



HYDRA

120L GT *PART*

120L Monoblock Valve

Specifications

Spool: 1/ Double - Single - Closed Center- Motor Spool

Flow: 120L Nominal - 140L Max

Ports: 1/2 Standard- 3/4 Optional

Front Cap: Handle - Remote Cable Control - Lock Handle

Open Center | Carry over is notavailable | Parallel Circuit



Features

Simple, compact designed, this valve is only one section for open center and closed center hydraulic systems.

- ▶ Fitted With Main Pressure Relief Valve.
- ▶ Diameter 20 mm-0.79 in interchangeable spools.
- ▶ Available manual, pneumatic, electro-hydraulic and remote with flexible cable spool control kits.

Additional information

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

WARNING!

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

APPROVED HYDRAULICS LIMITED IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN INCORRECT USE OF THE PRODUCT.

1st edition January 2023:

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Valve general information

Working conditions

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

Nominal flow rating		120 l/min.	32 US gpm
Max. flow		140 l	37 US gpm
Operating pressure (max.)		250 bar	3600 psi
Back pressure (max.)	T outlet port	20 bar	290 psi
Internal leakage (standard) A(B) T	p=100 bar (1450 psi)	3cm ³ /min.	0.18 in ³ /min.
Hydraulic fluid		Mineral base oil	
Fluid temperature	with NBR seals	from - 20° to 80°C	from -4°F to 176°F
	with FPM (VITON) seals	from - 20° to 100°C	from -4°F to 212°F
Viscosity	operating range	from 15 to 75 mm ² /s	from 15 to 75 cSt
	min.	12 mm ² /s	12 cSt
	max.	400 mm ² /s	400 cSt
Max. contamination level		-/19/16 - ISO 4406	NAS 1638 - class 10
Ambient temperature for working conditions	with mechanical devices	from -40°C to 60°C	from -40°F to 140°F
	with pneumatic and hydraulic devices	from -30°C to 80°C	from -22°F to 140°F
	with electric devices	from -20°C to 50°C	from -4°F to 122°F

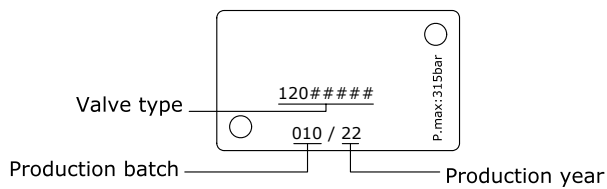
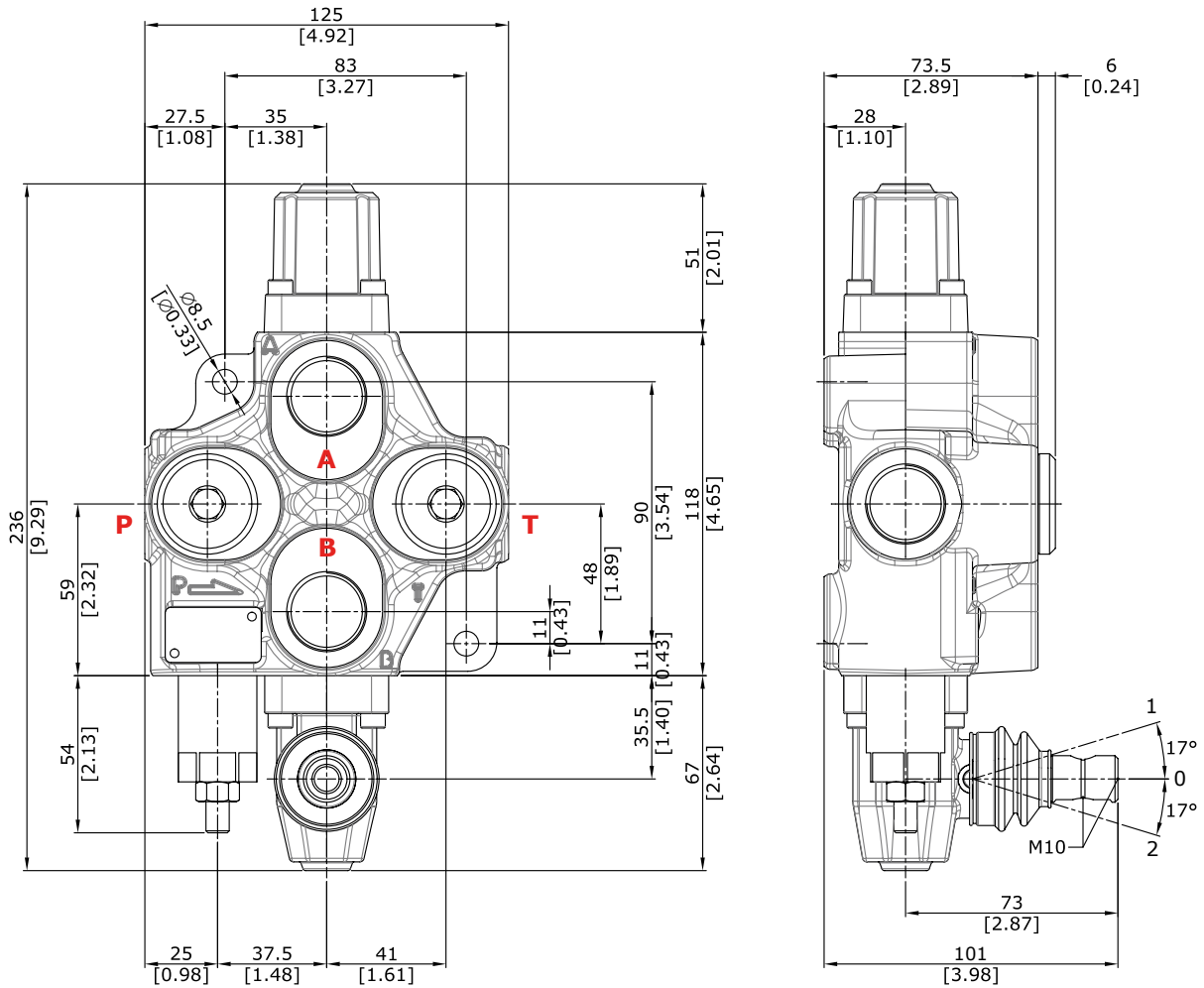
Standard threads

REFERENCE STANDARD			
	BSP	UN-UNF	NPTF
THREAD ACCORDING TO	ISO 228/1	ISO 263	ANSI B1.20.3
	BS 2779	ANSI B1.1 unified	
CAVITY DIMENSION ACCORDING TO	ISO 1179-1	11926-1	
	SAE	J1926-1	J476a
	DIN 3852-2 shape X or Y		

PORTS THREADING			
MAIN PORTS	BSP	OPTIONAL	UN-UNF
P inlet	G 3/4	G 1/2	1 1/16-12 (SAE 12)
A and B ports	G 3/4	G 1/2	1 1/16-12 (SAE 12)
T outlet	G 3/4	G 1/2	1 1/16-12 (SAE 12)
PILOT PORTS			
Hydraulic	G 1/4	-	-
Pneumatic	G 1/8	-	-

Valve general information

Dimensional data



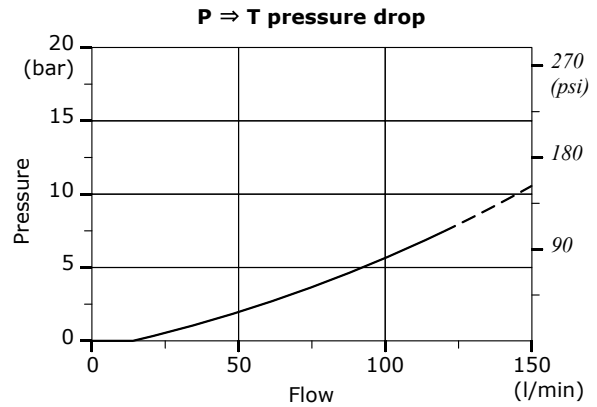
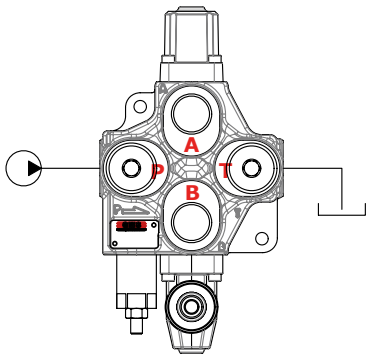
NOTE - Drawings and dimensions are referred to **BSP** thread configuration.

Valve general information

Performance data (pressure drop vs. flow)

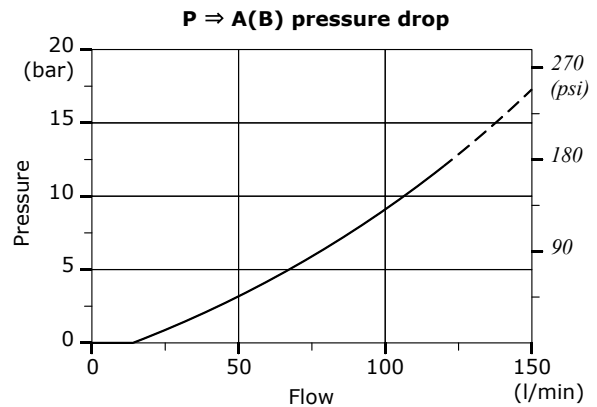
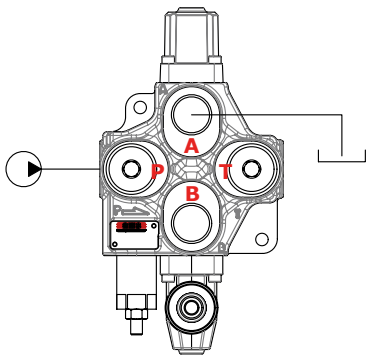
Open centre

From side inlet to side outlet.



