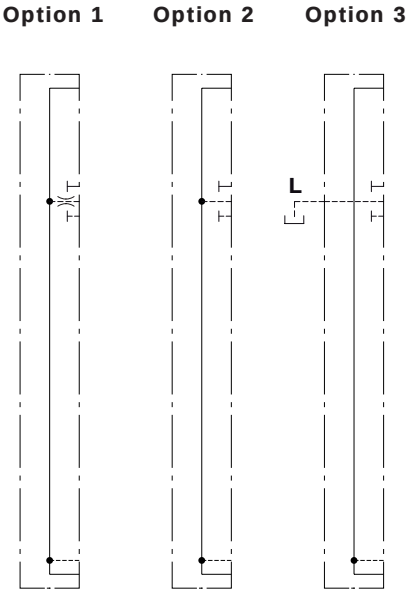
Option 1
internal drain for
mechanical controls



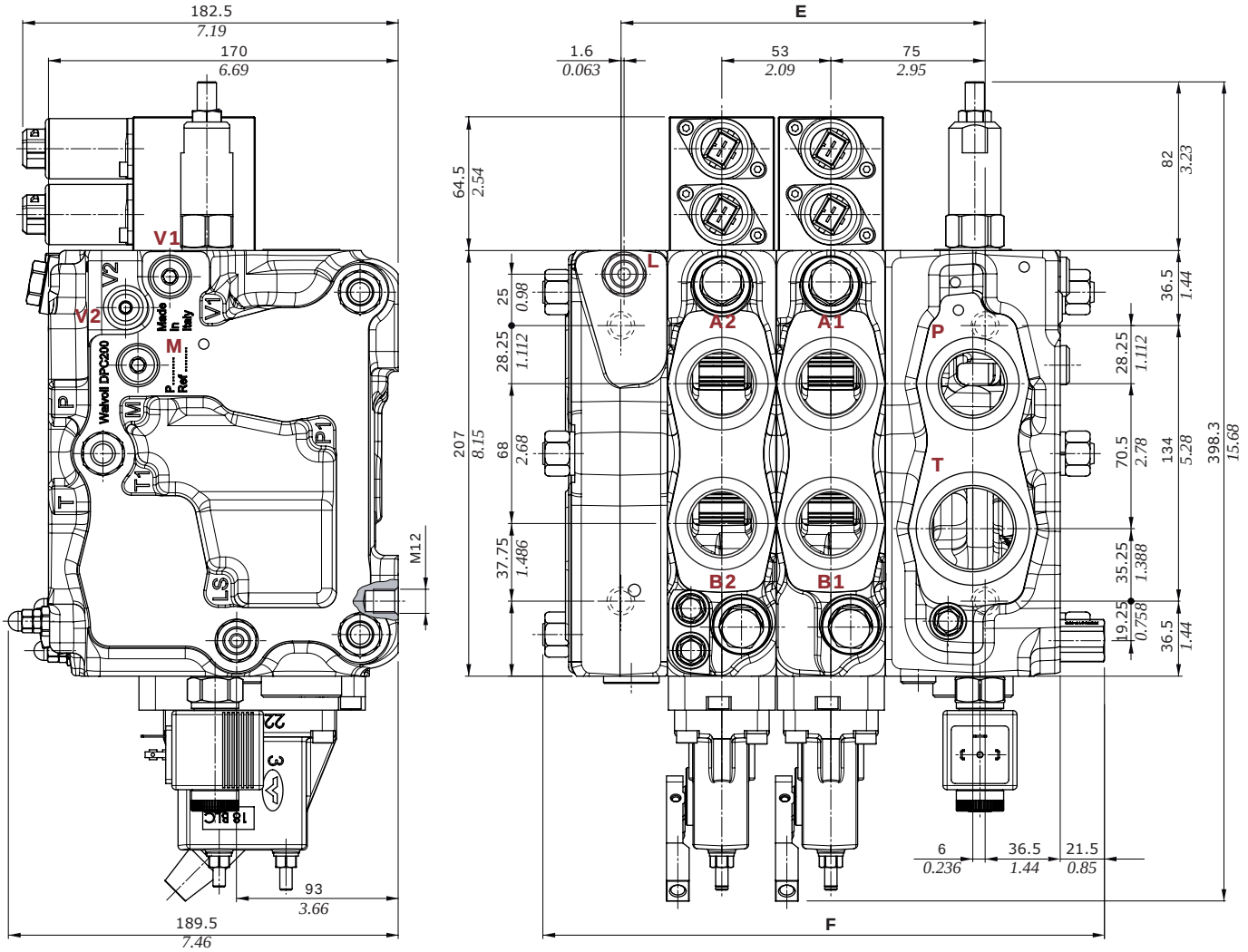
Option 2
internal drain for
hydraulic controls

Option 3
external drain for
electrohydraulic controls





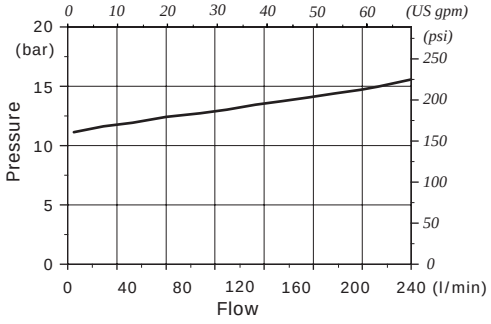
Dimensional data and performance



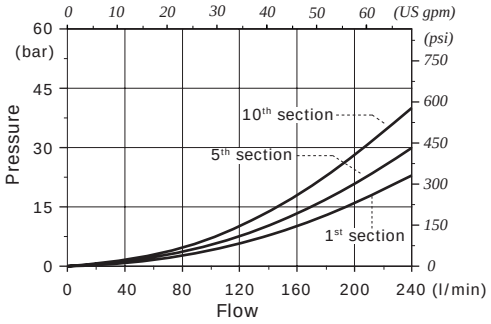
TYPE	E		F		Weight	
	mm	in	mm	in	Kg	lb
DPC200/1	177	6.97	220	8.66	39.5	87.1
DPC200/2	230	9.06	273	10.75	53.8	117
DPC200/3	283	11.14	326	12.83	68.1	150
DPC200/4	336	13.23	379	14.92	82.4	182
DPC200/5	389	15.31	432	17.01	96.7	213

TYPE	E		F		Weight	
	mm	in	mm	in	Kg	lb
DPC200/6	442	17.40	485	19.09	111	245
DPC200/7	495	19.49	538	21.18	125	276
DPC200/8	548	21.57	591	23.27	140	308
DPC200/9	601	23.66	644	25.35	154	339
DPC200/10	654	25.75	697	27.44	168	371

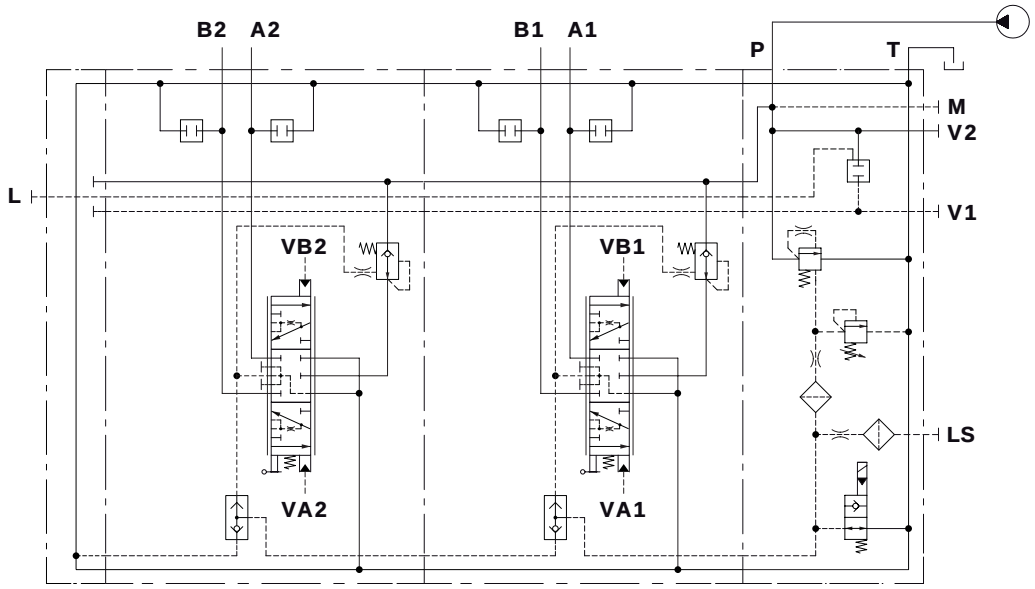
P⇒T Pressure drop inlet compensator (margin pressure)



A(B)⇒T pressure drop (standard spool @ max.stroke)

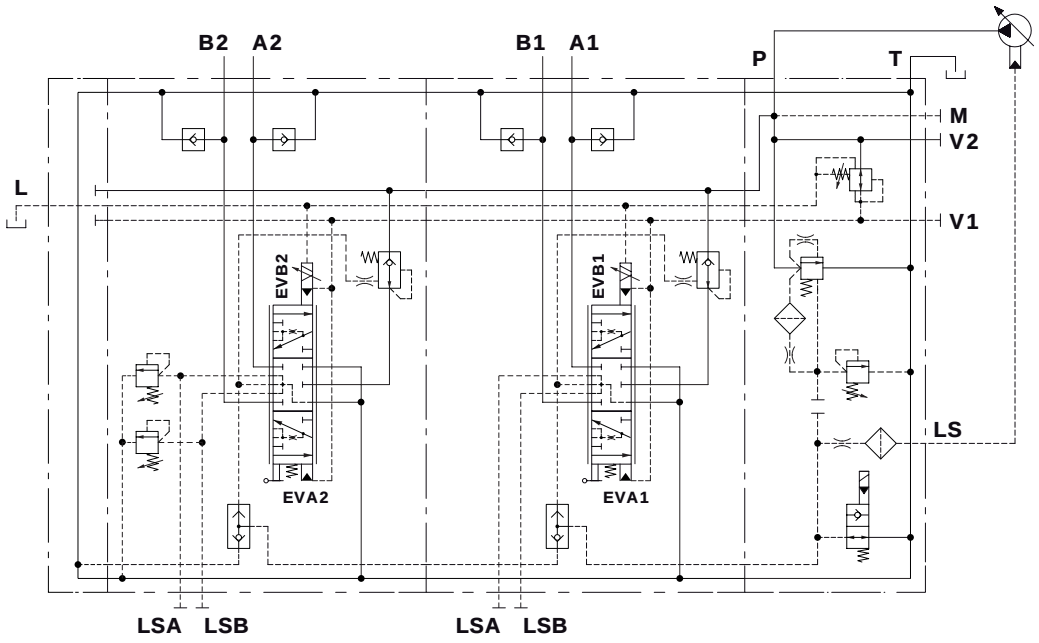


Open center configuration example



Open center circuit and proportional hydraulic control with lever, with unloader valve and port valves arrangement

Closed center configuration example

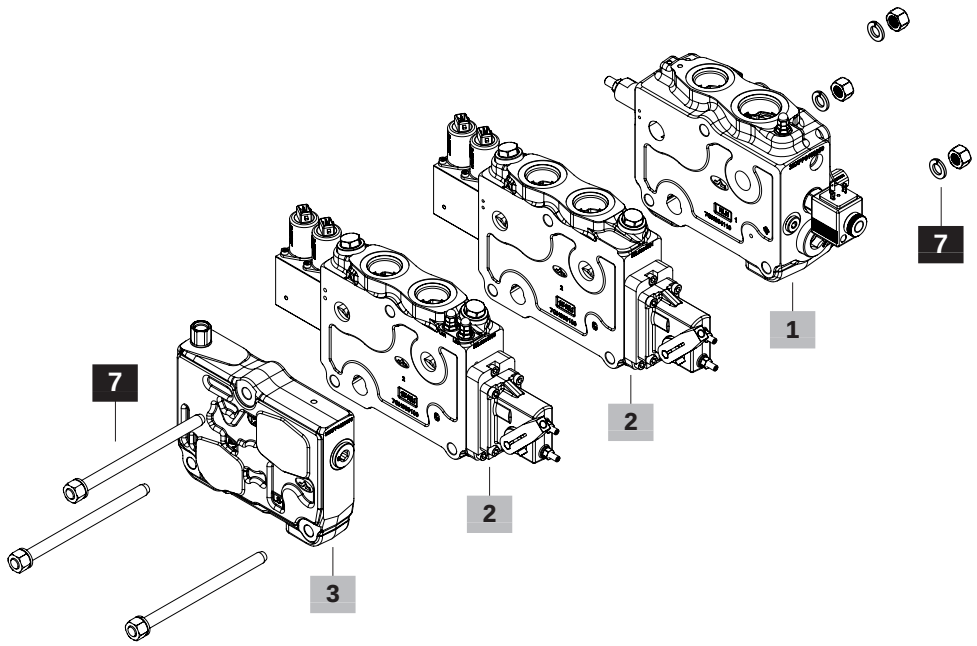


Closed center circuit and one-side proportional electrohydraulic control with lever, with unloader valve and pressure reducing valve, anticavitation valves on all ports, L.S. relief valves on 2th section, LSA and LSB ports, internal pilot and external drain

Complete sections ordering codes

DPC200/2/ BR2-10(H220\ELP) / C21-104(200\200)-8EZ3TLG1.U100U320 /..... / RF30-.....-12VDC-<SB20-CVN>

- Valve type
- Nr. of working sections
- 1
- 2
- 3
- 4
- 5
- 6
- The valve is supplied painted, as standard, with one coat of Primer black antirust paint



1 Inlet section * page 44

Closed Center circuit
TYPE: **DPC200/BR2-10(H220\ELP)-12VDC** CODE: 638203001
DESCRIPTION: With 3-way compensator, L.S. pressure relief valve and 12VDC solenoid operated unloader valve, with P-T-LS ports open
TYPE: **DPC200/BRF2-30(H220\ELP)-12VDC** CODE: 638203002
DESCRIPTION: Without compensator, with L.S. pressure relief valve and 12VDC solenoid operated unloader valve, with P-T-LS ports open
Open Center circuit
TYPE: **DPC200/BR1-10(H220\ELP)-12VDC** CODE: 638203003
DESCRIPTION: With 3-way compensator, L.S. pressure relief valve and 12VDC solenoid operated unloader valve, with P-T-LS ports open

2 Working section * page 50

TYPE: **DPC200/C10-104(200\200)-8EZ3TLG1-12VDC**
CODE: 638103001
DESCRIPTION: With 2-way compensator, double acting spool for 200 l/min *(52.8 US gpm)*, prop. electrohydraulic control with lever.
TYPE: **DPC200/F32-504(200\200)-8EZ3TLG1.ULTULT.STST-12VDC**
CODE: 638103002
DESCRIPTION: With 2-way compensator, floating spool for 200 l/min *(52.8 US gpm)*, prop. electrohydraulic control with lever, arranged for "UL" size valves and L.S. relief valves, with LSA-LSB ports

3 Outlet section * page 63

For valve with mechanical control
TYPE: **DPC200/RF10** CODE: 638303001
DESCRIPTION: Without ports
For valve with hydraulic control
TYPE: **DPC200/RF20** CODE: 638303002
DESCRIPTION: Without ports, internal drain
TYPE: **DPC200/RD21** CODE: 638303004
DESCRIPTION: With port P1, T1 (plugged) and LS1, internal drain
For valve with electrohydraulic control
TYPE: **DPC200/RF30** CODE: 638303003
DESCRIPTION: Without ports, external drain L
TYPE: **DPC200/RD31** CODE: 638303005
DESCRIPTION: With port P1, T1 (plugged) and LS1, external drain L

4 Valve threading

Specify threading only if it is different from BSP standard (see page 5).
For valve with ISO 6162-1 type 1 flange connection digit: **FS3-M(BSP).**

5 Voltage

Specify the voltage of electric devices.