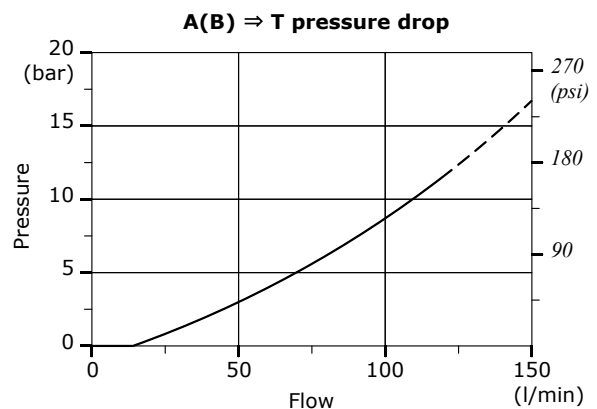
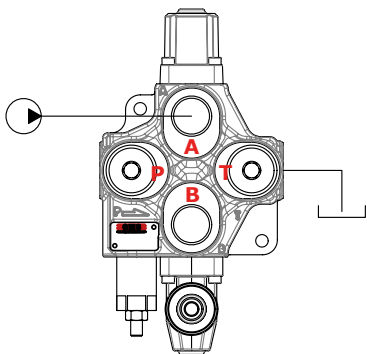
Inlet to work port

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



Work port to outlet

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

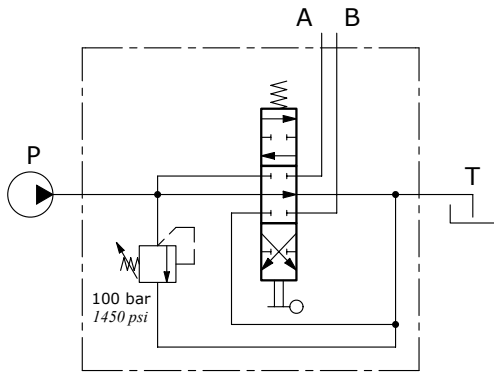


Valve general information

Hydraulic circuit

Standard configuration

Standard valve is supplied with positive overlap spool (1CP).

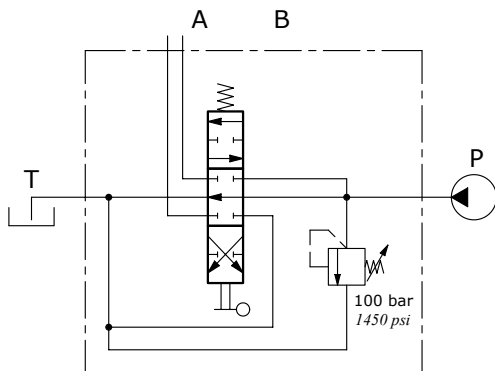


Description example

120L GT16/1(X-100)/1CP8L/PSL5

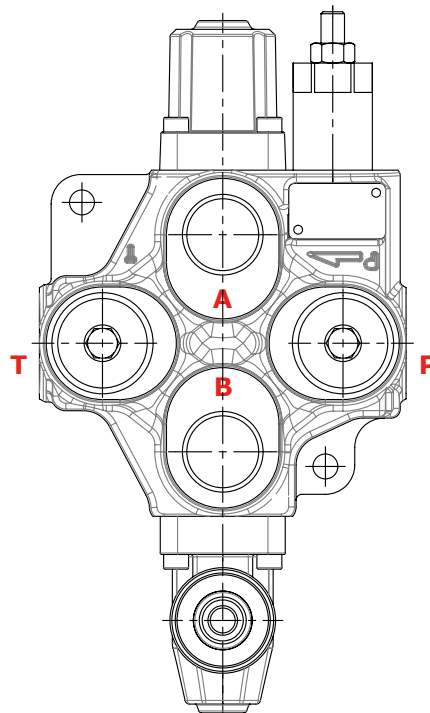
Right inlet

A symmetrical body allows the reverse assembly of spool and relative control kit and lever (ED configuration).



Description example

120L GT16/1(X-100)/ED-1CP8L/PSL5

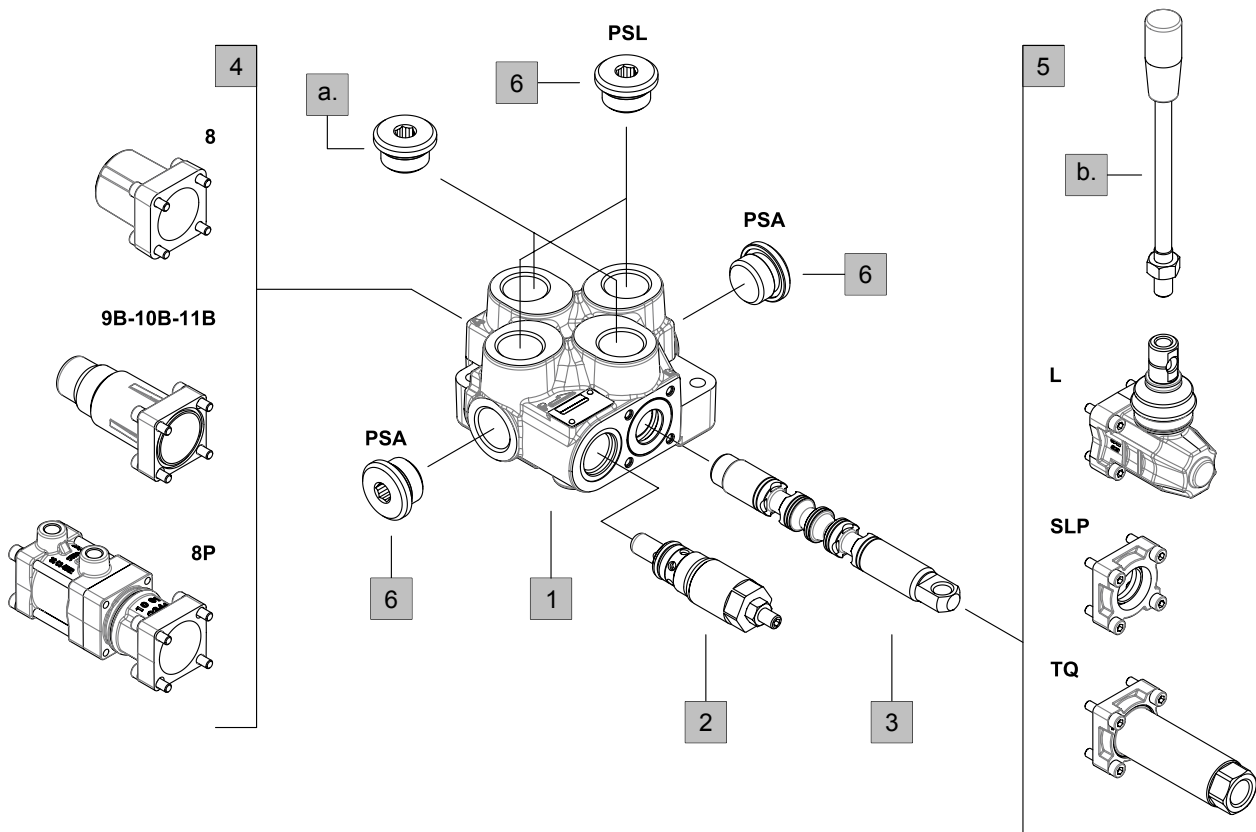
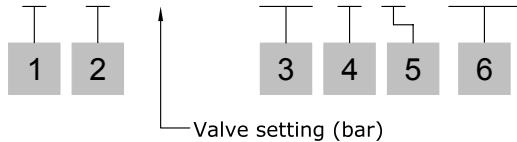


Valve general information

Ordering codes

Description example:

120L GT16 / 1 (X - 100) / 1CP 8 L / PSL5



1. Body kit *

TYPE	CODE	DESCRIPTION
1	30 08 9066	1 section

Include body, seals, rings and load check valve.

2. Inlet relief options page 9

TYPE	CODE	DESCRIPTION
Direct pressure relief valve X type (standard) (X-100)	30 05 4912	Range 60-315 bar (870-4570 psi) standard setting 100 bar (1450 psi)

TYPE	CODE	DESCRIPTION
Pilot operated pressure relief valve Z type (Z-100)	30 05 4915	Range 60-315 bar (870-4570 psi) standard setting 100 bar (1450 psi)

Standard setting is referred to 6 l/min flow.
(V) 30 05 4914 Relief valve blanking plug

3. Spools page 11

TYPE	CODE	DESCRIPTION
1CP	30 01 3589	Double acting, 3 positions, with A and B closed in neutral position
2	30 01 3591	Double acting, 3 positions, with A and B to tank in neutral position
open		
3CP	30 01 3595	Single acting on A, 3 positions, B plugged; requires G3/4 plug (see part a)
4CP	30 01 3596	Single acting on B, 3 positions, A plugged; requires G3/4 plug (see part a)
6	30 01 3590	Double acting, 3 positions, closed center
7	30 01 3593	Double acting, 3 positions, closed center with A and B to tank in neutral position
D4	30 01 3592	Double acting, 2 positions, without neutral position