6 Pump stand-by

This option must be specified only if valve is configured for Closed Center circuit, without local compensation and if the value is different from 11.5 bar (*167 psi*)

7 Assembling kit

CODE	CODE	DESCRIPTION
With inlet section type		
Type BR	**Type BRF**	
5TIR112215	5TIR112175	For 1 working section valve
5TIR112268	5TIR112228	For 2 working sections valve
5TIR112321	5TIR112281	For 3 working sections valve
5TIR112374	5TIR112334	For 4 working sections valve
5TIR112427	5TIR112387	For 5 working sections valve
5TIR112480	5TIR112440	For 6 working sections valve
5TIR112533	5TIR112493	For 7 working sections valve
5TIR112586	5TIR112546	For 8 working sections valve
5TIR112639	5TIR112599	For 9 working sections valve
5TIR112692	5TIR112652	For 10 working sections valve

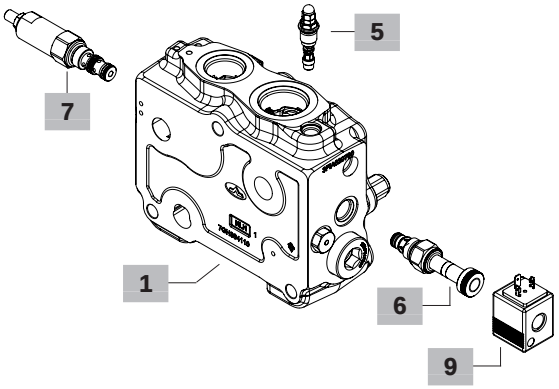
NOTE (*): *Codes are referred to **BSP** thread.*

Inlet section parts ordering codes

Valve setting (bar)

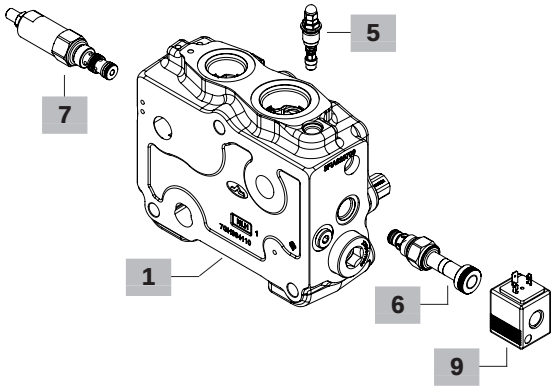
DPC200 / BR1 - 1 0 (H220\ELP\.....\SB15)-.....-12VDC

1 2 3 5 6 7 4 8 9



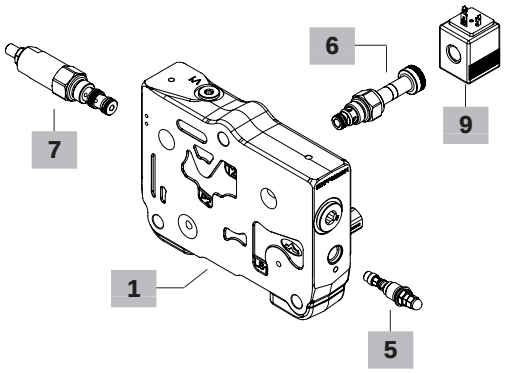
DPC200/BR2 - 1 0 (H220\ELP\.....)-.....-12VDC

1 2 3 5 6 7 8 9

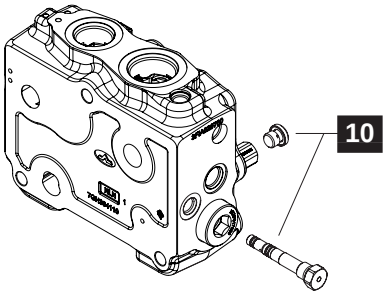


DPC200/BRF2 - 3 0 (H220\ELP\.....)-.....-12VDC

1 2 3 5 6 7 8 9



Circuit conversion kit



Inlet section parts ordering codes

1 Inlet section body kit* page 46

Open Center circuit

TYPE: **DPC200/BR1-1** CODE: 5FIA620302
DESCRIPTION: With compensator, pressure reducing valve arrangement, P-T-LS ports (LS plugged), arranged for unloader valve

TYPE: **DPC200/BR1-1-FS3-M(BSP)** CODE: 5FIA620303
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connector

Closed Center circuit

TYPE: **DPC200/BR2-1** CODE: 5FIA620304
DESCRIPTION: With compensator, pressure reducing valve arrangement, P-T-LS ports, arranged for unloader valve

TYPE: **DPC200/BR2-1-FS3-M(BSP)** CODE: 5FIA620305
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.

TYPE: **DPC200/BRF2-3** CODE: 5FIA620306
DESCRIPTION: Without compensator, with pressure reducing valve arrangement, P-T-LS ports, arranged for unloader valve

TYPE: **DPC200/BRF2-3-FS3-M(BSP)** CODE: 5FIA620307
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.

2 Port arrangement

TYPE	DESCRIPTION
1	With upper T and P ports (for section BR)
3	With side T and P ports (for section BRF)

3 Port options

TYPE	DESCRIPTION
0	Ports P and T open
1	Port P open, port T plugged

4 Compensator stanb-by

Specify value only if it's different from the standard (11.5 bar / *167 psi*): for Open Center sections

5 L.S. relief valve page 49

Standard setting is referred to 10 l/min - *2.6 US gpm* flow.

TYPE	CODE	DESCRIPTION
LSD	XCAR126215	With blind nut, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126213	As previous, range 180-350 bar / *2600-5100 psi* std. setting 180 bar / *2600 psi*
LSH	XCAR126216	With locked arrangement, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126217	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
LSZ	5CAR126221	With anti-tamper cap, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	5CAR126219	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
ST	5KIT126210	Relief valve blanking plug

6 Solenoid operated unloading valve page 48

Needs coil type BER: see chapter 9

TYPE	CODE	DESCRIPTION
ELN	0EC08002031	Without emergency override
ELP	0EC08002033	With push-button emergency override
ELT	0EC08002035	With "twist & push" emergency override
ELV	0EC08002034	With screw type emergency override
LT	XTAP225320	Unloading valve blanking plug

7 Pressure reducing valve page 48

TYPE	CODE	DESCRIPTION
-	4AC9539900	Pressure reducing valve, 32 bar / *464 psi*
RT	3XTP3535100	Valve blanking plug (SAE 08/3)

8 Section threading

Specify threading only if it is different from BSP standard.
For section with ISO 6162-1 type 1 flange connection digit: **FS3-M(BSP).**

9 Coil

TYPE	CODE	DESCRIPTION
12VDC	4SLE001200	Coil type **BER,** ISO4400 conn., 12VDC

For complete available coils list see page 68.

10 Circuit conversion kit

These kits ara available only for BR section; not for BRF section.

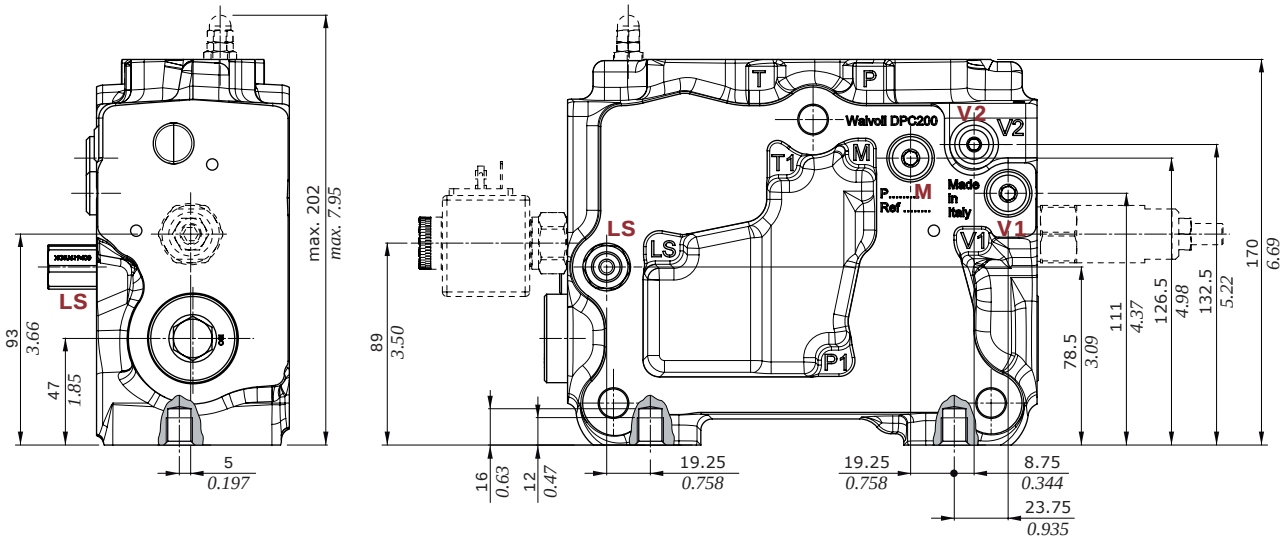
CODE	DESCRIPTION
XSTR117790	For circuit conversion from Open Center to Closed Center
5KIT200310*	Kit for circuit conversion from Closed Center to Open Center

NOTE (*): *Codes are referred to **BSP** thread.*

Inlet section

Dimensions and hydraulic circuit

Example of BR section type

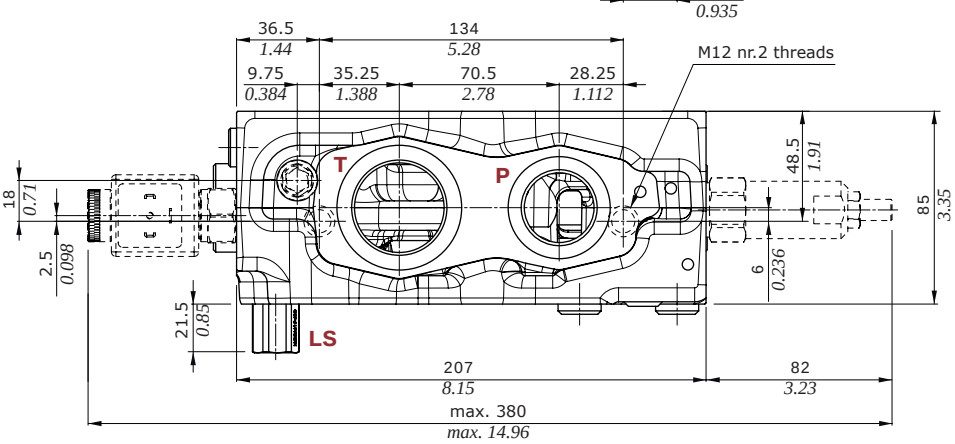


Auxiliary ports specification

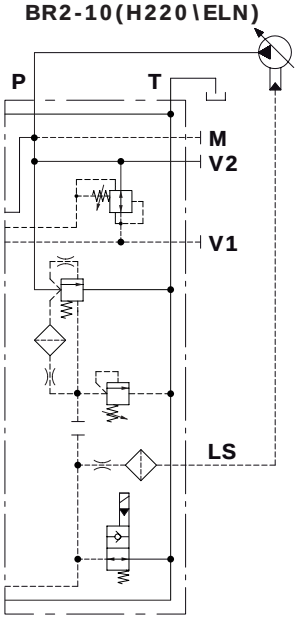
M = G1/4 pressure gauge connection

V1 = G1/4 pilot pressure port (Pmax = 30 bar / *435 psi*) for hydraulic pilot control valves feeding (P⇒OUT)

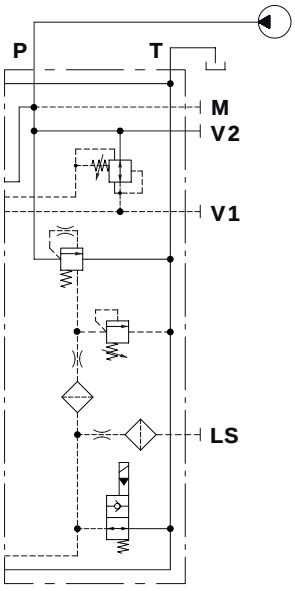
V2 = M14x1.5 pilot pressure port for electrohydraulic controls optional feeding (Pmax = 315 bar / *4600 psi*) (P⇒IN): needs G1/4 joint, code 5GIU519611.



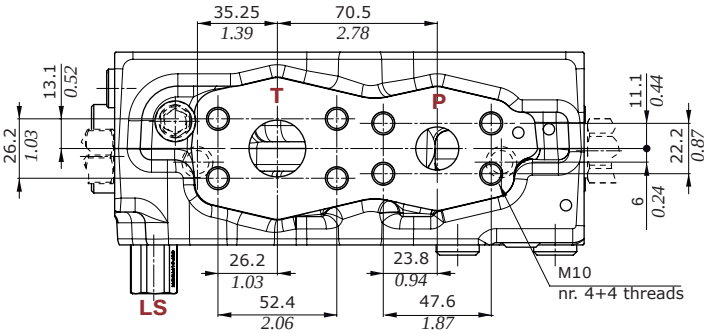
Closed center configuration example BR2-10(H220\ELN)



Open center configuration example BR1-10(H220\ELN)

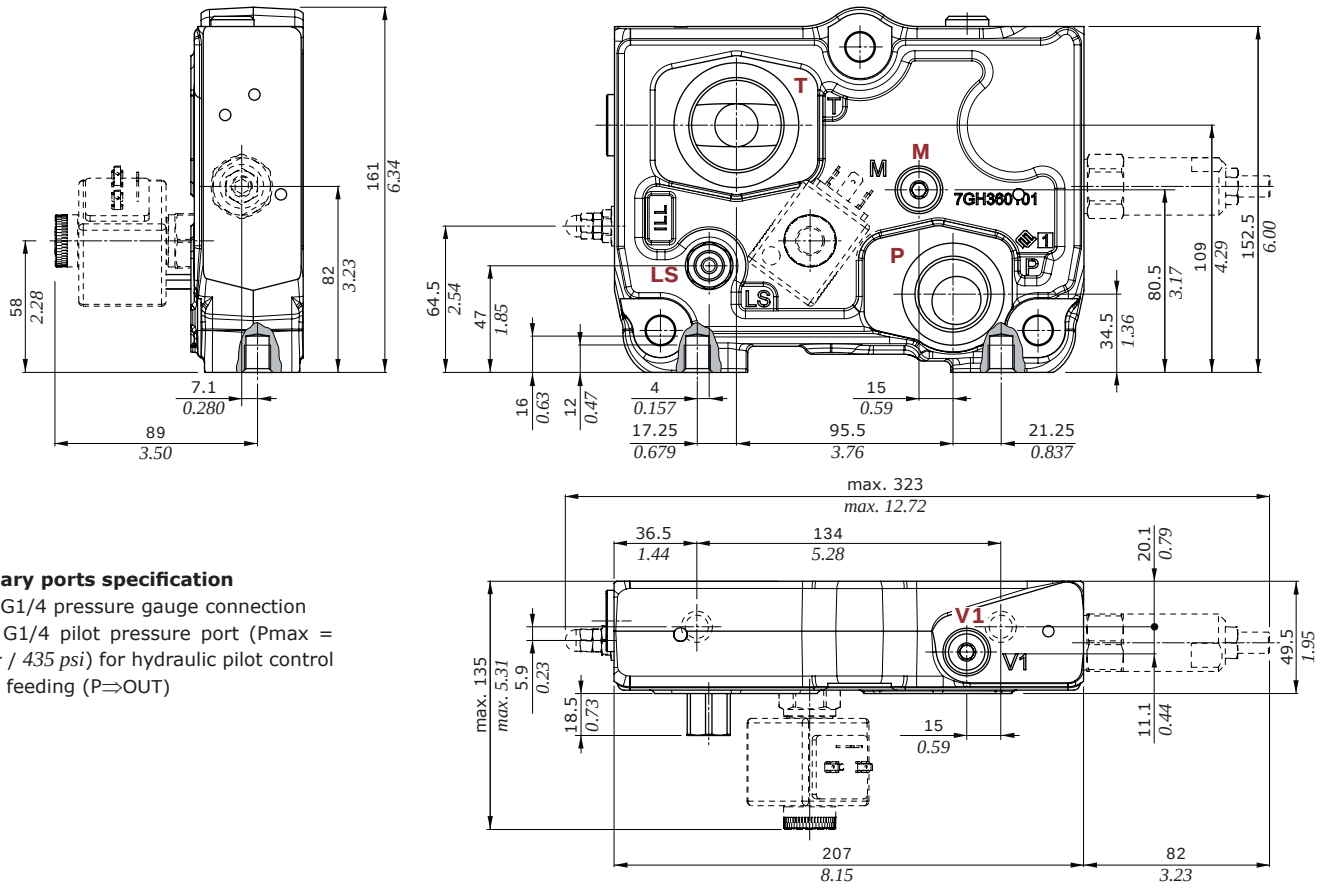


FS3-M(BSP) optional connection



Dimensions and hydraulic circuit

Example of BRF section type

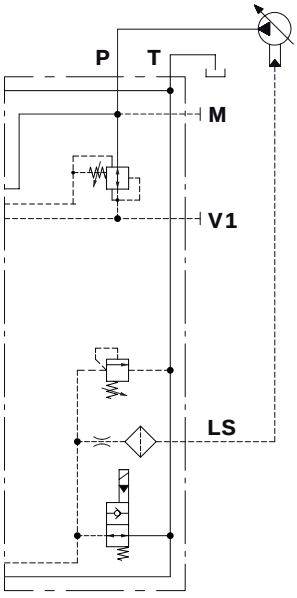


Auxiliary ports specification

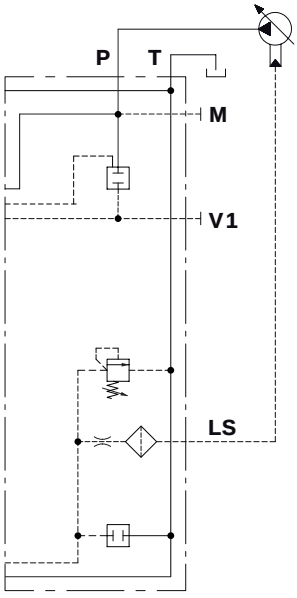
M = G1/4 pressure gauge connection

V1 = G1/4 pilot pressure port (Pmax = 30 bar / *435 psi*) for hydraulic pilot control valves feeding (P⇒OUT)