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

Valve general information

Ordering codes

4. "A" side spool positioners page 12

TYPE	CODE	DESCRIPTION
8	30 07 5375	With spring return in neutral position
8D	30 07 5383	As type 8, M8 female threaded pin extension for dual control
8D1	30 07 5402	As type 8, pin with Ø 8 mm (0.31 in) radial hole
8D2	30 07 5384	As type 8, M8 male threaded pin extension for dual control
8TL	30 07 5397	As type 8, for flexible cable control
8F2	30 07 5377	As type 8 with adjustable stroke limiter
19	30 07 5436	With spring return in position 0 from 1
20	30 07 5437	With spring return in position 0 from 2
11	30 07 5378	Detent in positions neutral, 1 and 2
12	30 07 5438	Detent in positions 1 and 2
15	30 07 5439	2 positions, detent in positions 1 and neutral
16	30 07 5440	2 positions, detent in positions 2 and neutral
17	30 07 5441	With spring return position 1
18	30 07 5381	With spring return position 2
17D	30 07 5442	With spring return position 1 and pin with M8 female thread for dual control
18D	30 07 5382	With spring return position 2 and pin with M8 female thread for dual control
9B	30 07 5386	With detent in position 1 and spring return in neutral position
10B	30 07 5387	With detent in position 2 and spring return in neutral position
11B	30 07 5388	Detent in positions 1 and 2 and spring return inneutral position
8K	30 07 7553	As type 8 and 12 VDC solenoid lock device
	30 07 7554	As previous, 24 VDC
8MG1(NO)	30 07 7538	As type 8, operation with microswitch (NO) in position 1
8MG1(NC)	30 07 7539	As previous, (NC)
8MG2(NO)	30 07 7536	As type 8, operation with microswitch (NO) in position 2
8MG2(NC)	30 07 7537	As previous, (NC)
8MG3(NO)	30 07 5562	As type 8, operation with microswitch (NO) in positions 1 and 2
8MG3(NC)	30 07 5563	As previous, (NC)
8P	30 07 5399	ON/OFF pneumatic kit
8PF	30 07 5596	Proportional pneumatic kit
8EP3	30 07 5443	12 VDC ON/OFF electro-pneumatic kit
	30 07 5400	24 VDC ON/OFF electro-pneumatic kit
8EP4	30 07 5345	12 VDC ON/OFF electro-pneumatic kit with manifold
	30 07 5346	24 VDC ON/OFF electro-pneumatic kit with manifold
8EI3	30 07 5401	12 VDC ON/OFF electro-hydraulic kit
	30 07 5361	24 VDC ON/OFF electro-hydraulic kit
8EI3F	30 07 7565	12 VDC Proportional electro-hydraulic kit
	30 07 7566	24 VDC Proportional electro-hydraulic kit

5. "B" side options page 20

TYPE	CODE	DESCRIPTION
L	30 07 5403	Standard lever box
LF1	30 07 5405	Lever box with spool stroke limiter in position 1
LB	30 07 5407	Steel lever kit (LB1-LB3)
	30 07 5571	Steel lever kit (LB2-LB4)
	30 07 7556	Steel lever kit (LB5-LB7)
SL	-	Without lever box
SLP	30 07 5406	Without lever box, with dust-proof plate
TQ	30 07 5398	Flexible cable connection; for CG cables
LEB	30 07 5409	Safety lever box, vertical configuration
SLCZ	30 07 5347	Without lever box, with endcap.

6. Inlet and outlet selection *

TYPE	CODE	DESCRIPTION
PSL5	30 05 4920	G3/4 plug for upper inlet
	30 05 4920	G3/4 plug for upper outlet
PSA5	30 05 4920	G3/4 plug for side inlet
	30 05 4920	G3/4 plug for side outlet

7. Complete controls page 23

TYPE	CODE	DESCRIPTION
ON/OFF Hydraulic control		
8IM	30 07 5414	ON/OFF Hydraulic control
Rotative control type		
R	30 07 5379	Rotative control type

a. "A" and "B" ports plugs

TYPE	CODE	DESCRIPTION
G3/4	30 05 4920	For single acting spools type 3CP and 4CP

b. Optional handlevers

TYPE	CODE	DESCRIPTION
M10x225	20 03 2381	Lenght L = 225mm / 8.86in

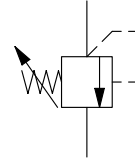
NOTE (*) – Codes are referred to **BSP** thread.

Inlet relief options

Direct pressure relief valve

30 05 4912 (**X - 100**)

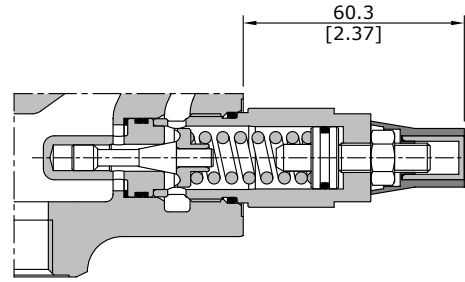
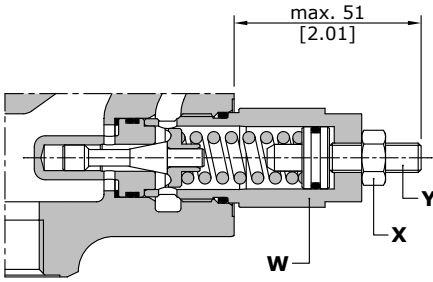
Configuration ——— Valve setting (bar)



Adjustment type

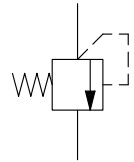
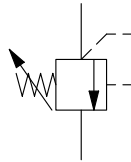
Configuration **X** type: adjustable with screw

Configuration **XH** type: valve set and locked



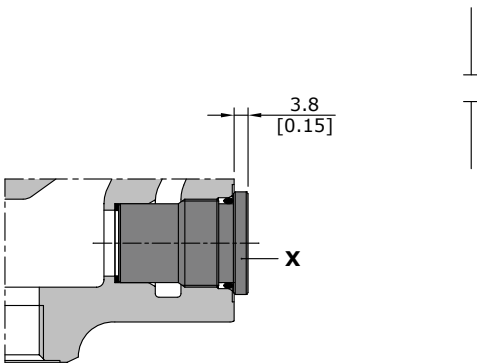
Wrenches and tightening torques

- X = wrench 13 - 24 Nm (17.7 lbf_t)
- Y = allen wrench 4
- W = wrench 24 - 42 Nm (31 lbf_t)



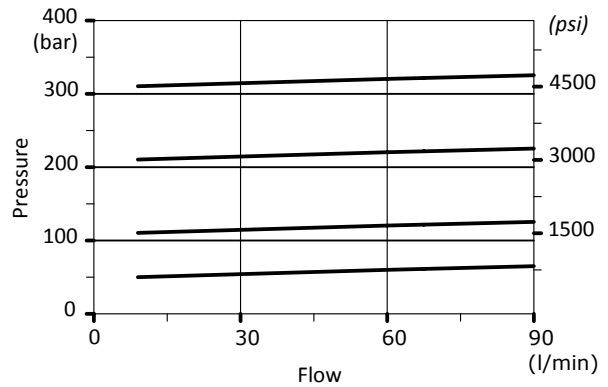
V: relief valve blanking plug

Performance data



Wrenches and tightening torques

- X = allen wrench 10 - 42 Nm (31 lbf_t)



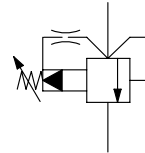
Inlet relief options

Pilot pressure relief valve

30 05 4915 (**Z** - **100**)

Configuration

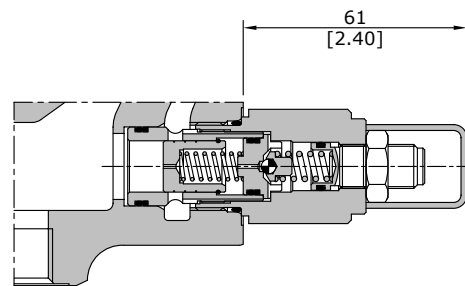
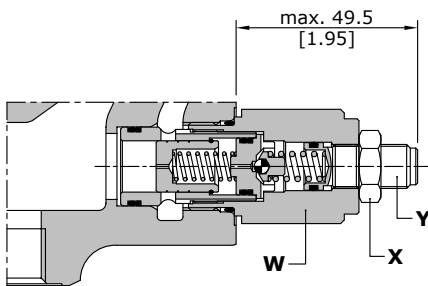
Valve setting (bar)



Adjustment type

Configuration **Z** type: adjustable with screw

Configuration **ZH** type: valve set and locked

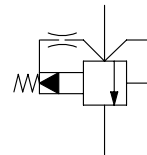
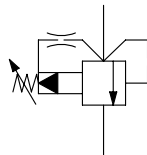


Wrenches and tightening torques

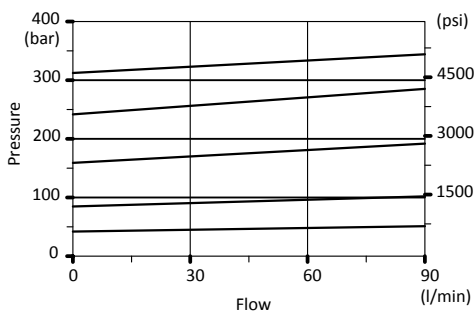
X = wrench 19 - 24 Nm (17.7 lbf_t)

Y = allen wrench 5

W = wrench 27 - 42 Nm (31 lbf_t)



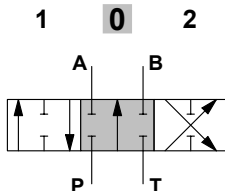
Performance data



Spools options

1CP, ED-1CP (30 01 3589) spool type

Double acting, 3 positions, with A and B closed in neutral position

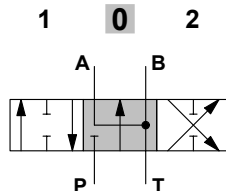


Spool stroke

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

2, ED-2 (30 01 3591) spool type

Double acting, 3 positions, with A and B open to tank in neutral position

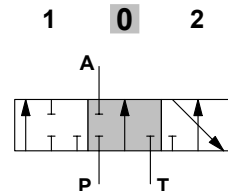


Spool stroke

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

3CP, ED-3CP (30 01 3595) spool type

Single acting on A, 3 positions, B plugged; requires G3/4 plug

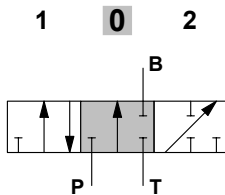


Spool stroke

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

4CP, ED-4CP (30 01 3596) spool type

Single acting on B, 3 positions, A plugged; requires G3/4 plug

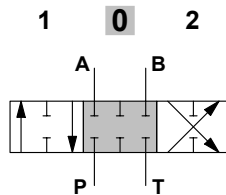


Spool stroke

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

6, ED-6 (30 01 3590) spool type

Double acting, 3 positions, closed center

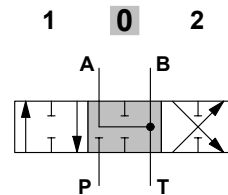


Spool stroke

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

7, ED-7 (30 01 3593) spool type

Double acting, 3 positions, closed center with A and B to tank in neutral position