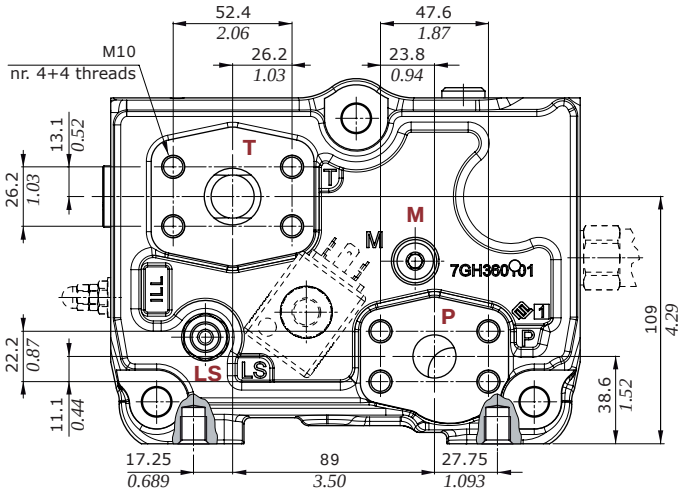
Configuration BRF2-30(H220\ELN)



Configuration BRF2-30(H220\ELT\RT)

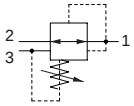


FS3-M(BSP) optional connection

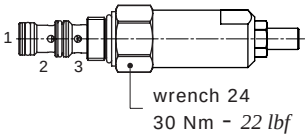


Inlet section

Pressure reducing valve

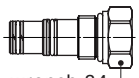


Pressure reducing valve



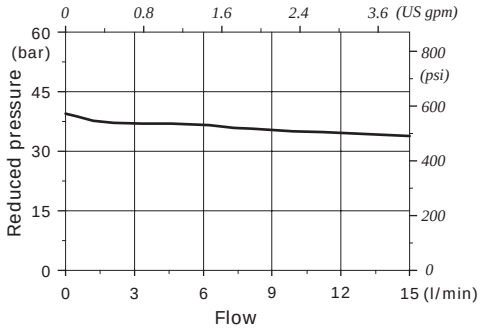
wrench 24
30 Nm - *22 lbf*

Type RT
valve blanking plug

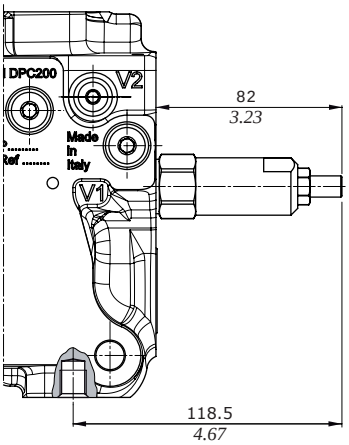


wrench 24
30 Nm - *22 lbf*

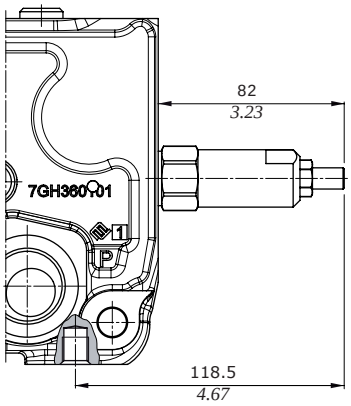
Reduced pressure vs. Flow



On BR section



On BRF section

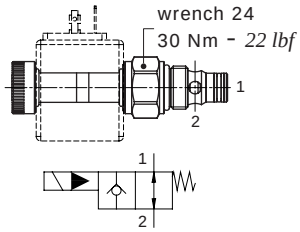


Features

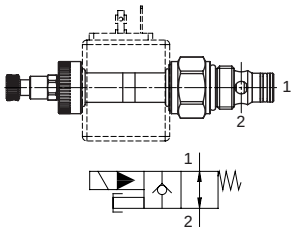
Reduced press. range . : from 3.5 to 35 bar
: *from 50 to 500 psi*
Max. inlet pressure . . . : 420 bar - *6100 psi*
Nominal flow . . . . . : 15 l/min - *4 US gpm*

Solenoid operated unloading valve

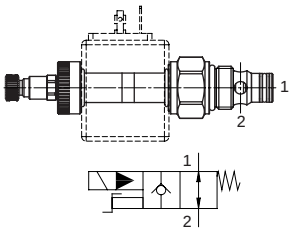
Type ELN: without emergency



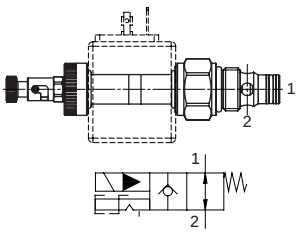
Type ELP: push button type



Type ELV: screw type

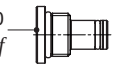


Type ELT: "push & twist" type

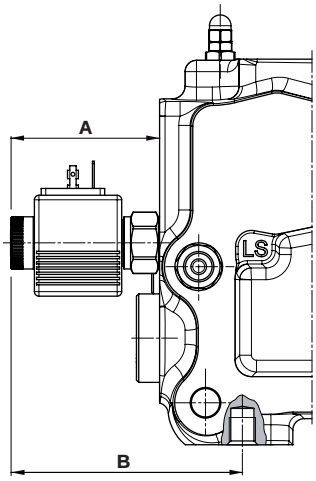


LT: valve blanking plug

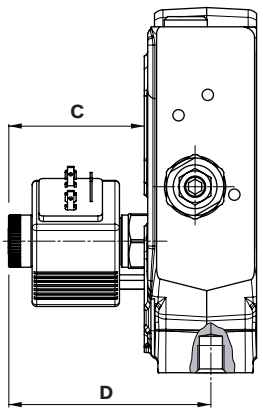
allen wrench 10
24 Nm - *17.7 lbf*



On BR section



On BRF section



Features

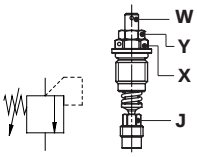
Max. flow . . . . . : 40 l/min - *10.6 US gpm*
Max. pressure. . . . . : 380 bar - *5500 psi*
Internal leakage . . . . . : 0.25 cm³/min @ 210 bar
0.015 in³/min @ 3050 psi

For coil features and options see coil **BER** at page 68.

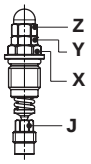
Valve type	BR section				BRF section			
	A		B		C		D	
	mm	*in*	mm	*in*	mm	*in*	mm	*in*
ELN	65.5	*2.58*	102	*4.02*	60	*2.36*	89	*3.50*
ELP	88.5	*3.48*	125	*4.92*	83	*3.27*	112	*4.41*
ELV	88.5	*3.48*	125	*4.92*	83	*3.27*	112	*4.41*
ELT	91	*3.58*	127.5	*5.02*	85.5	*3.37*	114.5	*4.51*

L.S. pressure relief valve

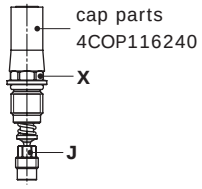
Type LSH
with lock arrangement



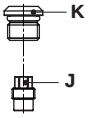
Type LSD
with blind nut



Type LSZ
with anti-tamper cap



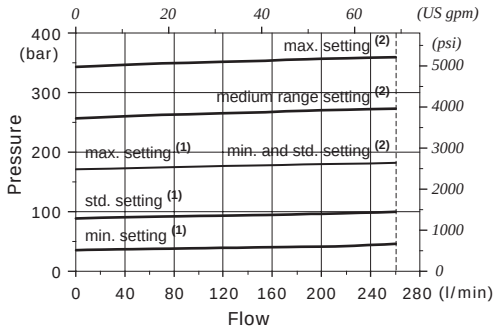
Type ST
valve blanking plug



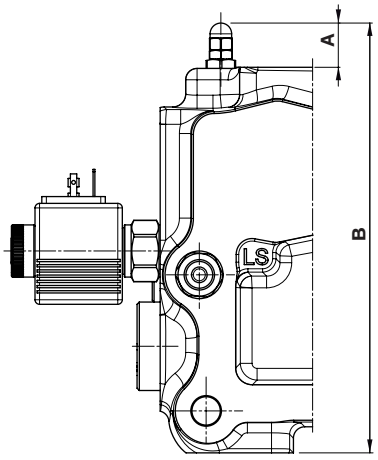
X = wrench 13 / 42 Nm - *31 lbf*
Y = wrench 10 / 9.8 Nm - *7.2 lbf*
W = allen wrench 3
Z = wrench 10 / 9.8 Nm - *7.2 lbf*
J = wrench 7 / 24 Nm - *17.7 lbf*
K = allen wrench 5 / 24 Nm - *17.7 lbf*

Pressure vs. flow diagram

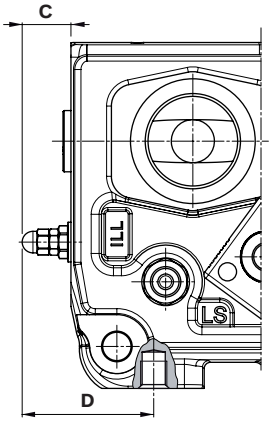
(1) = valve range 40-180 bar (*580-2600 psi*)
(2) = valve range 180-350 bar (*2600-5000 psi*)



On BR section

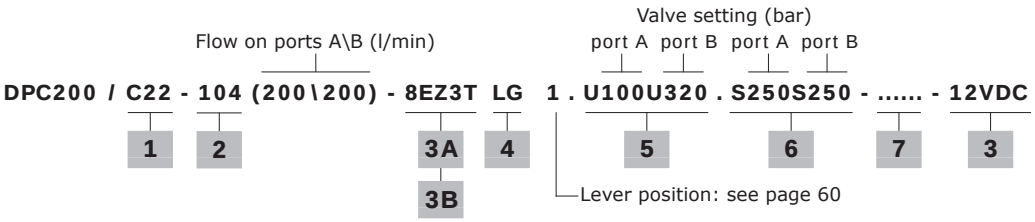


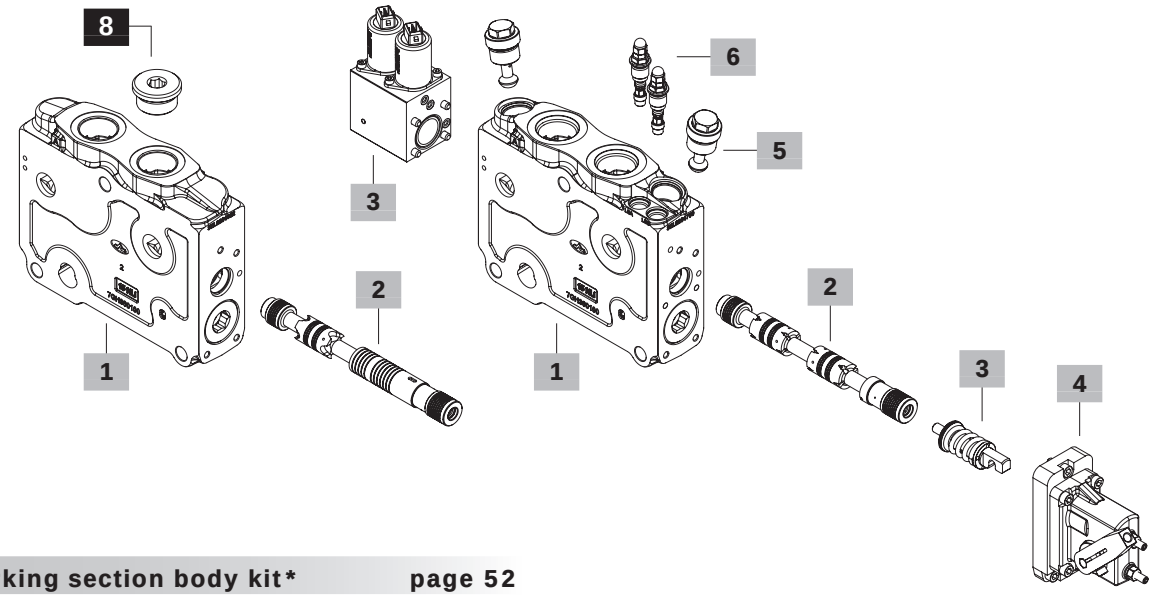
On BRF section



Valve type	BR section				BRF section			
	A		B		C		D	
	mm	*in*	mm	*in*	mm	*in*	mm	*in*
LSD	19.5	*0.77*	189.5	*7.46*	21.5	*0.85*	58	*2.28*
LSH	15	*0.59*	185	*7.28*	16	*0.63*	52.5	*2.07*
LSZ	32	*1.26*	202	*7.95*	34	*1.34*	70.5	*2.78*

Working section parts ordering codes





1 Working section body kit* page 52

With compensator

TYPE: **DPC200/C10** CODE: 5EL6201310
DESCRIPTION: Without valves arrangement
TYPE: **DPC200/C10-FS3-M** CODE: 5EL6209210
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.
TYPE: **DPC200/C11** CODE: 5EL6201311
DESCRIPTION: Without valves arrangement, with LSA-LSB ports
TYPE: **DPC200/C11-FS3-M(BSP)** CODE: 5EL6209211
DESCRIPTION: As previous, fwith ISO 6162-1 type 1 flange connect.
TYPE: **DPC200/C22** CODE: 5EL6201322
DESCRIPTION: Arranged for "U" size valves and L.S. relief valves, with LSA-LSB ports
TYPE: **DPC200/C22-FS3-M(BSP)** CODE: 5EL6209222
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.
TYPE: **DPC200/C32** CODE: 5EL6201332
DESCRIPTION: Arranged for "UL" size valves and L.S.relief valves, with LSA-LSB ports
TYPE: **DPC200/C32-FS3-M(BSP)** CODE: 5EL6209232
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.
TYPE: **DPC200/F32** CODE: 5EL6204332
DESCRIPTION: As Type C32, for floating circuit
TYPE: **DPC200/F32-FS3-M(BSP)** CODE: 5EL6209232F
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.

Without compensator, with check valve

TYPE: **DPC200/CV32** CODE: 5EL6201332A
DESCRIPTION: Arranged for "UL" size valves and L.S. relief valves, with LSA-LSB ports
TYPE: **DPC200/CV32-FS3-M(BSP)** CODE: 5EL6209232A
DESCRIPTION: As previous, with ISO 6162-1 type 1 flange connect.
TYPE: **DPC200/FV32** CODE: 5EL6204332A
DESCRIPTION: For floating circuit, arranged for "UL" size valves and L.S. relief valves, with LSA-LSB ports
TYPE: **DPC200/FV32-FS3-M(BSP)** CODE: 5EL6209232FA
DESCRIPTION: As previous, with ISO 6162-1 type 11 flange connect.

2 Spool page 54

Flow is referred to 7 bar (*102 psi*) stand-by (margin pressure)

TYPE	CODE	DESCRIPTION
Double acting with A and B closed in neutral position		
105	3CU4510025	25 l/min (*6.6 US gpm*) flow
101	3CU4510051	50 l/min (*13.2 US gpm*) flow
106	3CU4510075	75 l/min (*19.8 US gpm*) flow
102	3CU4510101	100 l/min (*26.4 US gpm*) flow
107	3CU4510125	125 l/min (*33 US gpm*) flow
103	3CU4510151	150 l/min (*39.5 US gpm*) flow
108	3CU4510175	175 l/min (*46.2 US gpm*) flow
104	3CU4510201	200 l/min (*52.8 US gpm*) flow
Double acting with A and B to tank in neutral position		
205	3CU4524025	25 l/min (*6.6 US gpm*) flow
201	3CU4524050	50 l/min (*13.2 US gpm*) flow
206	3CU4524075	75 l/min (*19.8 US gpm*) flow
202	3CU4524100	100 l/min (*26.4 US gpm*) flow
207	3CU4524125	125 l/min (*33 US gpm*) flow
203	3CU4524150	150 l/min (*39.5 US gpm*) flow
208	3CU4524175	175 l/min (*46.2 US gpm*) flow
204	3CU4524200	200 l/min (*52.8 US gpm*) flow
Double acting with A and B partially to tank in neutral position		
2H05	3CU4525025	25 l/min (*6.6 US gpm*) flow
2H01	3CU4525050	50 l/min (*13.2 US gpm*) flow
2H06	3CU4525075	75 l/min (*19.8 US gpm*) flow
2H02	3CU4525100	100 l/min (*26.4 US gpm*) flow
2H07	3CU4525125	125 l/min (*33 US gpm*) flow
2H03	3CU4525150	150 l/min (*39.5 US gpm*) flow
2H08	3CU4525175	175 l/min (*46.2 US gpm*) flow
2H04	3CU4525200	200 l/min (*52.8 US gpm*) flow

NOTE (*): *Codes are referred to **BSP** thread.*

Working section parts ordering codes

2 Spool (continued) page 54

TYPE	CODE	DESCRIPTION
Single acting on A, B plugged: needs G1 plug		
305	3CU4530025	25 l/min (*6.6 US gpm*) flow
301	3CU4530050	50 l/min (*13.2 US gpm*) flow
306	3CU4530075	75 l/min (*19.8 US gpm*) flow
302	3CU4530100	100 l/min (*26.4 US gpm*) flow
307	3CU4530125	125 l/min (*33 US gpm*) flow
303	3CU4530150	150 l/min (*39.5 US gpm*) flow
308	3CU4530175	175 l/min (*46.2 US gpm*) flow
304	3CU4530200	200 l/min (*52.8 US gpm*) flow
Double acting with A and B closed in neutral position, 4 positions, floating in 4th pos., spool in: needs working section type F or FV, positioner and controls type 13		
501	3CU4541050	50 l/min (*13.2 US gpm*) flow
502	3CU4541100	100 l/min (*26.4 US gpm*) flow
503	3CU4541150	150 l/min (*39.5 US gpm*) flow
504	3CU4541200	200 l/min (*52.8 US gpm*) flow