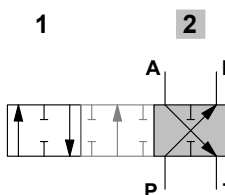


Spool stroke

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

D4 (30 01 3592) spool type

Double acting, 2 positions, without neutral position



Spool stroke

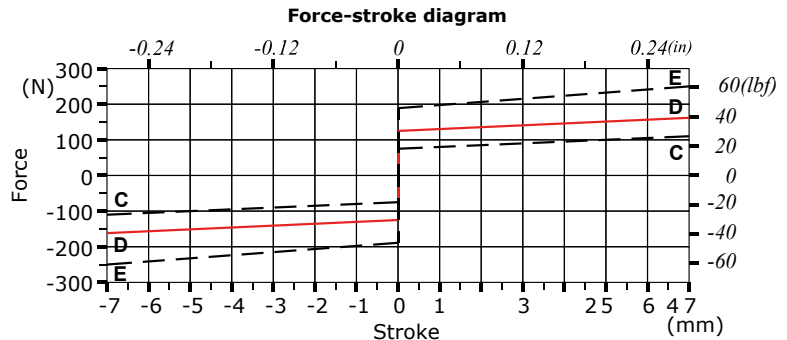
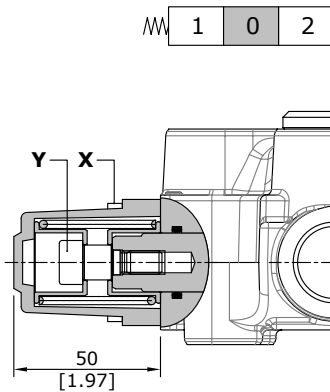
position 1: + 14 mm (+ 0.56 in)

"A" side spool positioners

With spring return in neutral position

8 type (30 07 5375)

It's supplied with standard spring type D (see force-stroke diagram) and available with lighter spring type C (**8MC**) or heavier type E (**8ME**).

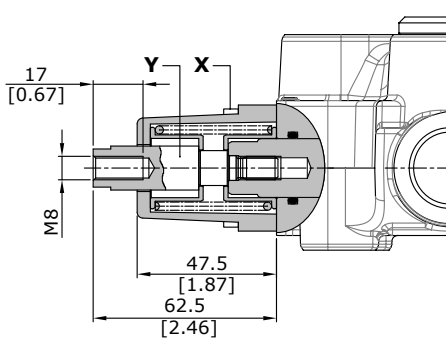


Wrenches and tightening torques

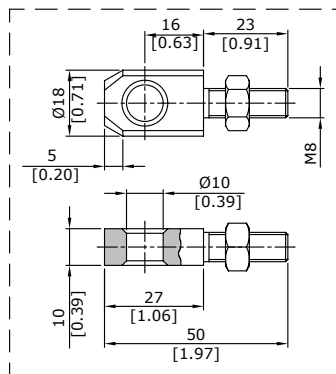
X = allen wrench 4 - 6 Nm (4.4 lbf_t)
Y = allen wrench 6 - 24 Nm (17.7 lbf_t)

8D type (30 07 5383)

With M8 female threaded pin extension for dual control.



Spool end joint dimensions (optional)



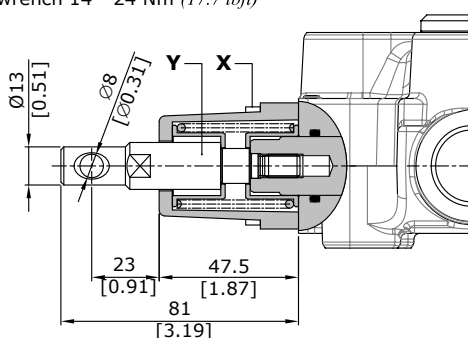
Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf_t)
Y = wrench 13 - 24 Nm (17.7 lbf_t)

8D1 type (30 07 5402)

Wrenches and tightening torques

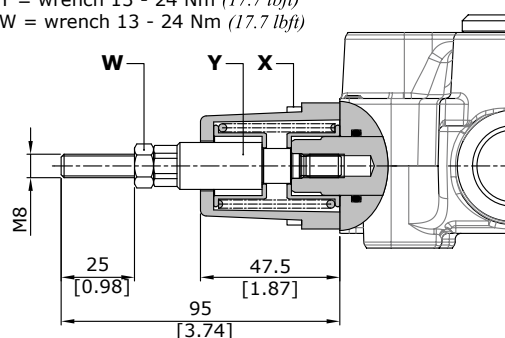
X = allen wrench 4 - 6 Nm (4.4 lbf_t)
Y = wrench 14 - 24 Nm (17.7 lbf_t)



8D2 type (30 07 5384)

Wrenches and tightening torques

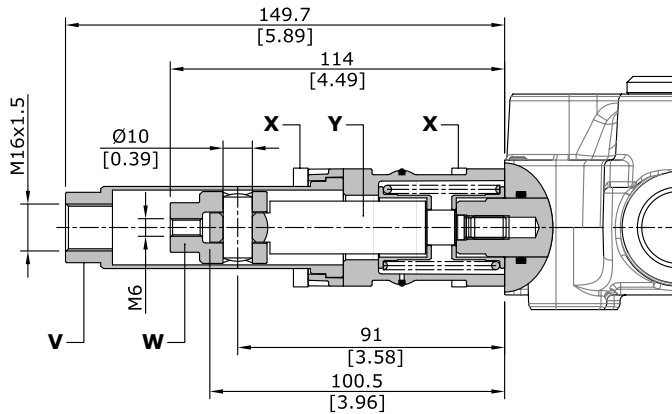
X = allen wrench 4 - 6 Nm (4.4 lbf_t)
Y = wrench 13 - 24 Nm (17.7 lbf_t)
W = wrench 13 - 24 Nm (17.7 lbf_t)



"A" side spool positioners

With spring return in neutral position

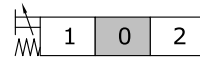
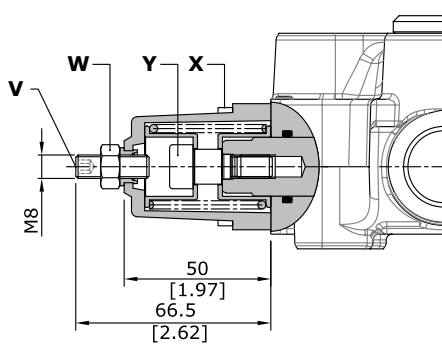
8TL type (30 07 5397)



Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = wrench 10 - 24 Nm (17.7 lbft)
 W = wrench 17
 V = wrench 24

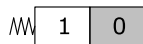
8F2 type (30 07 5377)

With spool stroke adjustment in position 2 (P→B)

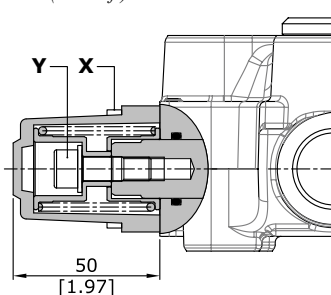


Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)
 W = wrench 13 - 24 Nm (17.7 lbft)
 V = allen wrench 4

19 type (30 07 5436)



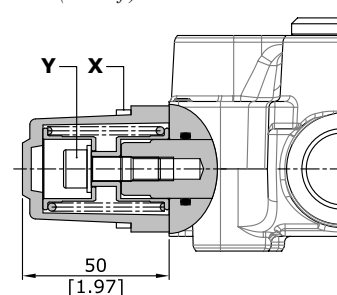
Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)



20 type (30 07 5437)



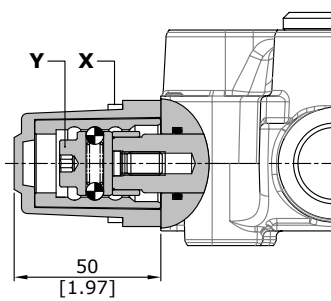
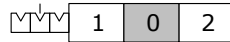
Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)



"A" side spool positioners

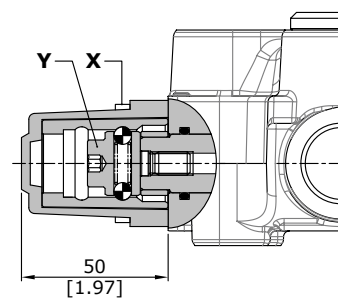
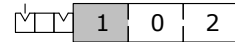
With detent

11 type (30 07 5378)



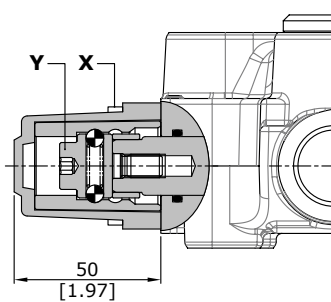
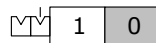
Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)

12 type (30 07 5438)



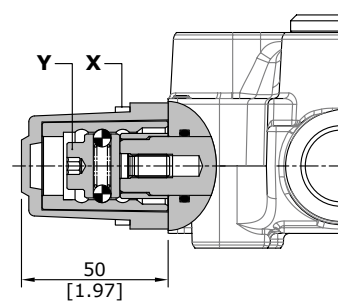
Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)

15 type (30 07 5439)



Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)

16 type (30 07 5440)

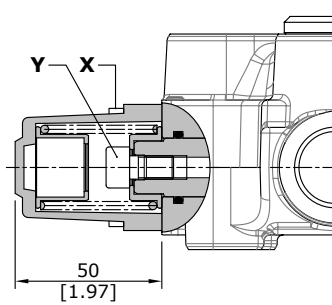
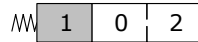


Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbft)
 Y = allen wrench 6 - 24 Nm (17.7 lbft)

"A" side spool positioners

With spring return

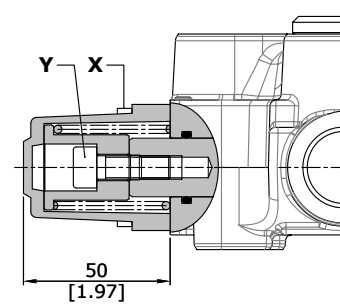
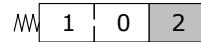
17 type (30 07 5441)



Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbft)
Y = allen wrench 6 - 24 Nm (17.7 lbft)

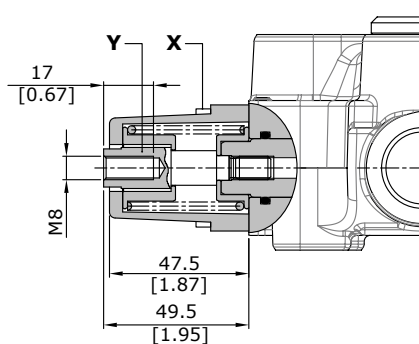
18 type (30 07 5381)



Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbft)
Y = allen wrench 6 - 24 Nm (17.7 lbft)

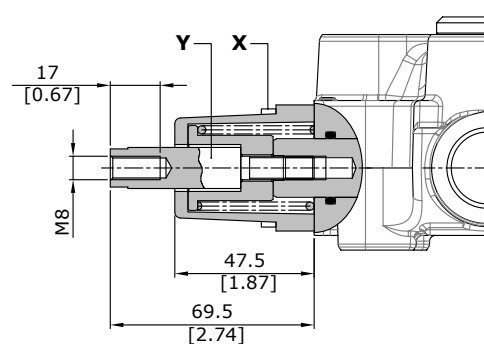
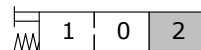
17D type (30 07 5442)



Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbft)
Y = wrench 13 - 24 Nm (17.7 lbft)

18D type (30 07 5382)



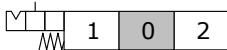
Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbft)
Y = wrench 13 - 24 Nm (17.7 lbft)

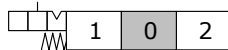
"A" side spool positioners

With detent and spring return to neutral position from either directions

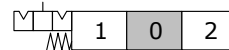
9B type (30 07 5386)
detent in position 1
(curve A)



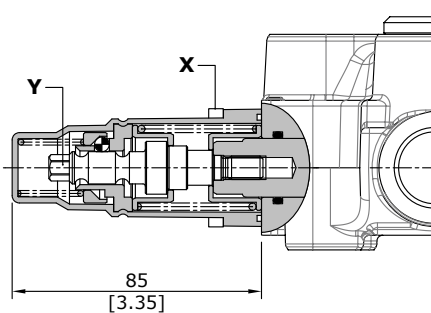
10B type (30 07 5387)
detent in position 2
(curve B)



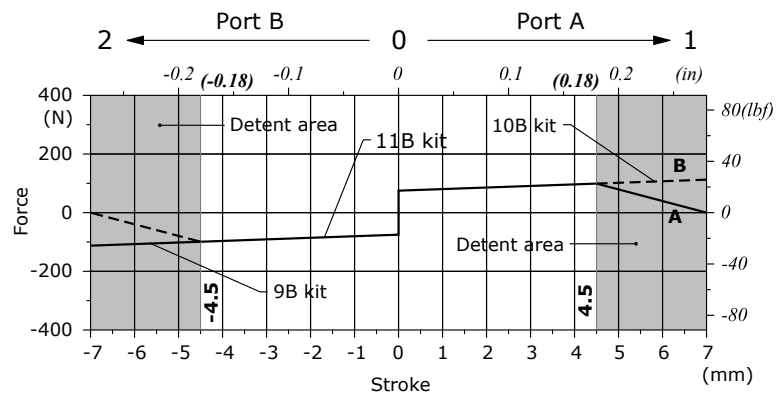
11B type (30 07 5388)
detent in position 1 and 2
(curves A and B)



11B type



Detent force-stroke



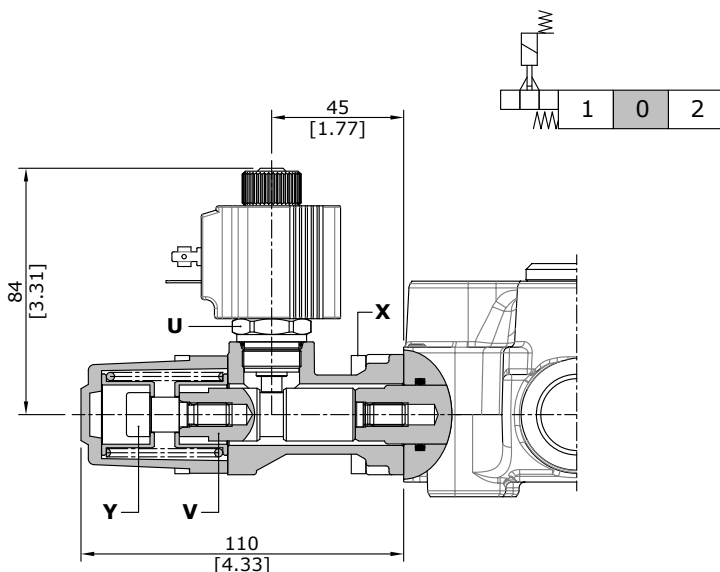
Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf)
Y = wrench 8 - 9 Nm (6.6 lbf)

Position 1 - Detent force: 130 N (29.2 lbf) ± 10% / Release force: 215 N (48.3 lbf) ± 10%
Position 2 - Detent force: 145 N (32.6 lbf) ± 10% / Release force: 300 N (67.4 lbf) ± 10%

Solenoid lock device 8K type (30 07 7553)

With spring return and spool electromechanical lock in neutral position; when coil is feeded the spool can be moved. it's possible to obtain further configurations with several "A" side spool positioners: contact Sales Dept.



Wrenches and tightening torques

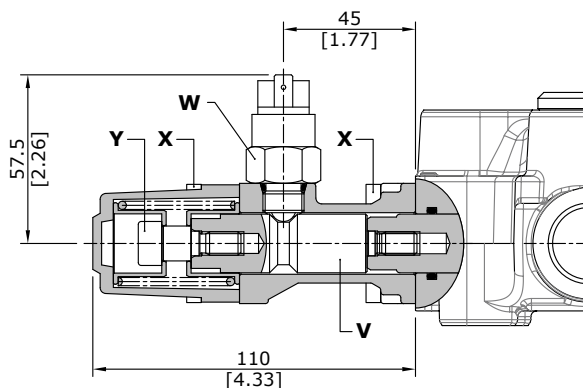
X = allen wrench 4 - 6 Nm (4.4 lbf)
Y = allen wrench 6 - 24 Nm (17.7 lbf)
V = wrench 15 - 24 Nm (17.7 lbf)
U = wrench 24 - 24 Nm (17.7 lbf)

"A" side spool positioners

With microswitch

8MG3(NO) type (30 07 5562)

With spring return in neutral position and microswitch operated in both directions.
 Also available **8MG1(NO)** (microswitch operated in position 1) and **8MG2(NO)** (microswitch operated in position 2) configurations; dimension are the same of **8MG3(NO)** configuration.
 Same configurations are available with normally closed (NC) contact.
 For more information contact Sales Department.

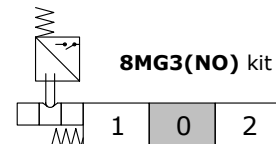


Wrenches and tightening torques

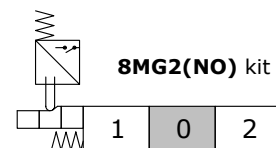
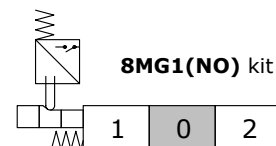
- X = allen wrench 4 - 6 Nm (4.4 lbf_t)
- Y = allen wrench 6 - 24 Nm (17.7 lbf_t)
- W = wrench 22 - 42 Nm (31 lbf_t)
- V = wrench 17 - 9.8 Nm (7.2 lbf_t)

Operating features

- MICROSWITCH**
- Mechanical life : 5x10⁵ operations
 - Electrical life (resistive load) : 5x10⁴ operations 10A / 12VDC
 - : 5x10⁴ operations 3A / 24VDC

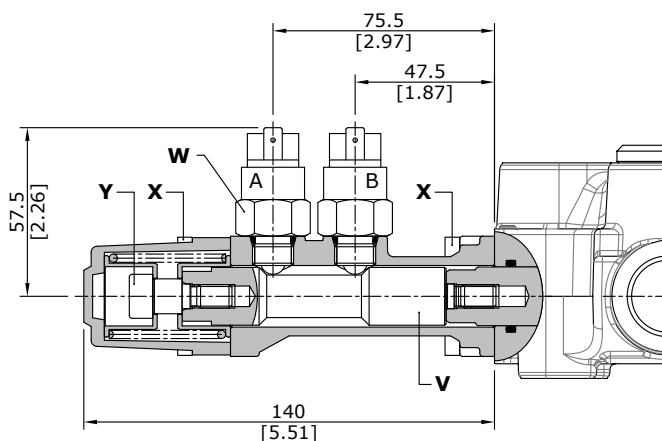


Other configurations



8MG1\MG2(NC\NC) type (30 07 5360)

With double microswitch in position 1 and 2.

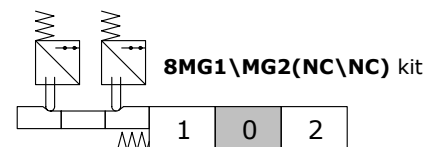


Wrenches and tightening torques

- X = allen wrench 4 - 6 Nm (4.4 lbf_t)
- Y = allen wrench 6 - 24 Nm (17.7 lbf_t)
- W = wrench 22 - 42 Nm (31 lbf_t)
- V = wrench 17 - 9.8 Nm (7.2 lbf_t)

Operating features

- MICROSWITCH**
- Mechanical life : 5x10⁵ operations
 - Electrical life (resistive load) : 5x10⁴ operations 10A / 12VDC
 - : 5x10⁴ operations 3A / 24VDC



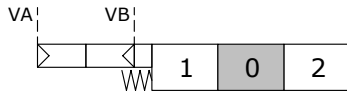
Positions	A	B
1		
0		
2		

"A" side spool positioners

ON/OFF pneumatic kit and proportional pneumatic kit

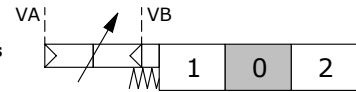
ON/OFF pneumatic: 8P type (30 07 5399)

With spring return to neutral position.