3A "A" side spool control kit page 56

TYPE	CODE	DESCRIPTION
Mechanical positioners		
7FT	5V07200000	With friction and center position feeling
8	5V08200000	3 position, spring return to neutral position
13	5V13200000	For floating circuit (**spool type 5**), 4 pos., detent in 4th position, with spring return to neutral pos.
Proportional hydraulic controls		
8IM	5V08200801	Range from 5.2 to 15.3 bar (*75 to 222 psi*)
13IM	5V13200800	For floating circuit (**spool type 5**), range 2.5 to 7 bar (*75 to 222 psi*), floating 11 bar (*160 psi*)

3B Electrohydraulic controls page 58

TYPE	CODE	DESCRIPTION
8EZ3T-12VDC	5V08200721	With AMP connector
8EZ3T-24VDC	5V08200741	With AMP conector
8EZ34T-12VDC	5V08200722	With Deutsch connector
8EZ34T-24VDC	5V08200742	With Deutsch connector
For floating circuit (**spool type 5**)		
13EZ3T-12VDC	5V13200721	With AMP connector
13EZ3T-24VDC	5V13200741	With AMP connector
13EZ34T-12VDC	5V13200722	With Deutsch connector
13EZ34T-24VDC	5V13200742	With Deutsch connector

4 "B" side spool control kit page 60

TYPE	CODE	DESCRIPTION
LG	5LEV200802	Cast iron lever box
LGN	5LEV200801	Cast iron lever box, without lever
L	5LEV200701	Aluminium lever box

5 Port valves page 61

TYPE	CODE	DESCRIPTION
"U" size valves		
UT	XTAP522442	Valve blanking plug
C	5KIT410000	Anticavitation valve (for U cavity)

Fixed setting antishock and anticavitation valves: setting is referred to 10 l/min (*2.6 US gpm*)

TYPE: **U 100** (100 = setting (bar)) CODE: 5KIT330 100 (100 = setting (bar))

SETTING:

50 bar (*725 psi*)	63 bar (*914 psi*)	80 bar (*1150 psi*)
100 bar (*1450 psi*)	110 bar (*1590 psi*)	125 bar (*1800 psi*)
140 bar (*2050 psi*)	150 bar (*2150 psi*)	160 bar (*2300 psi*)
175 bar (*2550 psi*)	190 bar (*2750 psi*)	200 bar (*2900 psi*)
210 bar (*3050 psi*)	230 bar (*3350 psi*)	240 bar (*3500 psi*)
250 bar (*3600 psi*)	260 bar (*3750 psi*)	270 bar (*3900 psi*)
280 bar (*4050 psi*)	290 bar (*4200 psi*)	300 bar (*4350 psi*)
310 bar (*4500 psi*)	320 bar (*4650 psi*)	340 bar (*4950 psi*)
360 bar (*5200 psi*)	400 bar (*5800 psi*)	420 bar (*6100 psi*)

TYPE	CODE	DESCRIPTION
"UL" size valves		
ULT	XTAP528520	Valve blanking plug
CL	5KIT409000	Anticavitation valve (for UL cavity)

Fixed setting antishock and anticavitation valves with pressure relief function: setting is referred to 5 l/min *1.3 US gpm*)

TYPE: **UL 100** (100 = setting (bar)) CODE: 5KIT340 100 L (100 = setting (bar))

SETTING:

50 bar (*725 psi*)	70 bar (*1010 psi*)	80 bar (*1150 psi*)
100 bar (*1450 psi*)	120 bar (*1750 psi*)	130 bar (*1900 psi*)
140 bar (*2050 psi*)	150 bar (*2150 psi*)	160 bar (*2300 psi*)
170 bar (*2450 psi*)	180 bar (*2600 psi*)	190 bar (*2750 psi*)
200 bar (*2900 psi*)	210 bar (*3050 psi*)	220 bar (*3200 psi*)
250 bar (*3600 psi*)	270 bar (*3900 psi*)	300 bar (*4350 psi*)
320 bar (*4650 psi*)	350 bar (*5050 psi*)	370 bar (*5350 psi*)
380 bar (*5500 psi*)		

6 L.S. port relief valves page 62

Standard setting is referred to 10 l/min - *2.6 US gpm* flow.

TYPE	CODE	DESCRIPTION
LSD	XCAR126215	With blind nut, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126213	As previous, range 180-350 bar / *2600-5100 psi* std. setting 180 bar / *2600 psi*
LSH	XCAR126216	With locked arrangement, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	XCAR126217	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
LSZ	5CAR126221	With anti-tamper cap, range 40-180 bar / *580-2600 psi*, std. setting 90 bar / *1300 psi*
	5CAR126219	As previous, range 180-350 bar / *2600-5100 psi*, std. setting 180 bar / *2600 psi*
ST	5KIT126210	Relief valve blanking plug

7 Section threading

Specify threading only if it is different from BSP standard. For section with ISO 6162-1 type 1 flange connection digit: **FS3-M(BSP),** only **FS3-M** for type **C10**

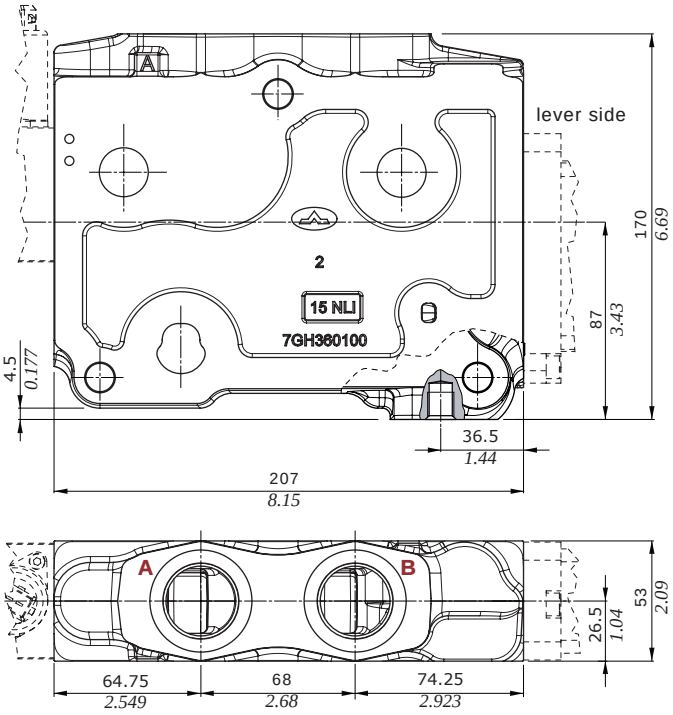
8 Plug for single acting spool*

CODE	DESCRIPTION
3XTAP740210	G1 plug
4FL1066180	DN19 blind flange

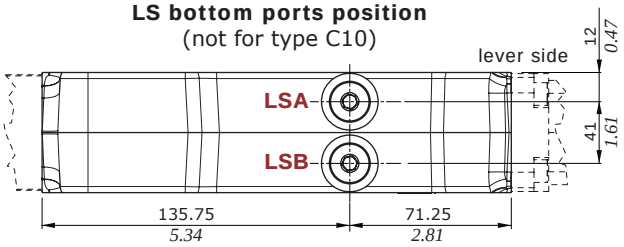
Working section

Dimensions and hydraulic circuit

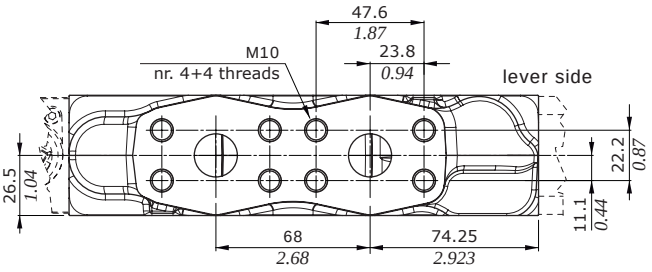
Without port valves



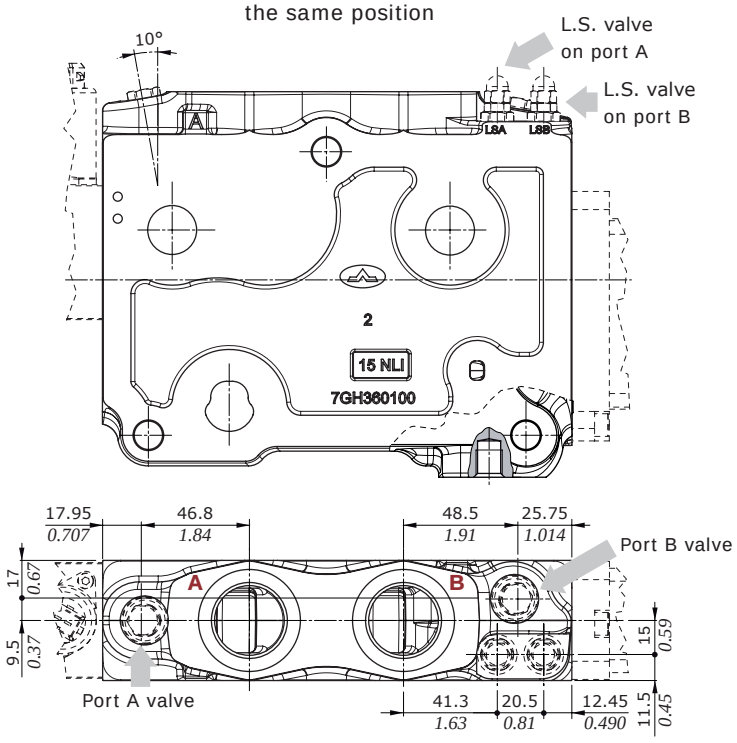
LS bottom ports position
(not for type C10)



FS3-M(BSP) optional connection

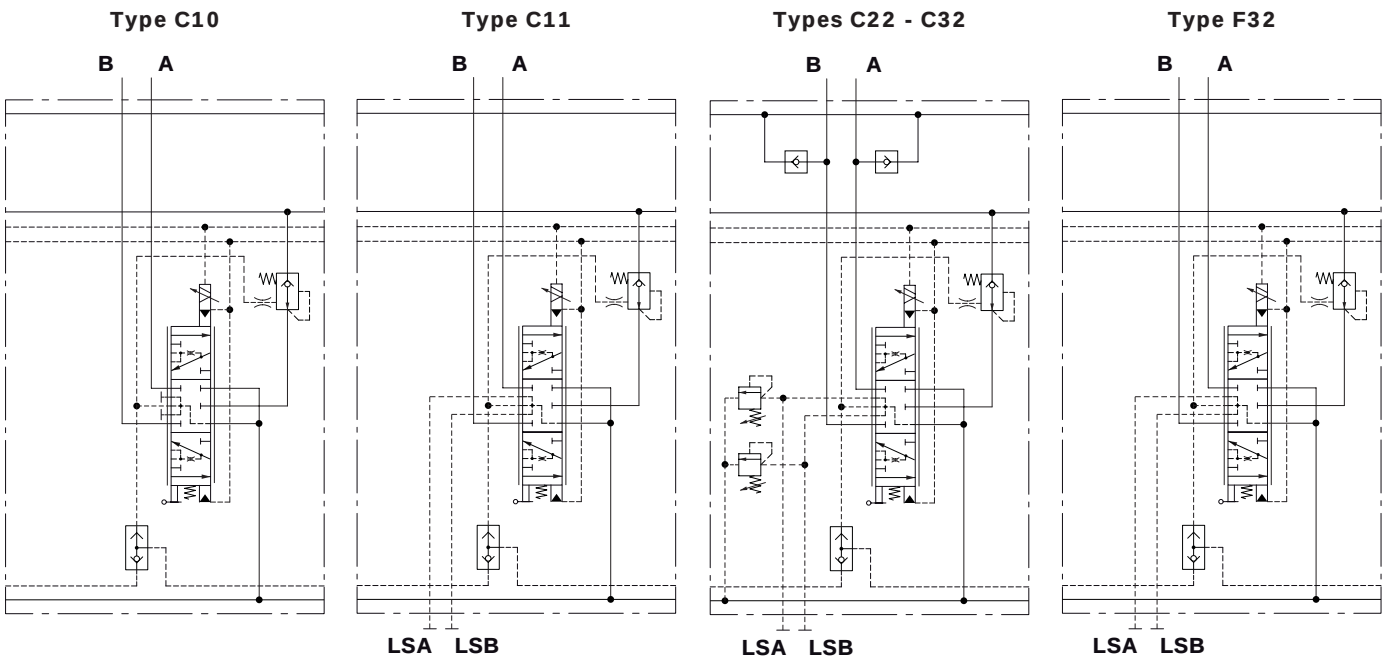


With port valves
"U" and "UL" size valves have
the same position

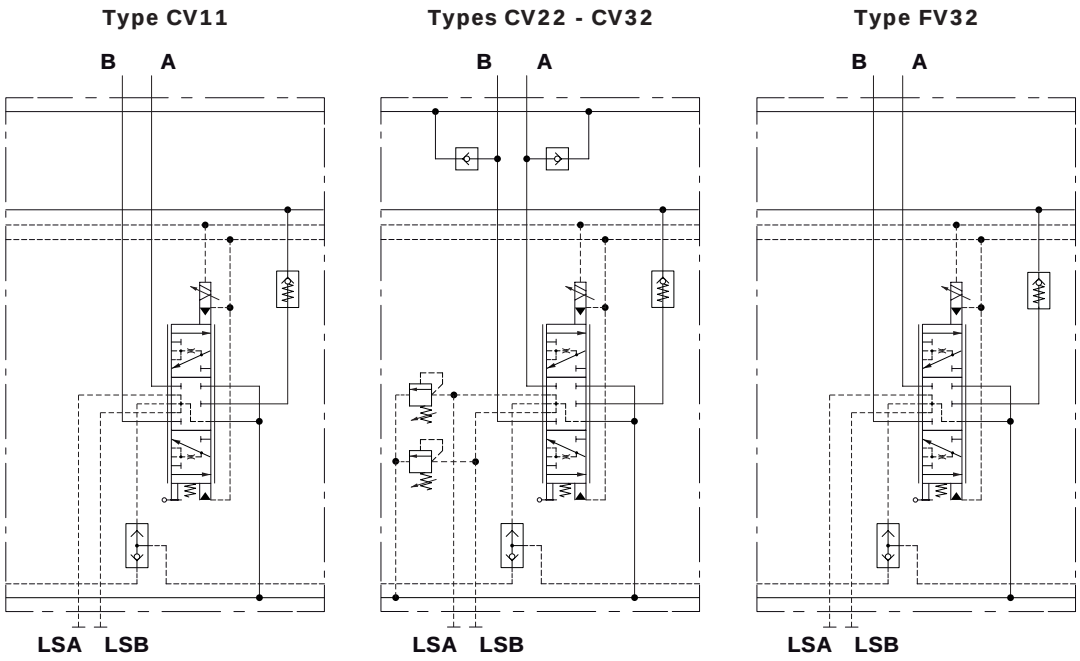


Dimensions and hydraulic circuit

With compensator



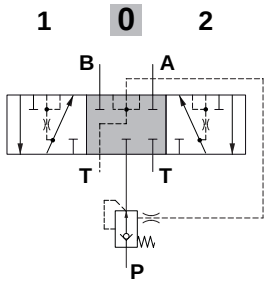
Without compensator, with check valve



Working section

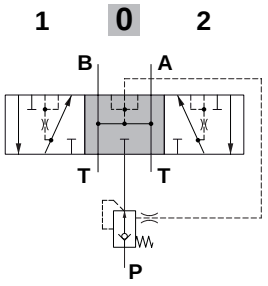
Spools

Spool type 1
A, B closed in neutral position



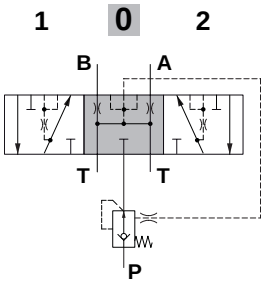
Spool stroke
position 1: - 8 mm *(- 0.31 in)*
position 2: + 8 mm *(+ 0.31 in)*

Spool type 2
A, B open to tank in neutral pos.



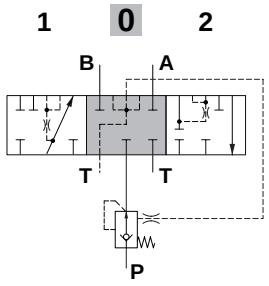
Spool stroke
position 1: - 8 mm *(- 0.31 in)*
position 2: + 8 mm *(+ 0.31 in)*

Spool type 2H
A, B partially to tank in neutral pos.



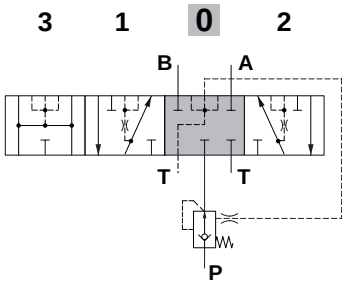
Spool stroke
position 1: - 8 mm *(- 0.31 in)*
position 2: + 8 mm *(+ 0.31 in)*

Spool type 3
single acting on A



Spool stroke
position 1: - 8 mm *(- 0.31 in)*
position 2: + 8 mm *(+ 0.31 in)*

Spool type 5
floating in 4th position (pos.3)



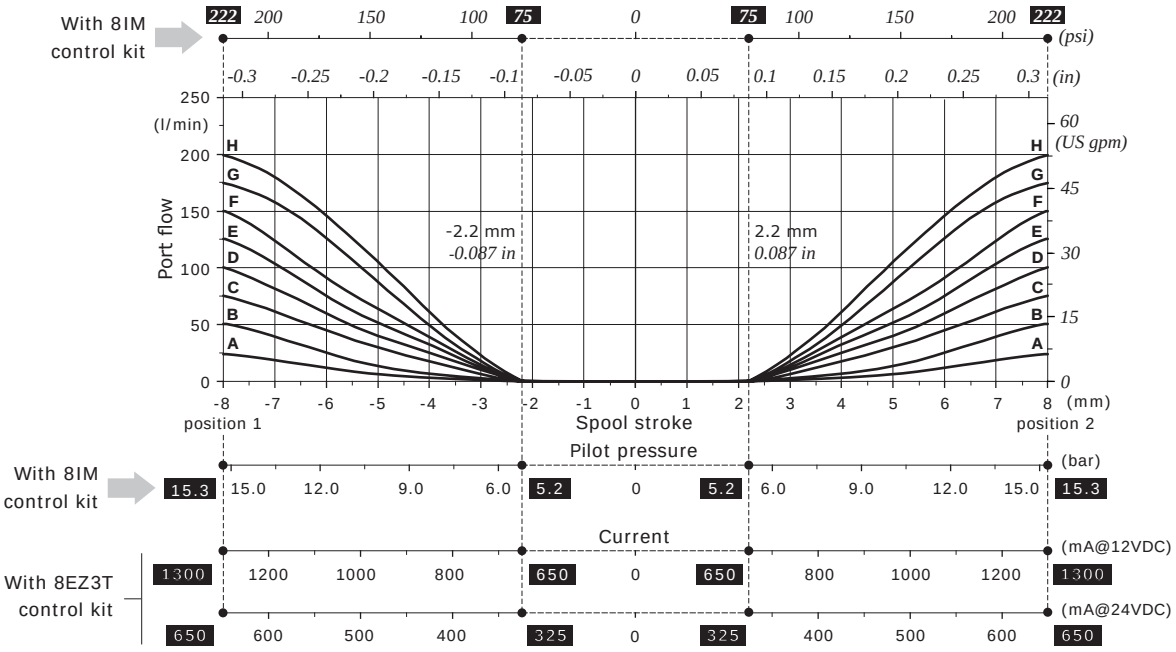
Spool stroke
position 1: - 8 mm *(- 0.31 in)*
position 2: + 8 mm *(+ 0.31 in)*
position 3: - 13 mm *(- 0.51 in)*

Spools

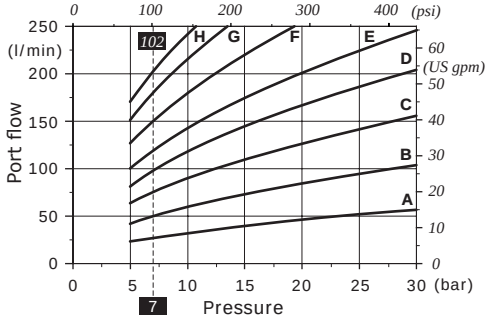
Following curves are detected with standard spools, connecting P⇒A⇒B⇒T and P⇒B⇒A⇒T ports without flow multiplication. Customized spools with backpressure or flow multiplication may require different force, pressure and pilot current for operation.

NOTE: for spools up to 120 l/min (*31.7 US gpm*), the effective flow on working ports may differ by 10% between the 1st an 10th section.

Metering curves
Compensated working section - 3 positions spools
Qin = 260 l/min (*68.7 US gpm*)



Non-compensated working section
Spool flow vs. Stand-by pressure
(margin pressure)

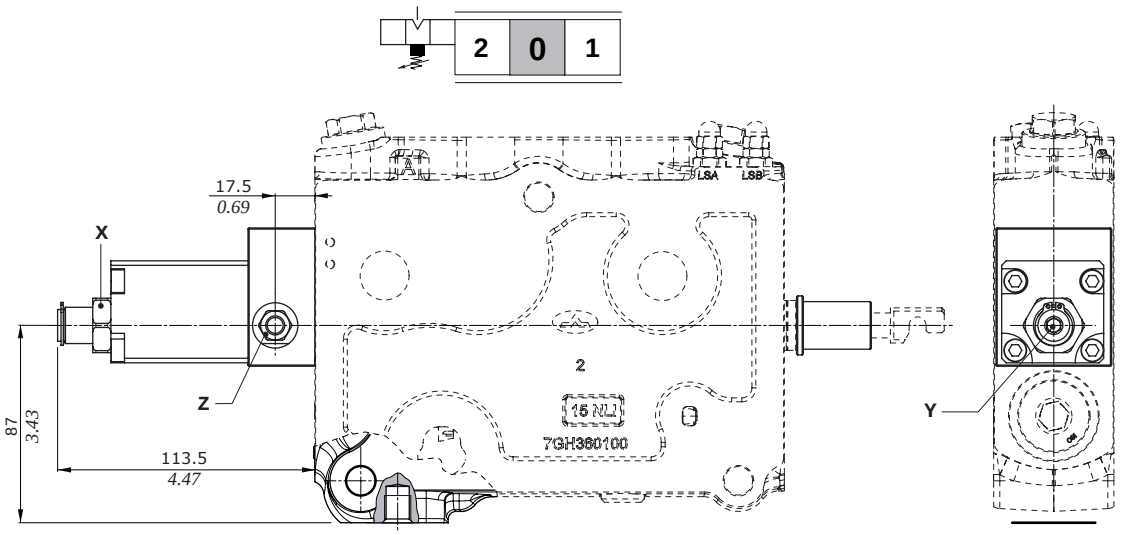


Spool nominal flow @ 7 bar *(102 psi)* stand-by (margin pressure)
A = 25 l/min (*6.6 US gpm*)
B = 50 l/min (*13.2 US gpm*)
C = 75 l/min (*19.8 US gpm*)
D = 100 l/min (*26.4 US gpm*)
E = 125 l/min (*33 US gpm*)
F = 150 l/min (*39.5 US gpm*)
G = 175 l/min (*46.2 US gpm*)
H = 200 l/min (*52.8 US gpm*)

Working section

"A" side spool control kit

With friction and center position feeling: type 7FT

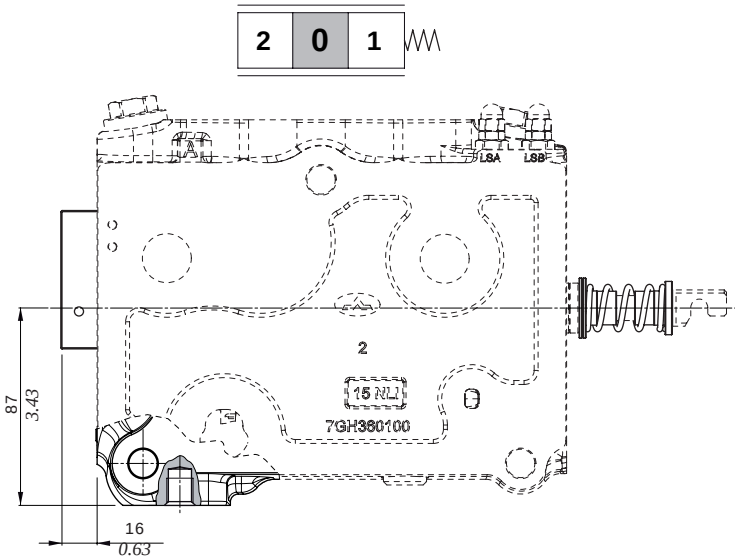


Features

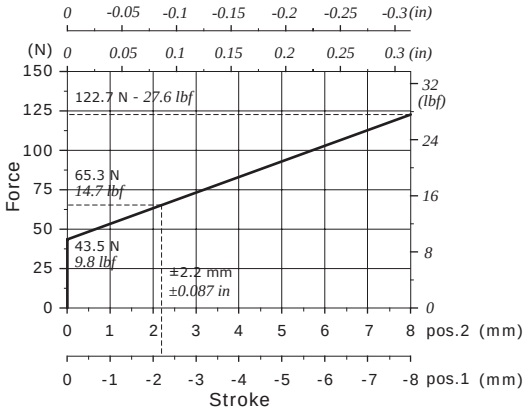
Friction load adjusting . . . . . : 20-150 N *(4.5-34 lbf)*
Friction load std. setting . . . . . : 100 N *(22.5 lbf)*
Center tap (more than load). . . : 100 N *(22.5 lbf)*

X = wrench 24 - 42 Nm *(31 lbf)*
Y = allen wrench 6
Z = wrench 13 - 24 Nm *(17.7 lbf)*

With spring return to neutral position: type 8



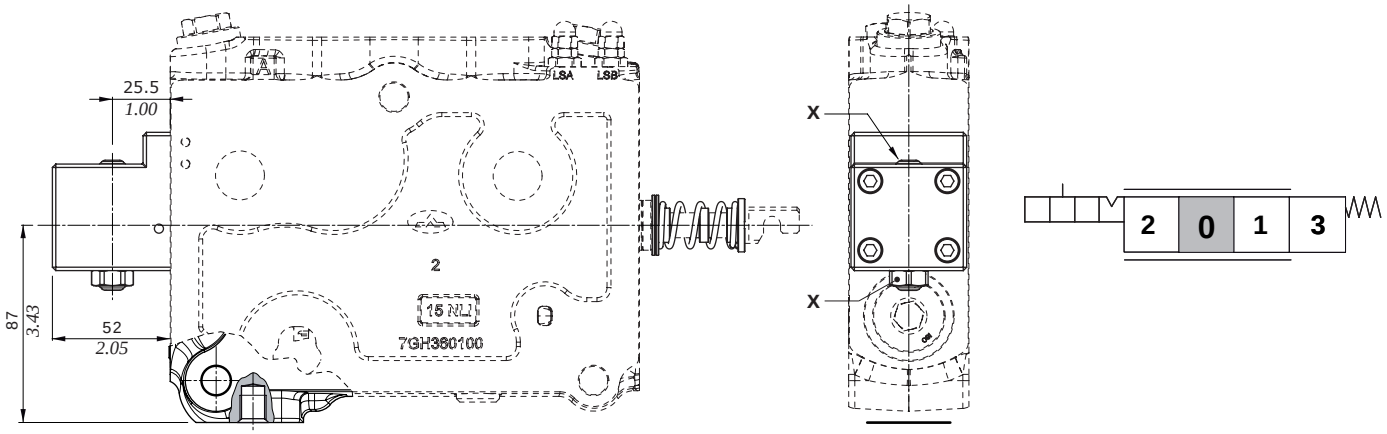
Force vs. Stroke diagram



"A" side spool control kit

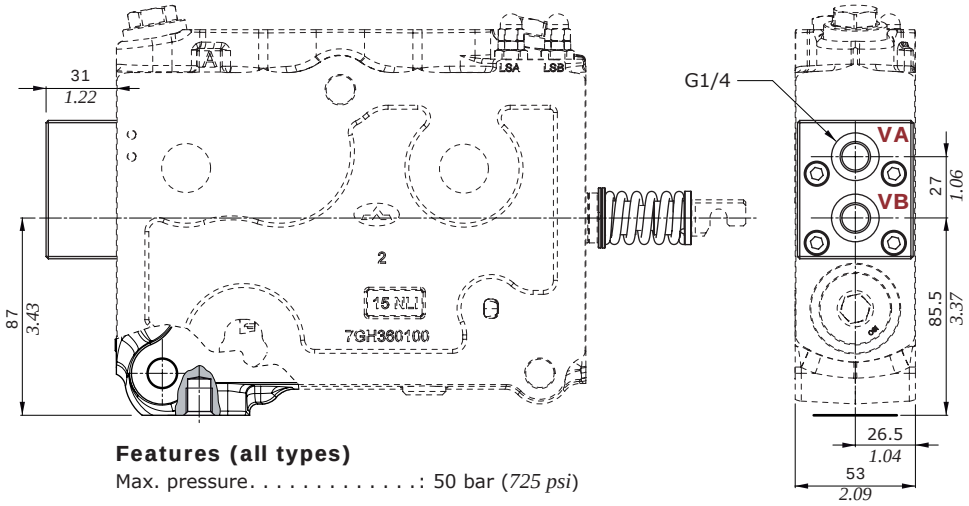
With detent in 4th position (pos.3), for floating circuit: type 13

Need working section type F or FV and floating circuit spools type 5.



X = wrench 17 - 24 Nm *(17.7 lbf)*

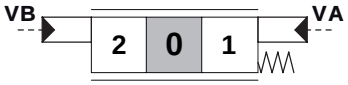
Proportional hydraulic controls



Features (all types)

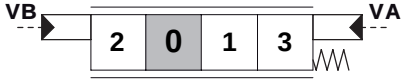
Max. pressure. . . . . : 50 bar (*725 psi*)

Type 8IM

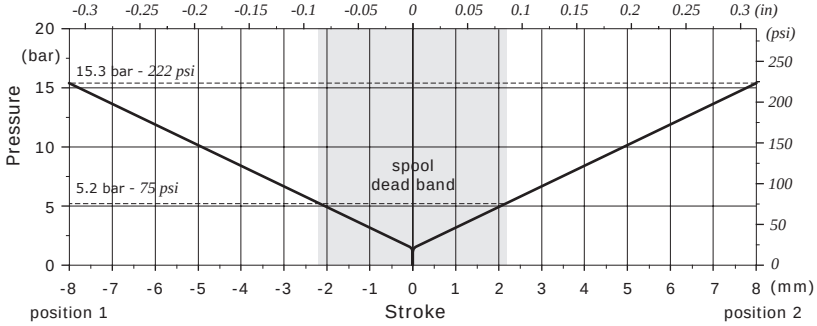


Type 13IM

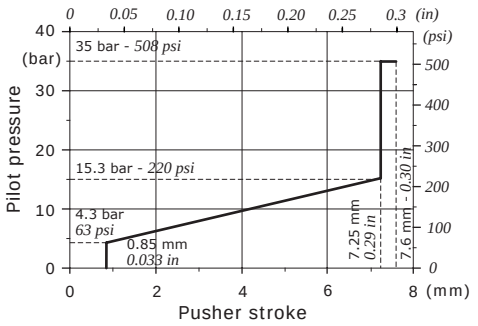
For floating circuit



Type 8IM: Stroke vs. Pressure diagram



Type 8IM: suggested pressure control curve: type 020



Working section

Electrohydraulic controls

Following specifications are measured with:
- mineral oil of 46 mm²/s - *46 cSt* viscosity at 40°C - *104°F* temperature,
- 20°C - *60°F* environmental temperature,
- standard spools, connecting P⇒A⇒B⇒T ports without flow multiplication,
- 12 VDC and 24 VDC nominal voltage with tolerance ± 10%.

Specifications		Spool control type 8EZ3	Spool control type 13EZ3
Electric specifications			
Coil impedance	12 VDC	4.72 Ω	4.72 Ω
	24 VDC	20.8 Ω	20.8 Ω
Max. operating current	12 VDC	1.5 A	1.5 A
	24 VDC	0.75 A	0.75 A
No load current consumption		0	0
Hysteresis max. (1)	internal drain	5% with lever	7% with lever
Time response	from 0 ⇒ 100% of stroke	< 150 ms	< 250 ms
	from 100% ⇒ 0 of stroke	< 80 ms	< 125 ms
Min. flow control signal	12 VDC	650 mA	400 mA
	24 VDC	325 mA	200 mA
Max. flow control signal	12 VDC	1300 mA	600 mA
	24 VDC	650 mA	300 mA
Float flow control signal	12 VDC	-	850 mA
	24 VDC	-	250 mA
Dither frequency	low frequency	150 Hz	150 Hz
	high frequency	150 Hz - 350 mA	150 Hz - 350 mA
Insertion		100%	100%
Coil insulance		Class H (180°C - *356°F*)	Class H (180°C - *356°F*)
Connector type		AMP JPT - Deutsch DT	AMP JPT - Deutsch DT
Weather protection (connector)		IP65 (type JPT) - IP69K (type DT)	IP65 (type JPT) - IP69K (type DT)
Hydraulic specifications			
Max. pressure		50 bar (*725 psi*)	50 bar (*725 psi*)
Max. back pressure		5 bar (*72.5 psi*)	5 bar (*72.5 psi*)

Note (1) for the calculation rules see "Appendix A" on page 71.