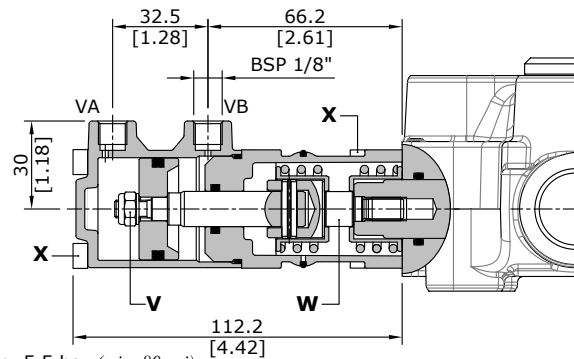
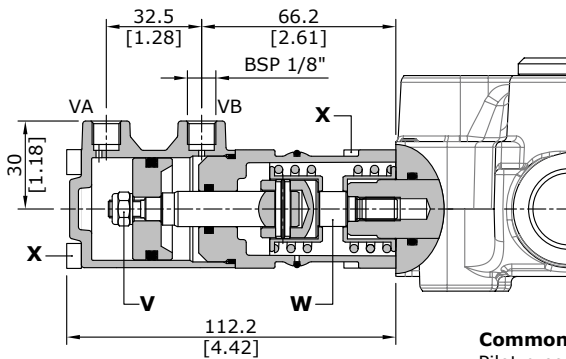
Proportional pneumatic: 8PF type (30 07 5596)

With spring return to neutral position.



Wrenches and tightening torques

- X = allen wrench 4 - 6 Nm (4.4 lbf^t)
- W = wrench 17 - 24 Nm (17.7 lbf^t)
- V = wrench 13 - 9 Nm (6.6 lbf^t)



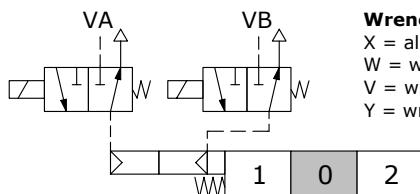
Common features

Pilot pressure.....: min. 5.5 bar (min. 80 psi)
: max. 10 bar (min. 145 psi)

ON/OFF electro-pneumatic kit

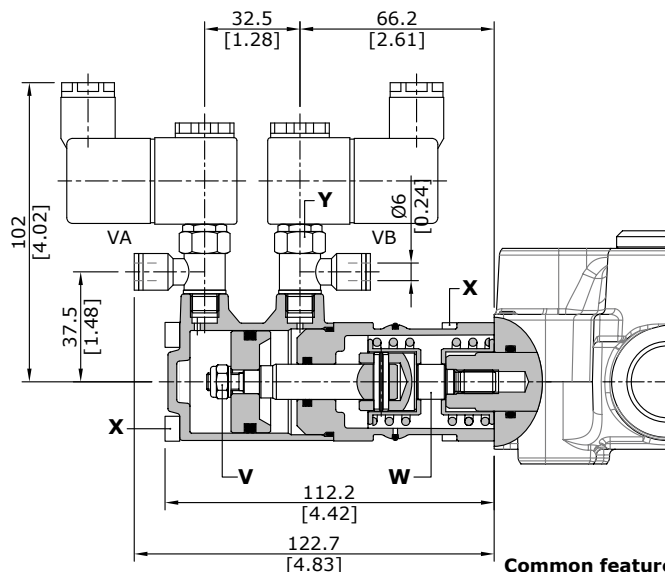
Electro-pneumatic: 8EP3 type

With spring return to neutral position.



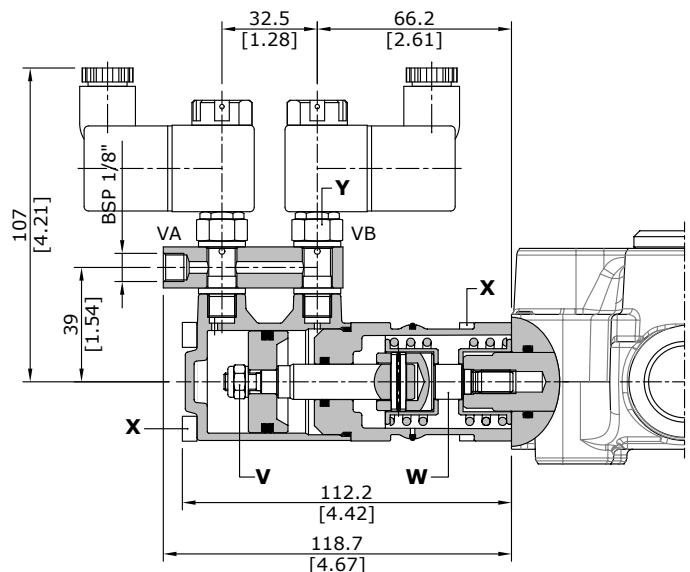
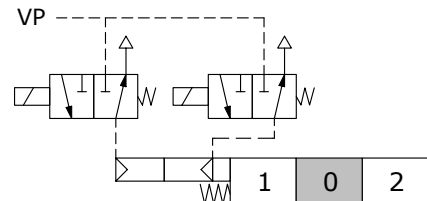
Wrenches and tightening torques

- X = allen wrench 4 - 6 Nm (4.4 lbf^t)
- W = wrench 17 - 24 Nm (17.7 lbf^t)
- V = wrench 13 - 9 Nm (6.6 lbf^t)
- Y = wrench 15 - 6 Nm (4.4 lbf^t)



Electro-pneumatic: 8EP4 type

With spring return to neutral position.



Common features

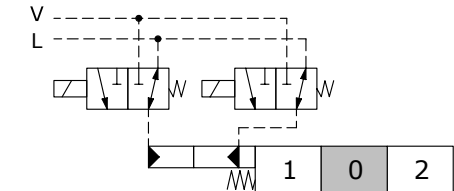
Pilot pressure.....: min. 5.5 bar (min. 80 psi)
: max. 10 bar (min. 145 psi)

"A" side spool positioners

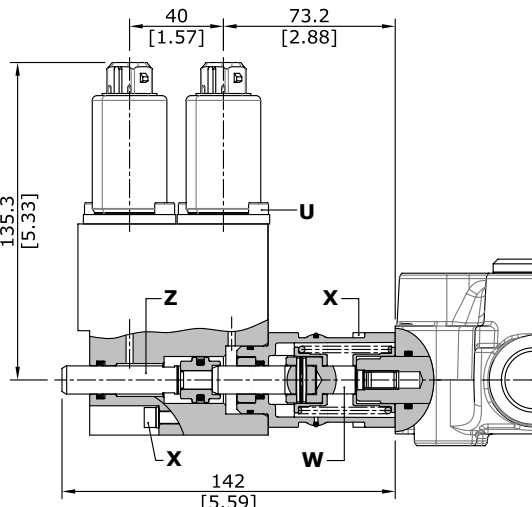
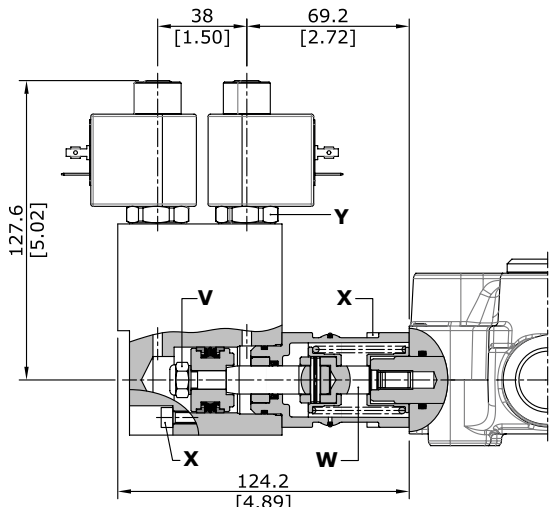
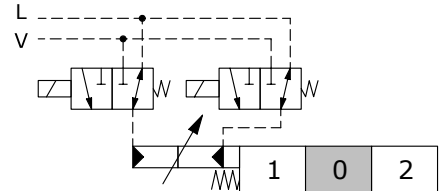
ON/OFF electro-hydraulic kit and proportional electro-hydraulic kit

ON/OFF electro-hydraulic: 8EI3 type

Proportional electro-hydraulic: 8EI3F type

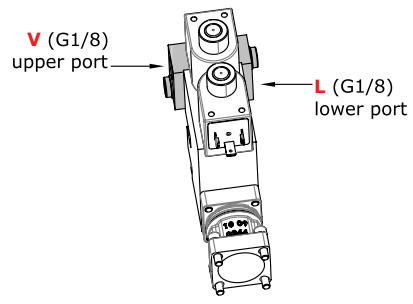
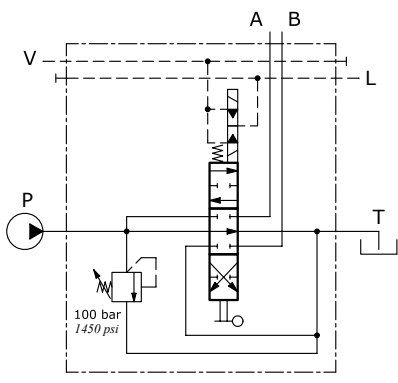
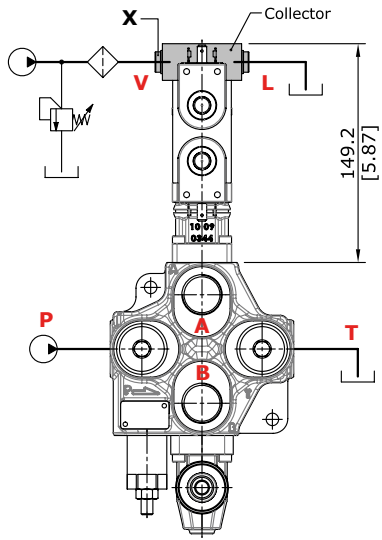