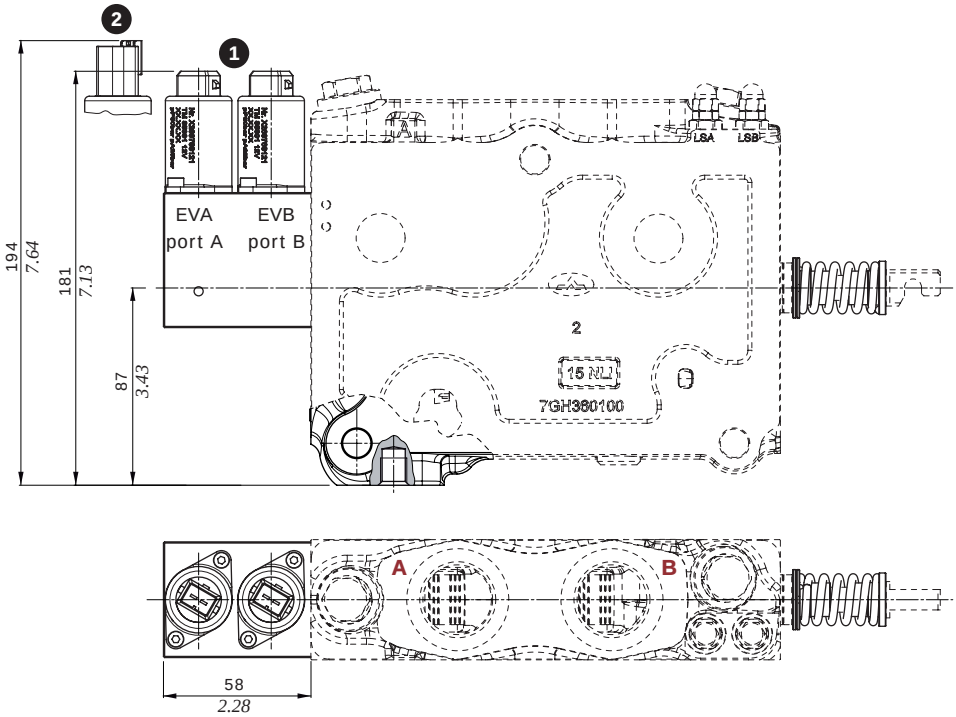
Listed electrohydraulic controls need CED100X or CED400X electronic unit; for information contact Sales Department.

Working section

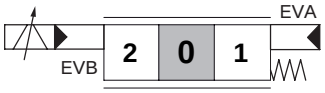
Electrohydraulic controls

Control Types

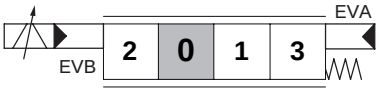
1 : With AMP JPT connector - mating connector AMP JPT, code: 5CON003
2 : With Deutsch DT04 connector - mating connector Deutsch DT06-2S code: 5CON140031



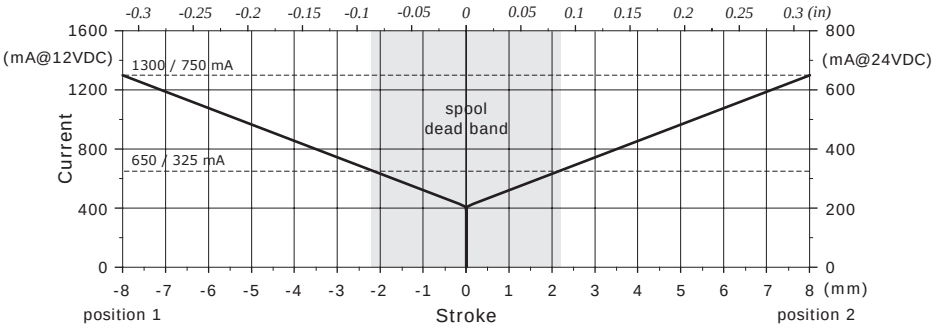
Types
8EZ3 - 8EZ34



Types
13EZ3 - 13EZ34
For floating circuit



Types 8EZ3: Stroke vs. Current diagram

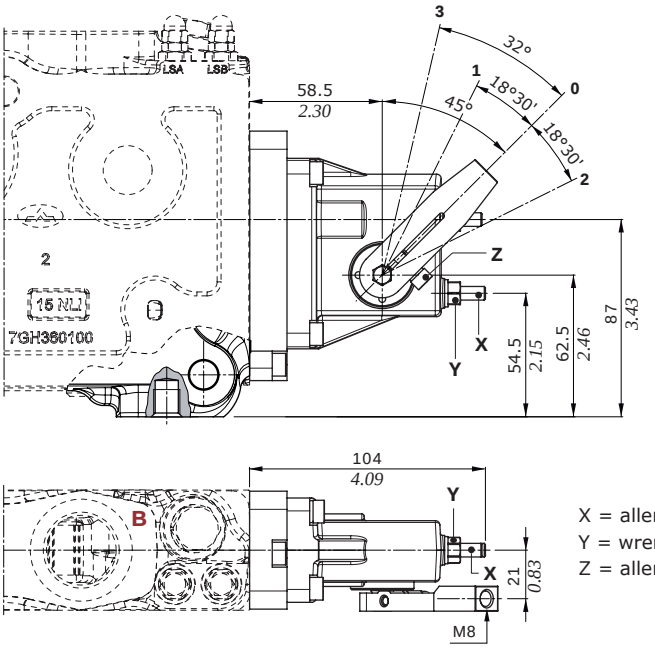


Working section

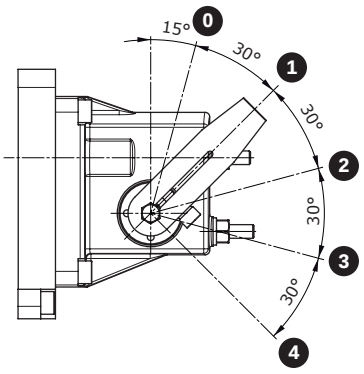
"B" side spool control kit

Cast iron standard lever box; type LG

2	0	1	3



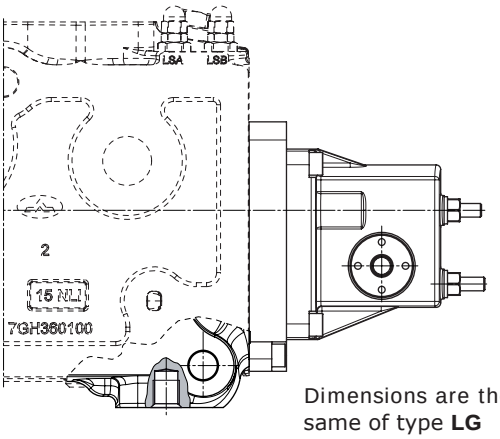
Lever assembly position
See page 50 for specification in working section description



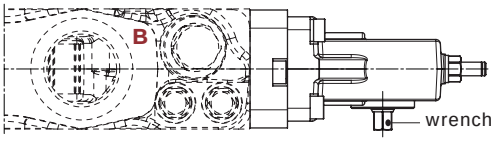
X = allen wrench 3
Y = wrench 10 / 9.8 Nm - *7.2 lbf*
Z = allen wrench 4 / 6.6 Nm - *4.9 lbf*

Cast iron lever box, without lever; type LGN

2	0	1	3

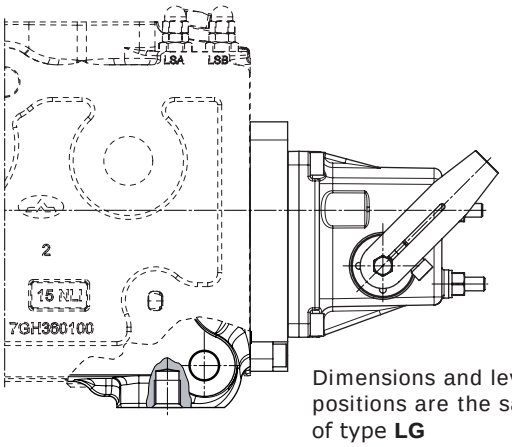


Dimensions are the same of type **LG**

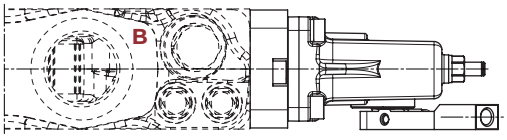


Aluminium lever box; type L

2	0	1	3

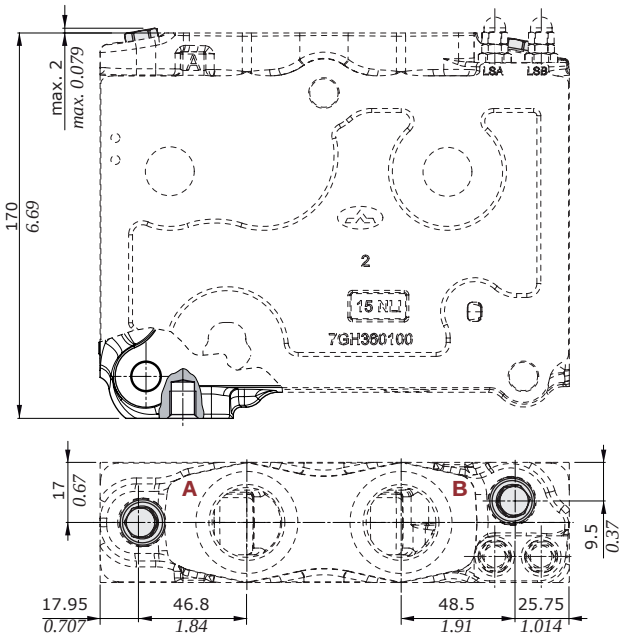


Dimensions and lever positions are the same of type **LG**

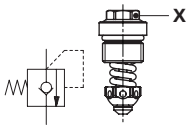


Port valves

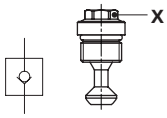
Antishock anticavitation valves, type U
Anticavitation valve, type C



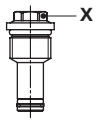
Type U
antishock valve



Type C
anticavitation valve

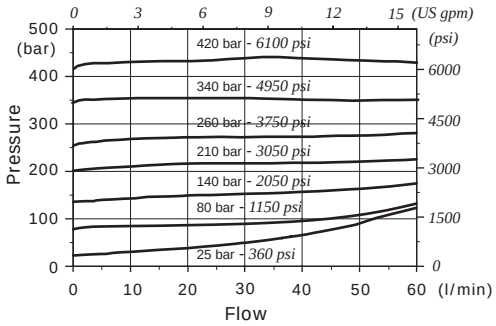


Type UT
valve blanking plug

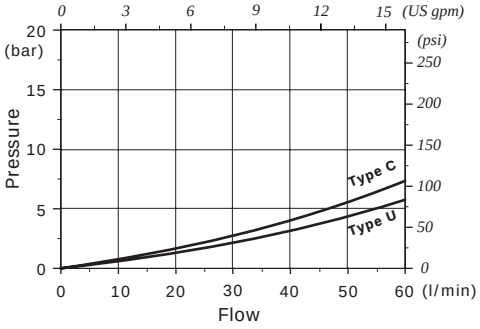


X = wrench 13
24 Nm - *17.7 lbf*

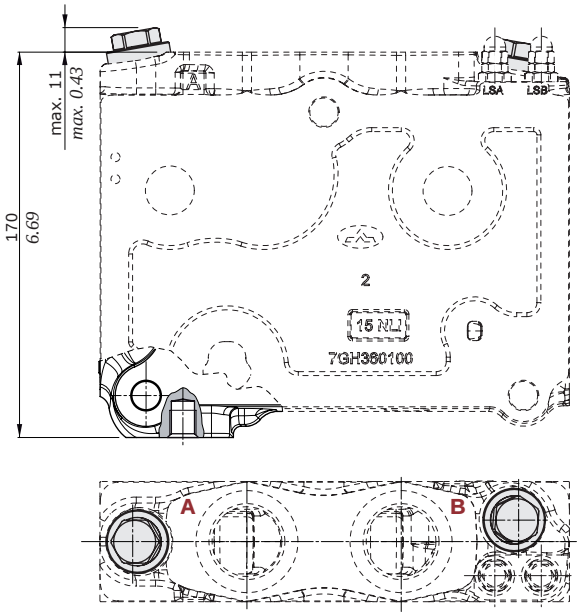
Type U, setting example
(10 l/min - *2.6 Us gpm*)



Types U-C, pressure drop
(in anticavitation)

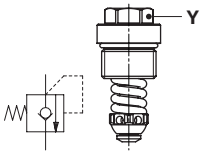


Antishock anticavitation valves with pressure relief function, type UL
Anticavitation valve, type CL

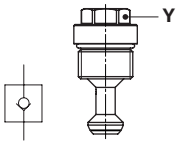


valves position are the same of type U

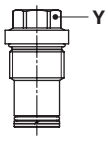
Type UL
antishock valve



Type CL
anticavitation valve

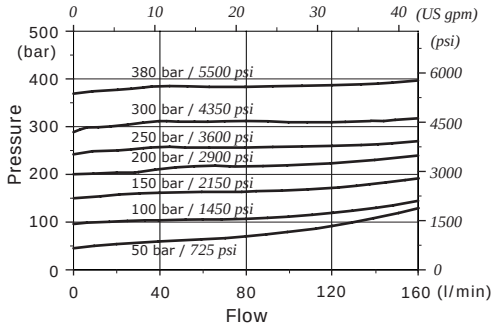


Type ULT
valve blanking plug

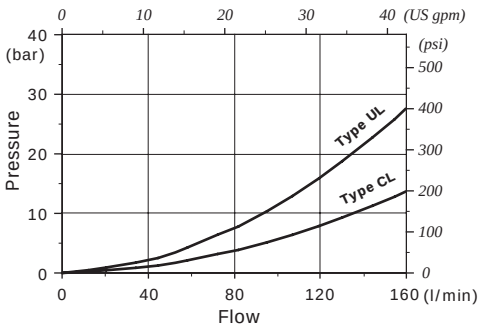


Y = wrench 19
42 Nm - *31 lbf*

Type UL, setting example
(5 l/min - *1.3 Us gpm*)

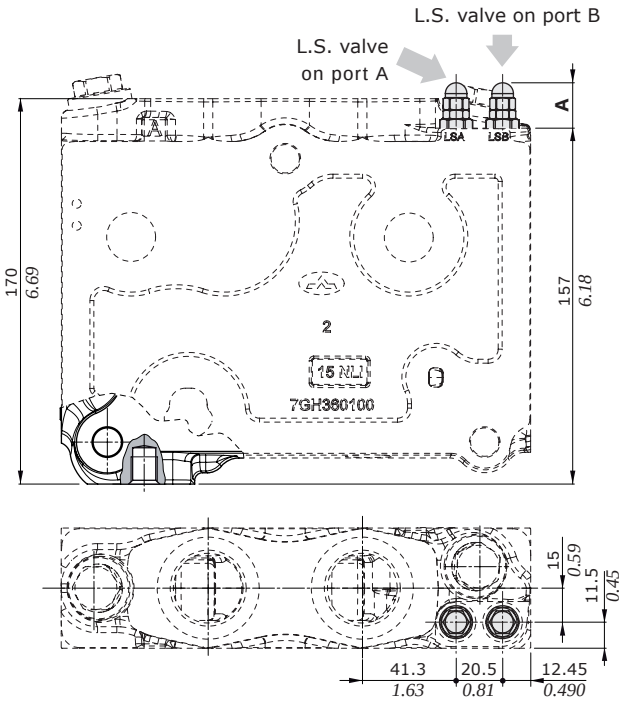


Types UL-CL, pressure drop
(in anticavitation)



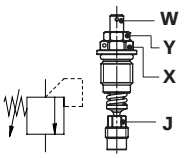
Working section

L.S. port relief valves

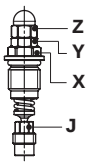


Valve type	dim. A	
	mm	*in*
LSD	20	*0.79*
LSH	15.5	*0.61*
LSZ	32.5	*1.28*

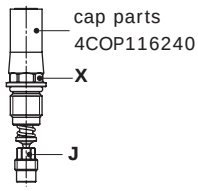
Type LSH
with lock arrangement



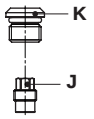
Type LSD
with blind nut



Type LSZ
with anti-tamper cap



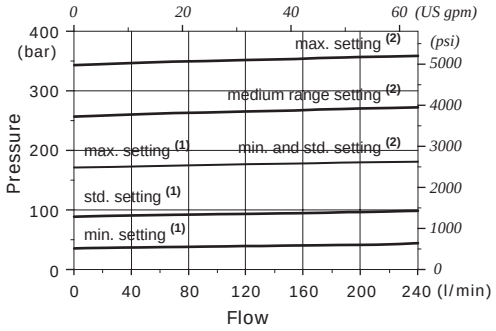
Type ST
valve blanking plug



X = wrench 13 / 42 Nm - *31 lbf*
Y = wrench 10 / 9.8 Nm - *7.2 lbf*
W = allen wrench 3
Z = wrench 10 / 9.8 Nm - *7.2 lbf*
J = wrench 7 / 24 Nm - *17.7 lbf*
K = allen wrench 5 / 24 Nm - *17.7 lbf*

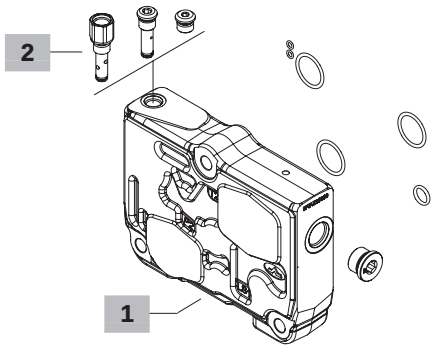
Pressure vs. flow diagram

(1) = valve range 40-180 bar (*580-2600 psi*)
(2) = valve range 180-350 bar (*2600-5000 psi*)