Wrenches and tightening torques
 X = allen wrench 4 - 6 Nm (4.4 lbf^t)
 W = wrench 17 - 24 Nm (17.7 lbf^t)
 V = wrench 13 - 9 Nm (6.6 lbf^t)
 Y = wrench 24 - 9.8 Nm (7.2 lbf^t)
 Z = wrench 11 - 9 Nm (6.6 lbf^t)
 U = allen wrench 4



Features
 Pilot pressure.....: min. 10 bar / 145 psi
 : max. 50 bar / 725 psi
 Max backpressure on drain L.....: 25 bar / 360 psi

Collector kit for external pilot and drain



Description example:
 120L GT16/1(X-100)/
 18EI3L-PSL5-KE1S0-24VDC

COLLECTOR KIT CODES		
Type	Code *	Description
KE1S0	30 07 5537	Kit for one section

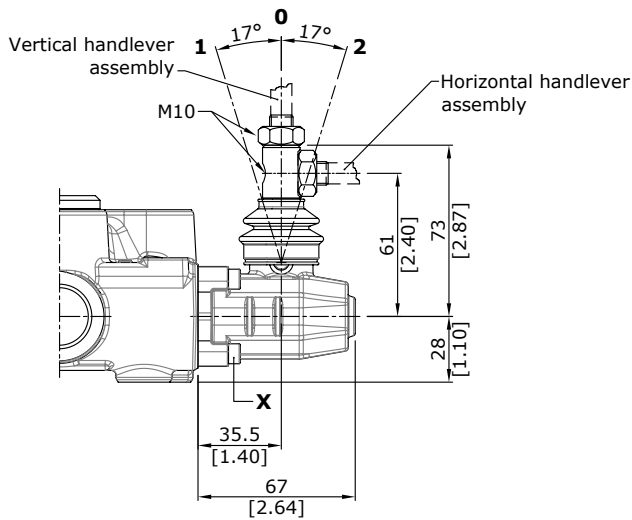
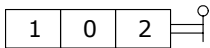
Wrenches and tightening torques
 X = allen wrench 5 - 24 Nm (17.7 lbf^t)

(*) codes are referred to BSP thread

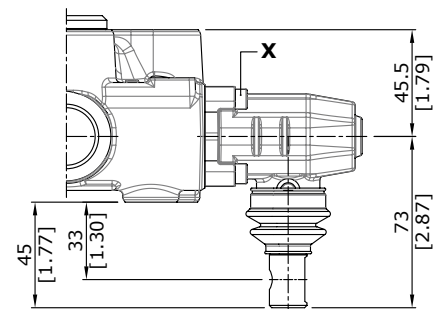
Lever control

L type (30 07 5403)

Alluminium lever pivot box with protective rubber bellow; it can be roated 180° (configuration **L180**).



configuration L180

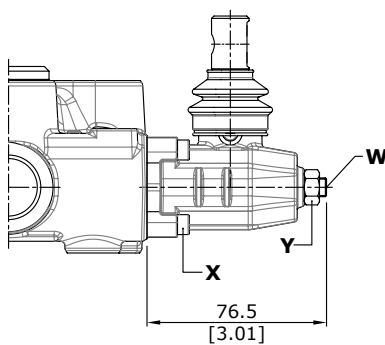
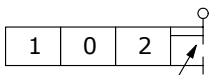


Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf_t)

LF1 type (30 07 5405)

With spool stroke adjustment in position 12 (P A). It can be roated 180° (configuration **LF1180**).



Wrenches and tightening torques

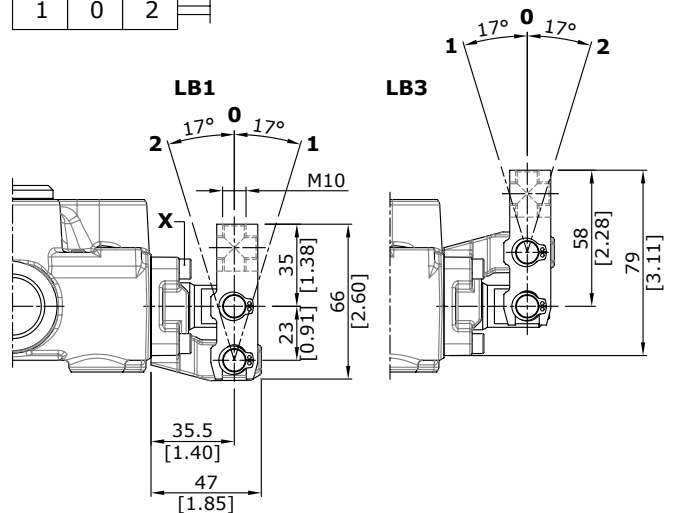
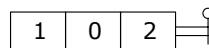
X = allen wrench 4 - 6 Nm (4.4 lbf_t)

Y = wrench 13 - 24 Nm (17.7 lbf_t)

W = allen wrench 4

LB type (30 07 5407)

Steel construction, LB1 with pivot placed down and LB3 with pivot placed over.



Wrenches and tightening torques

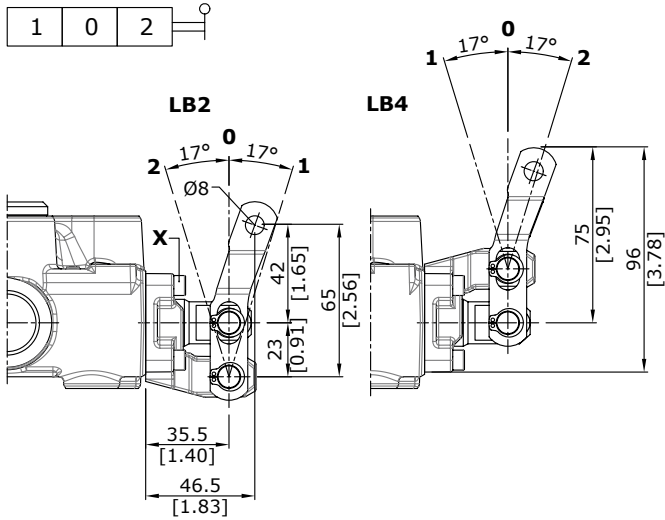
X = allen wrench 4 - 6 Nm (4.4 lbf_t)

"B" side options

Lever control

LB type (30 07 5571)

Steel construction, LB2 with pivot placed down and LB4 with pivot placed over.

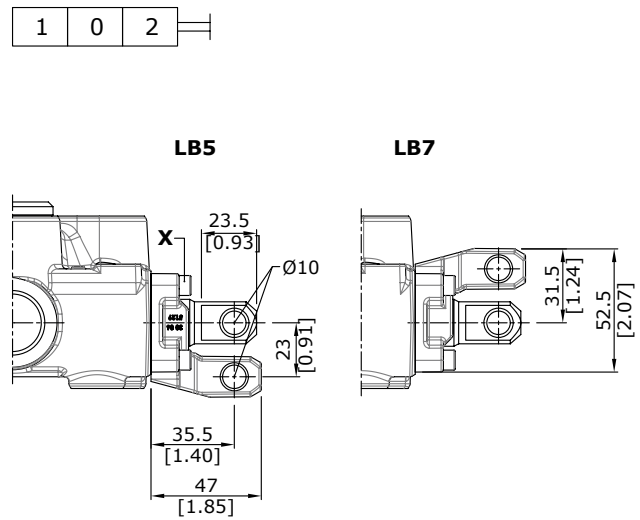


Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf_t)

LB type (30 07 7556)

Steel construction, LB5 with pivot placed down and LB7 with pivot placed over.

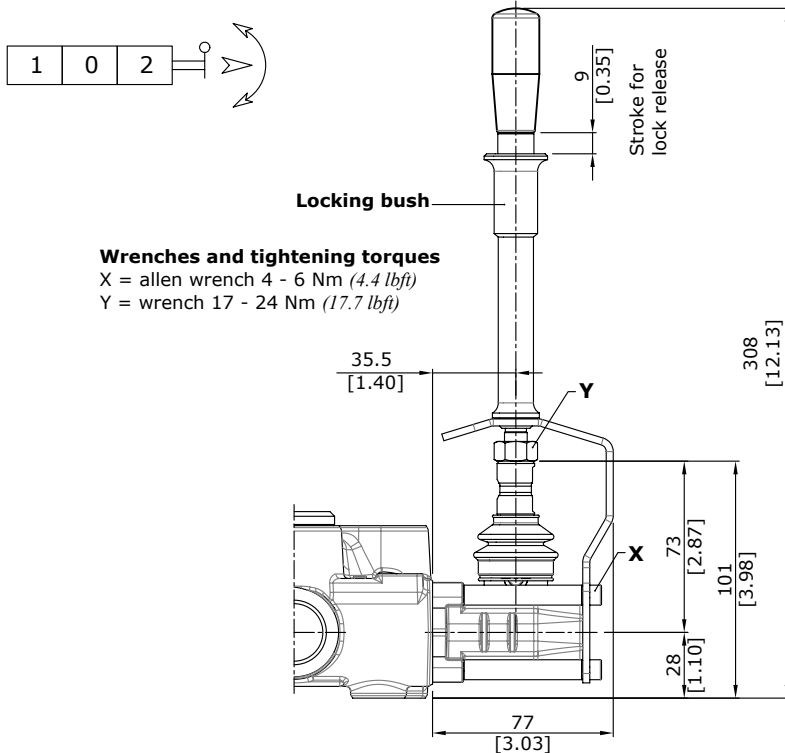


Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf_t)

Safety lever LEB type (30 07 5409)

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



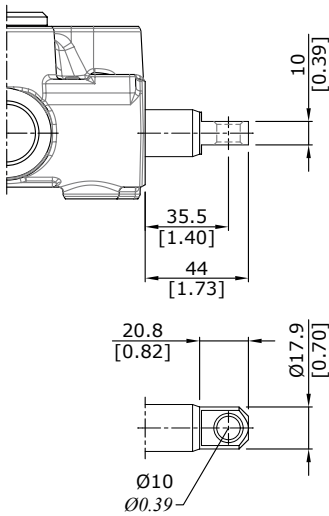
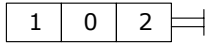
Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf_t)

Y = wrench 17 - 24 Nm (17.7 lbf_t)

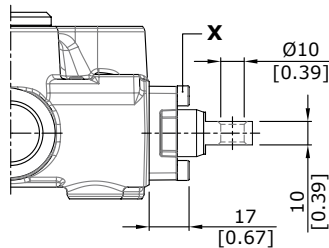
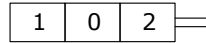
"B" side options

SL type



SLP type (30 07 5406)

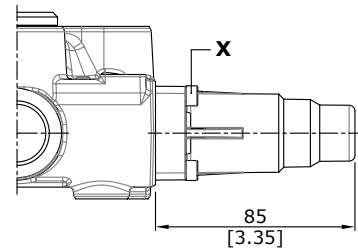
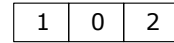
Mechanical control with dust-proof plate kit.