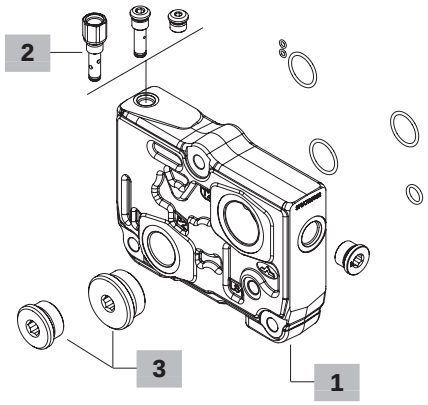


Outlet section parts ordering codes

DPC200 / RF 3 0 - .....
1 2 3 4



DPC200 / RD 3 1 - .....
1 2 3 4



1 Outlet section* page 64

TYPE	CODE	DESCRIPTION
RF	3FIA720300	Without ports
RD	3FIA720302	With P1, T1 and LS1 ports
RD-FS3-M(BSP)	3FIA720901	As previous, with ISO 6162-1 type 1 flange connection

2 Drain options page 65

TYPE	CODE	DESCRIPTION
1	XTAP517460	Internal drain; to use with mechanical controls
2	XTAP217160	Internal drain; to use with hydraulic controls
3	XCAR119611*	External drain G1/4; for electrohydraulic controls

3 Port options*

TYPE: **0** DESCRIPTION: Without ports (only for RF type)
TYPE: **1** DESCRIPTION: Ports P1 and T1 plugged
PLUG CODE: 3XTAP740210 (G1) + XTAP750240 (G1-1/4)
BLIND FLANGE CODE: 4FL1066180 (DN19) + 4FL1071190 (DN25)
TYPE: **2** DESCRIPTION: Port P1 plugged and T1 open
PLUG CODE: 3XTAP740210 (G1)
BLIND FLANGE CODE: 4FL1066180 (DN19)
TYPE: **3** DESCRIPTION: Port P1 open and T1 plugged
PLUG CODE: XTAP750240 (G1-1/4)
BLIND FLANGE CODE: 4FL1071190 (DN25)
TYPE: **4** DESCRIPTION: Ports P and T open

4 Section threading

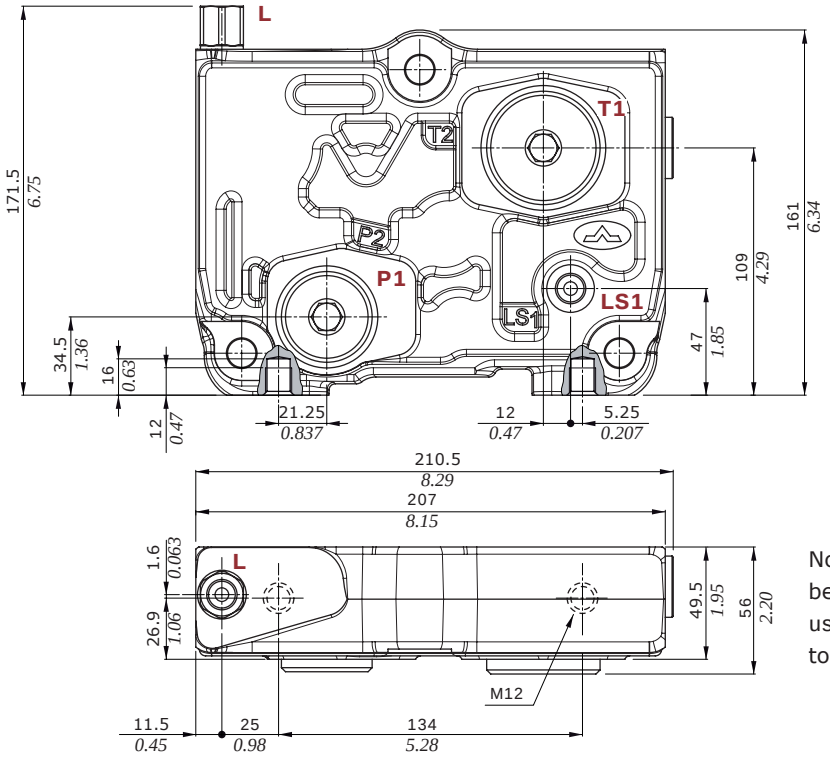
Specify threading only if it is different from BSP standard.
For section with ISO 6162-1 type 1 flange connection digit: **FS3-M(BSP).**

NOTE (*): *Codes are referred to **BSP** thread.*

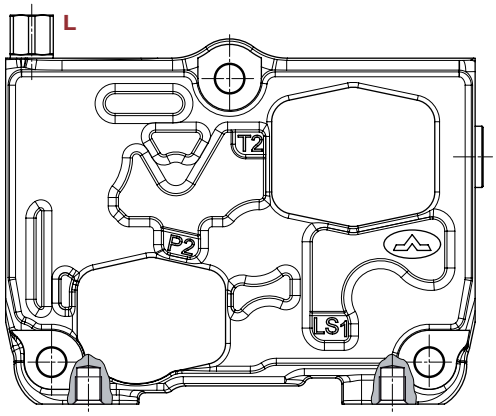
Outlet section

Dimensions and hydraulic circuit

Type RD31
With ports P1, T1 (plugged) and LS1; external drain

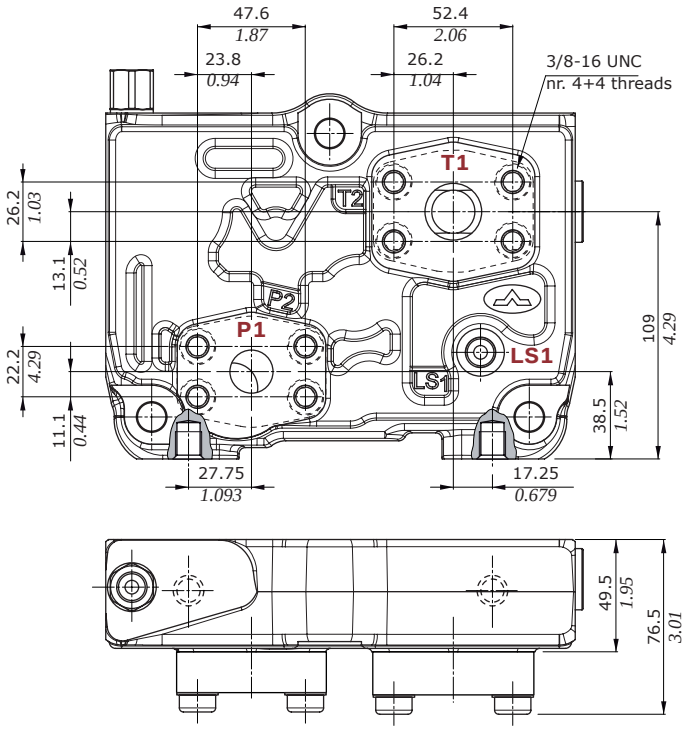


Type RF30
Without ports; external drain

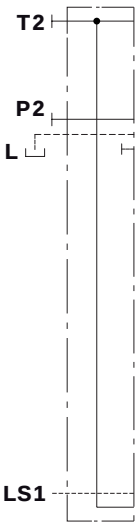


Note: The port LS1 must not be plugged (in case it's not used it has to be connected to tank).

FS3-M(BSP) optional connection

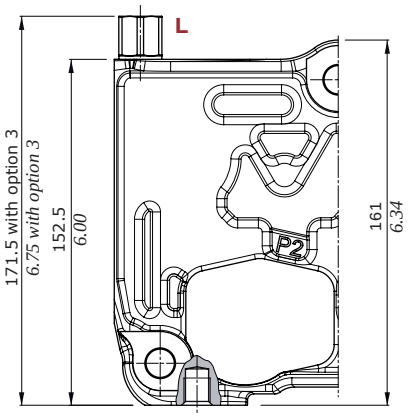


Type RF31

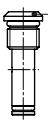


Type RF30

Drain options



Option 1
internal drain for
mechanical controls



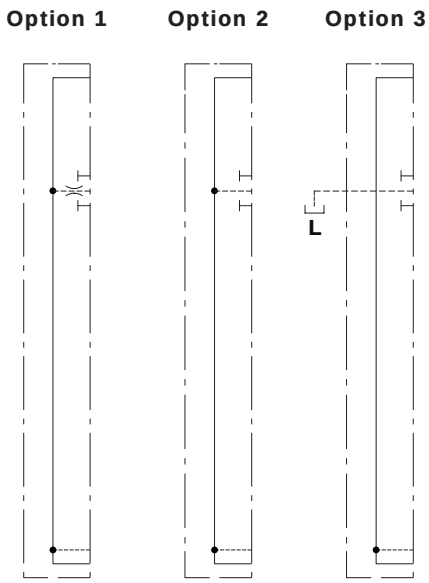
allen wrench 5
24 Nm - *17.7 lbf*

Option 2
internal drain for
hydraulic controls

allen wrench 6
24 Nm - *17.7 lbf*

Option 3
external drain for
electrohydraulic controls

wrench 19
24 Nm - *17.7 lbf*



Connection between DPC Series valves

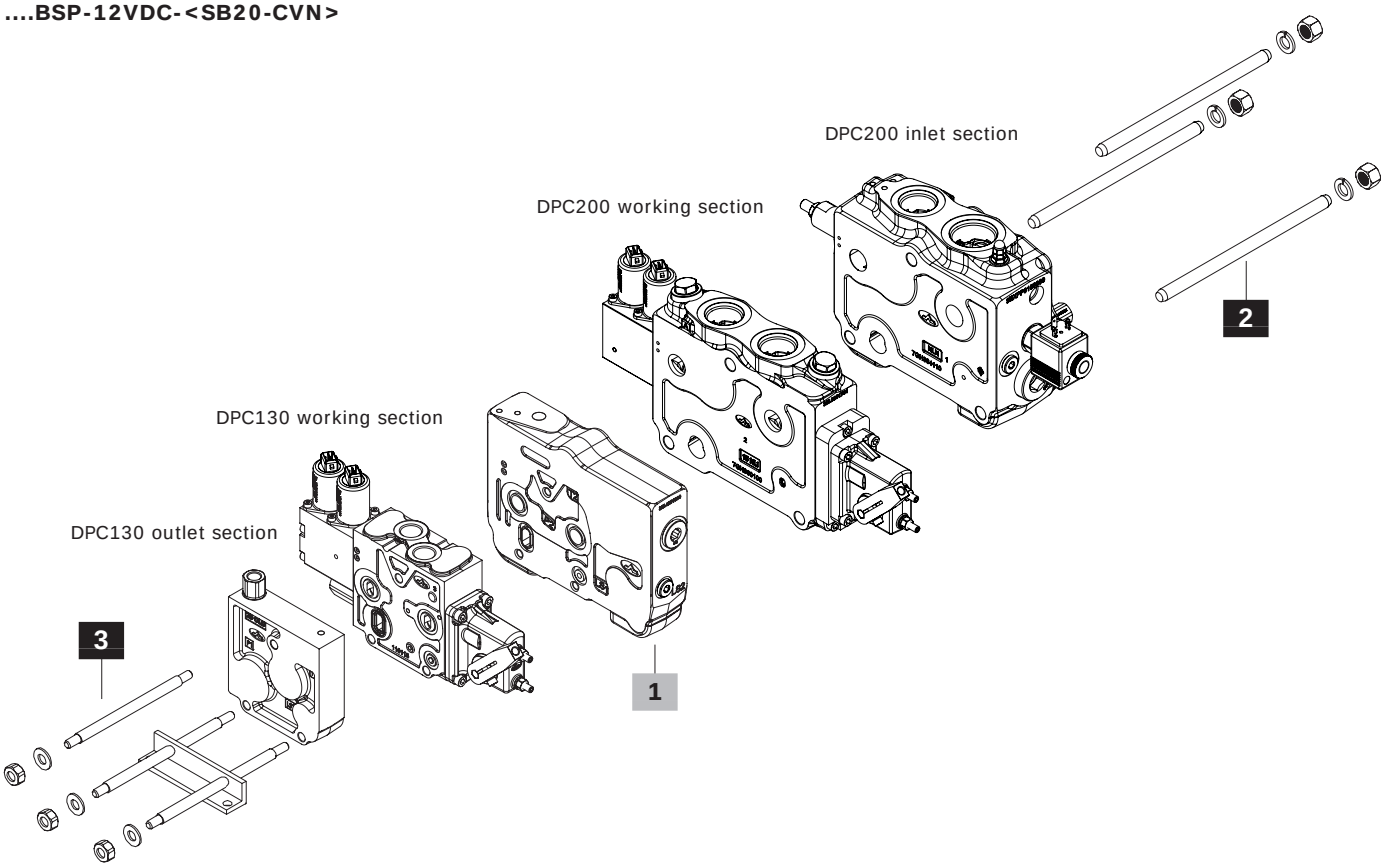
DPC200 directional valve — DPC130 directional valve

DPC200/1/BR2-10(D220\ELP)/C30-104(200\200)-8EZ3TLG1.UTUT/EIR/C10-1S8EZ3TL1/RF30/DPC130/1-.....

- DPC200/1: Nr. of working sections
- BR2-10(D220\ELP): Inlet section
- C30-104(200\200)-8EZ3TLG1.UTUT: Working section
- EIR: 1
- C10-1S8EZ3TL1: Working section
- RF30: Outlet section
- DPC130/1-.....: Nr. of working sections

directional valves common specification

....BSP-12VDC-<SB20-CVN>



1 Intermediate section page 68

TYPE	CODE	DESCRIPTION
EIR	638403001	Section for assembling of DPC200 and DPC130 in single directional valve; with LS port

NOTE: *the maximum number of working sections should not exceed 10 units*

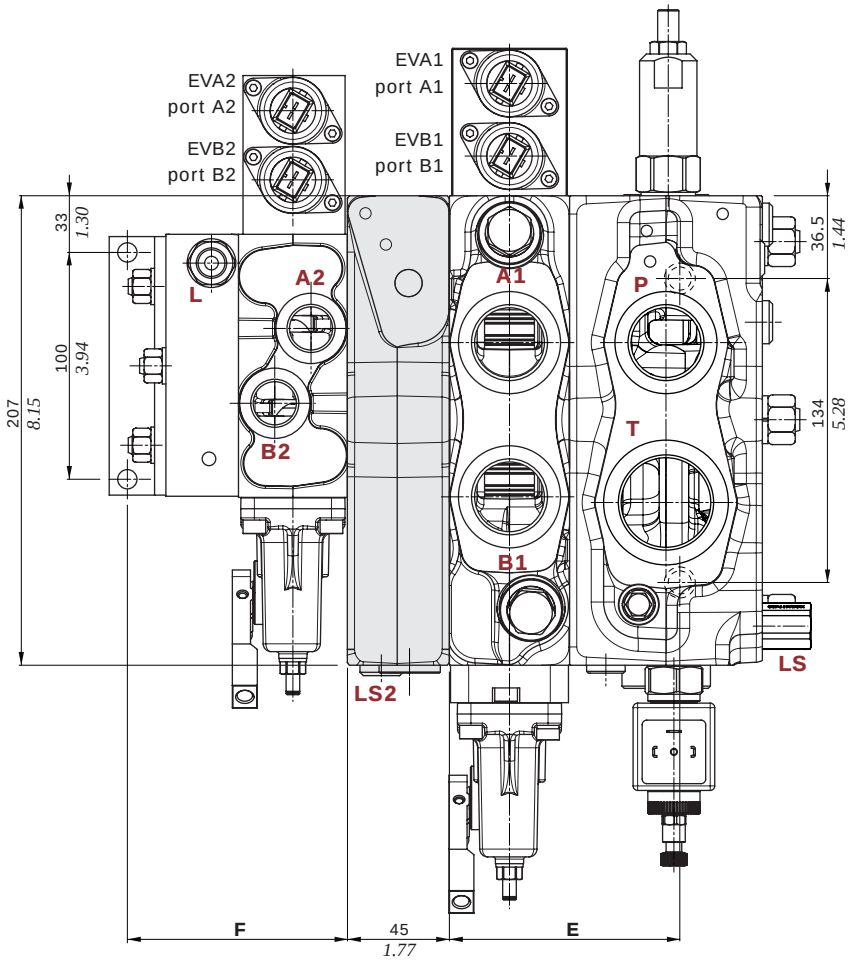
2 DPC200 side assembling kit

CODE	CODE	DESCRIPTION
With inlet section type		
Type BR	**Type BRF**	
5TIR112180	5TIR112141	For 1 working section valve
5TIR112235	5TIR112194	For 2 working sections valve
5TIR112287	5TIR112247	For 3 working sections valve
5TIR112340	5TIR112300	For 4 working sections valve
5TIR112393	5TIR112354	For 5 working sections valve
5TIR112446	5TIR112407	For 6 working section valve
5TIR112499	5TIR112460	For 7 working sections valve
5TIR112552	5TIR112512	For 8 working sections valve
5TIR112605	5TIR112565	For 9 working sections valve

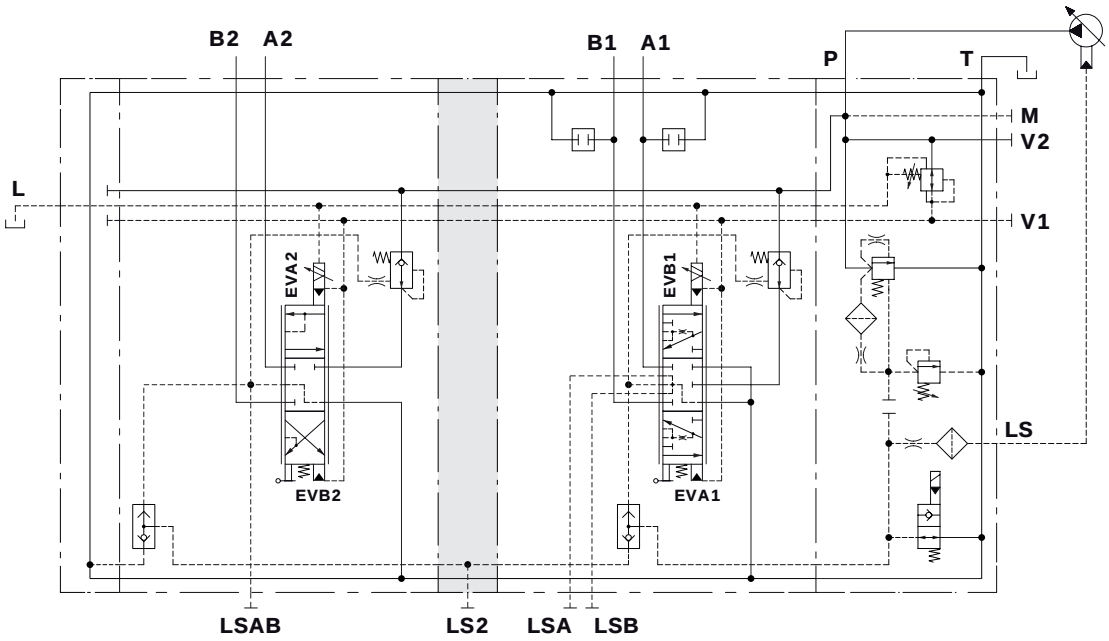
3 DPC130 side assembling kit

CODE	DESCRIPTION
5TIR108112	For 1 working section valve
5TIR108160	For 2 working sections valve
5TIR108208	For 3 working sections valve
5TIR108256	For 4 working sections valve
5TIR108304	For 5 working sections valve
5TIR108352	For 6 working section valve
5TIR108400	For 7 working sections valve
5TIR108448	For 8 working sections valve
5TIR108496	For 9 working sections valve

Connection between DPC Series valve



Nr. of working sections	dim. E				dim. F	
	BR inlet section		BRF inlet section			
	mm	*in*	mm	*in*	mm	*in*
1	101.5	*4.00*	73.1	*2.88*	97	*3.82*
2	151.5	*6.08*	126.1	*4.96*	145	*5.71*
3	207.5	*8.17*	179.1	*7.05*	193	*7.60*
4	260.5	*10.26*	232.1	*9.14*	241	*9.49*
5	313.5	*12.34*	285.1	*11.22*	289	*11.38*
6	366.5	*14.43*	338.1	*13.31*	337	*13.27*
7	419.5	*16.52*	391.1	*15.40*	385	*15.16*
8	472.5	*18.60*	444.1	*17.48*	433	*17.05*
9	525.5	*20.69*	497.1	*19.57*	481	*18.94*



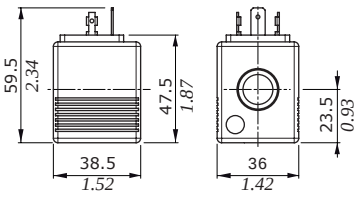
Coils and connectors

Coil type	Voltage	Connectors					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Fili uscenti (senza conn.)
BER	10 VDC	4SLE001000	-	-	-	-	-
	12 VDC	4SLE001200 4SLE001217 (3)	4SLE001201 (5) 4SLE001209 (3-5) 4SLE001202 (6) 4SLE001216 (3-6) 4SLE001206 (2)	4SLE001203 (5) 4SLE001211(3-5)	4SLE001210 (2)	4SLE001214 (2)	4SLE001207
	24 VDC	4SLE002400 4SLE002408 (3) 4SLE302400 (1)	4SLE002401(5) 4SLE0024007 (3-5) 4SLE002402(6)	4SLE002403 (5)	-	-	4SLE002404
	48 VDC	4SLE004800 4SLE304800 (1)	-	-	-	-	-
	110VDC	4SLE011000 4SLE311000 (1)	-	-	-	-	-
	220 VDC	4SLE022000 4SLE322000 (1)	-	-	-	-	-
BT	10 VDC	4SL3000100					
	12 VDC	4SL3000120 4SL3000126 (4)	4SL3000130 (6) 4SL3000134 (3-6) 4SL3000128 (2)	4SL3000122 (5) 4SL3001200 (3-5)	4SL3000124 (2)	4SL3000127 (2)	4SL300012C
	24 VDC	4SL3000240 4SL3030240 (1)	4SL3000249 (6) 4SL300024C (3-6)	4SL3000248 (5)	-	-	4SL3000246
	26 VDC	4SL3000260	-	-	-	-	-
	48 VDC	4SL3000480 4SL3030480 (1)	-	-	-	-	-
	110 VDC	4SL3001100 4SL3031100 (1)	-	-	-	-	-
	220 VDC	4SL3002200 4SL3032200 (1)	-	-	-	-	
Mating connectors							
Standard		4CN1009995	5CON140031	5CON003	-	-	
With rectifier	24VDC	4CN3010240	-	-	-	-	
	48VDC	4CN3010480	-	-	-	-	
	110VDC	4CN3011100	-	-	-	-	
	220VDC	4CN3012200	-	-	-	-	

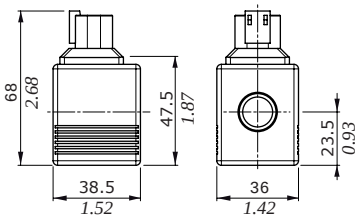
Notes: (1) to use only with rectifier connector - (2) with flying leads - (3) with bidirectional diode - (5) with unidirectional diode
(5) integrated perpendicular type - (6) integrated parallel type

Type BER

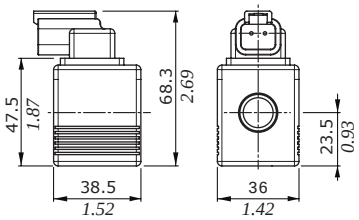
ISO4400 connector



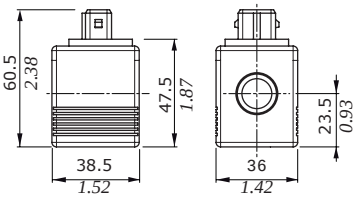
DEUTSCH DT04 connector
(perpendicular type)



DEUTSCH DT04 connector
(parallel type)



AMP JPT connector



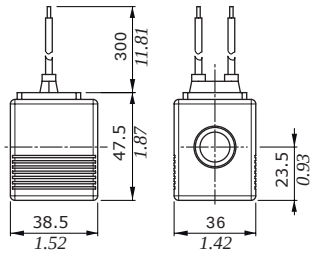
Features

Nominal voltage tolerance : ±10%
Power rating . . . . . : 19.3 W - 12VDC
: 19.2 W - 24VDC
: 19.2 - 48VDC
: 19.2 - 110VDC
: 19.3 - 220VDC
Max. operating current . . : 1.61 A - 12VDC
: 0.80 A - 24VDC
: 0.40 A - 48VDC
: 0.17 A - 110VDC
: 0.09 A - 220VDC
Coil insulance . . . . . : Class H (180°C - *356°F*)
Weather protection . . . . . : IP65 - ISO4400
: IP69K - Deutsch DT
: IP65 - AMP JPT
Insertion . . . . . : 100%

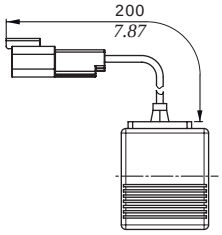
Coils and connectors

Type BER

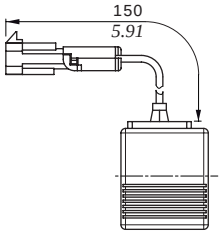
Flying leads



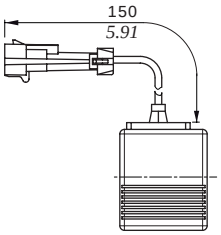
Flying leads with DEUTSCH DT04 connector



Flying leads with PACKARD WEATHER-PACK connector

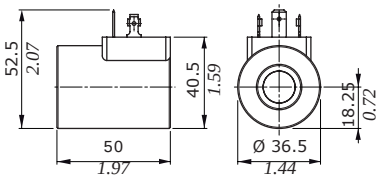


Flying leads with PACKARD METRI-PACK connector

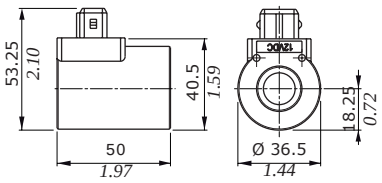


Type BT

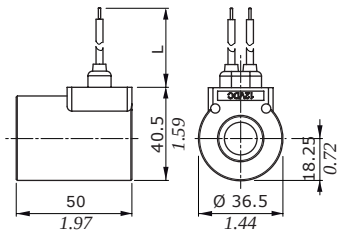
ISO4400 connector



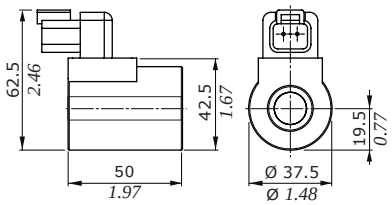
AMP JPT connector



Flying leads



DEUTSCH DT04 connector

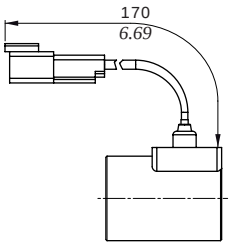


Features

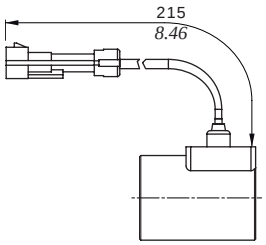
Nominal voltage tolerance : ±10%
Power rating . . . . . : 21 W - 12 VDC
: 21 W - 24 VDC
: 21 W - 26 VDC
: 20.3 W - 48 VDC
: 15,7 W - 110 VDC
: 21.7 W - 220 VDC
Max. operating current . . : 1.77 A - 12 VDC
: 0.89 A - 24VDC
: 0.84 A - 26 VDC
: 0.43 A - 48 VDC
: 0.15 A - 110 VDC
: 0.1 A - 220 VDC
Coil insulance . . . . . : Class F (155°C - *311°F*)
Weather protection . . . . . : IP65 - ISO4400
: IP69K - Deutsch DT
: IP65 - AMP JPT
: IP67 - Weatherpack
: IP67 - Metri-pack
Insertion . . . . . : 100%

Coil type	Dimension L	
	(mm)	*(in)*
12VDC	247	*9.72*
24VDC	307	*12.09*

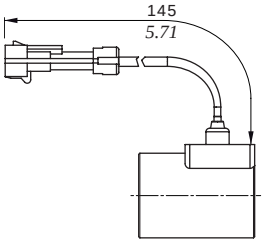
Flying leads with DEUTSCH DT04 connector



Flying leads with PACKARD WEATHER-PACK connector



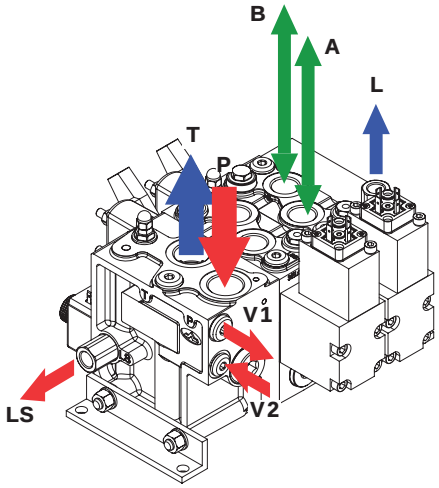
Flying leads with PACKARD METRI-PACK connector

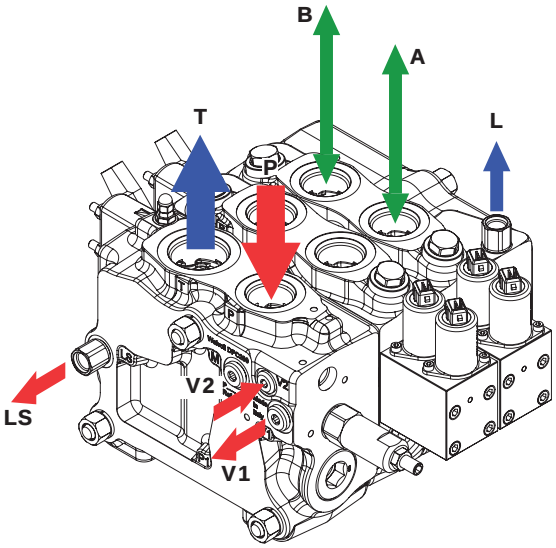


Installation and maintenance

The DPC Series valves are assembled and tested as per the technical specification of this catalogue.
Before the final installation on your equipment, follow the below re commendations:

- the valve can be assembled in any position; in order to prevent body deformation and spool sticking mount the product on a flat surface;
- In order to prevent the possibility of water entering the spool control kit, do not use high pressure wash down directly on the valve;
- prior to painting, ensure plugs on normally open ports are tightly in place.





	FITTINGS TIGHTENING TORQUE - Nm / *lbft*					
THREAD TYPE	**P inlet port**	**A and B workports**	**T outlet port**	**LS signal port V pilot ports***	**L drain port**	**Hydraulic control ports**
DPC130 BSP	G 3/4	G 1/2	G 3/4	G 1/4	G 1/4	G 1/4
With O-Ring seal	90 / *66.4*	50 / *36.9*	90 / *66.4*	25 / *18.4*	25 / *18.4*	25 / *18.4*
With copper washer	90 / *66.4*	60 / *44.3*	90 / *66.4*	30 / *22.1*	30 / *22.1*	30 / *22.1*
With steel and rubber washer	70 / *51.6*	60 / *44.3*	70 / *51.6*	16 / *11.8*	16 / *11.8*	16 / *11.8*
UN-UNF	1 1/16-12 (SAE 12)	7/8-14 (SAE 10)	1 1/16-12 (SAE 12)	9/16-18 (SAE 6)	9/16-18 (SAE 6)	9/16-18 (SAE 6)
With O-Ring seal	95 / *70*	50 / *36.9*	95 / *70*	30 / *22.1*	30 / *22.1*	30 / *22.1*
DPC200 BSP	G 1	G 1	G 1-1/4	G 1/4	G 1/4	G 1/4
With O-Ring seal	120 / *88.5*	120 / *88.5*	190 / *140*	25 / *18.4*	25 / *18.4*	25 / *18.4*
With copper washer	120 / *88.5*	120 / *88.5*	190 / *140*	30 / *22.1*	30 / *22.1*	30 / *22.1*
With steel and rubber washer	120 / *88.5*	120 / *88.5*	190 / *140*	16 / *11.8*	16 / *11.8*	16 / *11.8*
UN-UNF	1 5/16-12 (SAE 16)	1 5/16-12 (SAE 16)	1 5/8-12 (SAE 20)	9/16-18 (SAE 6)	9/16-18 (SAE 6)	7/16-20 (SAE 4)
With O-Ring seal	150 / *111*	150 / *111*	200 / *147*	30 / *22.1*	30 / *22.1*	18 / *13.3*
SAE J518 code 61 ISO 6162-1 type 1 [bolts threading]	3/4 [3/8-16 UNC] DN 19 [M10]	3/4 [3/8-16 UNC] DN 19 [M10]	1 [3/8-16 UNC] DN 25 [M10]	-	-	-
	28-40 / *20.7-29.5*	28-40 / *20.7-29.5*	37-48 / *27.3-35.4*	-	-	-

(*) V2 port is M14x1.5 threading: tightening torque value is the same of G1/4 thread

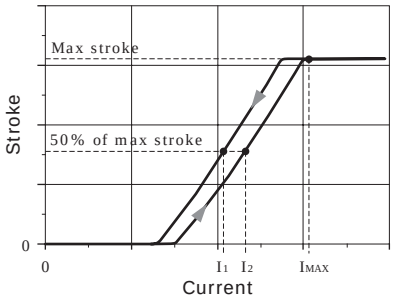
NOTE – *These torque are recommended. Assembly tightening torque depends on many factors, including lubrication, coating and surface finish.*

Appendix A

Electrohydraulic controls: hysteresis calculation rule

Hysteresis is calculated as difference between control currents (I_2-I_1), needed to reach 50% of nominal spool stroke, referred to maximum control current I_{MAX}, needed to reach 100% of spool stroke.
I_2 is determined on spool stroke increase line, I_1 is determined on spool stroke decrease line.

Example diagram for data detection



$$\text{Hysteresis \%} = \frac{I_2 - I_1}{I_{MAX}} \times 100$$

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