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm (4.4 lbf_t)

SLCZ type (30 07 5347)

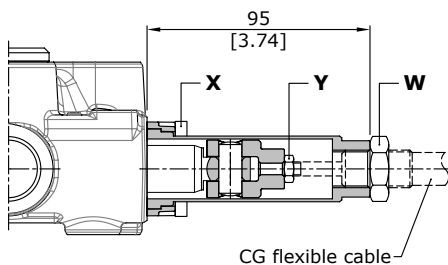
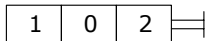
Protection cap usable with pneumatic, electropneumatic, and electrohydraulic spool positioners.



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm (4.4 lbf_t)

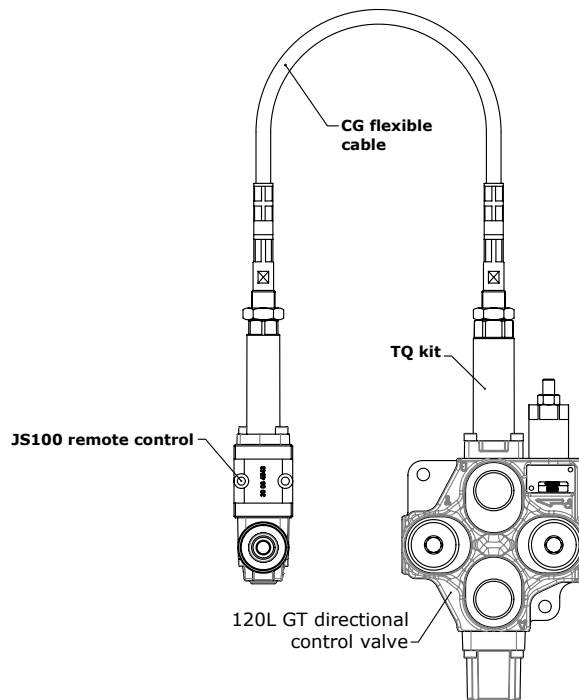
TQ cable remote control kit (30 07 5398)

Prearranged for remote control with flexible cable.



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm (4.4 lbf_t)
Y = wrench 10 - 9.8 Nm (7.2 lbf_t)
W = wrench 24 - 24 Nm (17.7 lbf_t)

Example of cable control



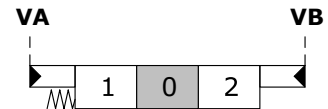
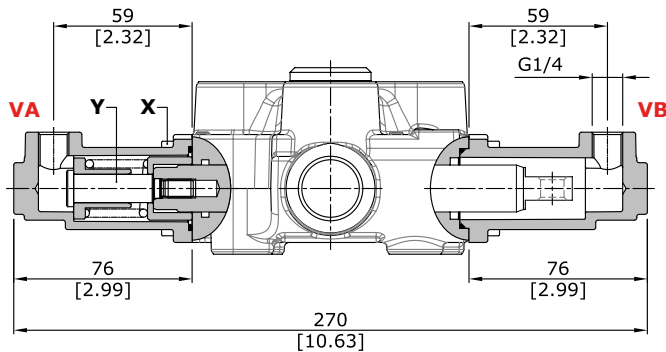
NOTE : For further information about remote cable control, require related documentation.

Complete controls

Proportional hydraulic controls

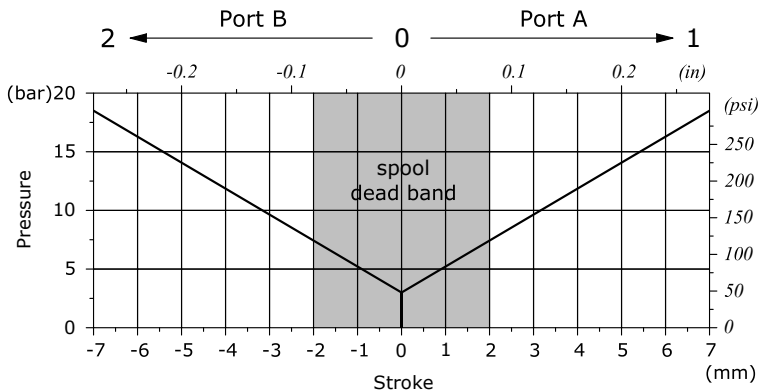
8IM type (30 07 5414)

It can be used with standard spools and body



Diagrams and features of proportional hydraulic controls

Pressure - stroke diagram
(for controls represented)



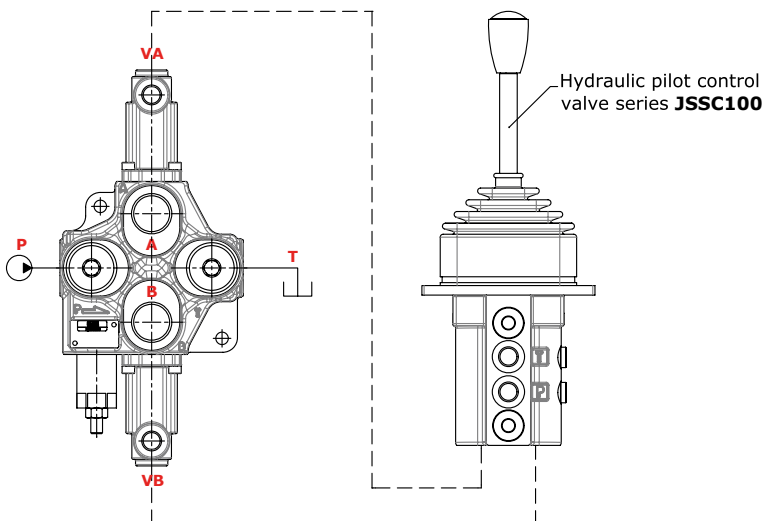
Wrenches and tightening torques

X = allen wrench 4 - 6 Nm (4.4 lbf^t)
Y = allen wrench 6 - 9 Nm (6.6 lbf^t)

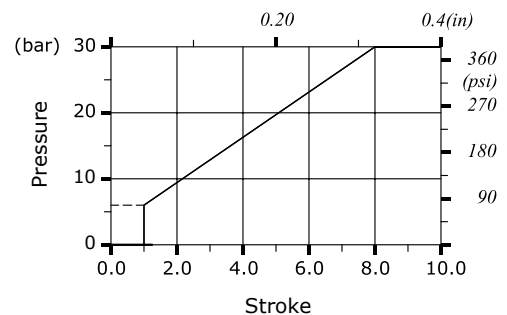
Operating features

Pilot pressure : max. 50 bar (725 psi)
Internal leakage A(B)→ T (Δ = 100 bar - (1450 psi) / T = 40°C)
..... : max. 6cm³/min - 0.37 in³/min

Connection example

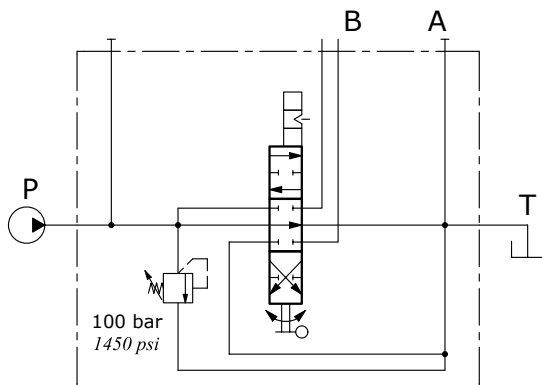
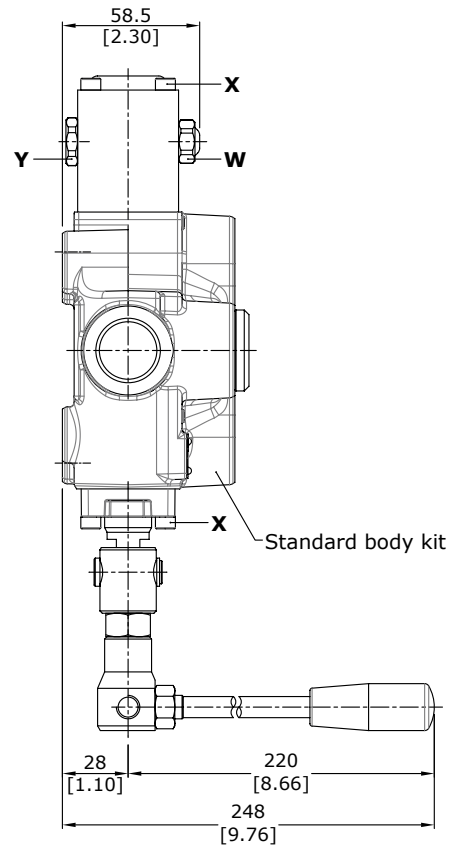
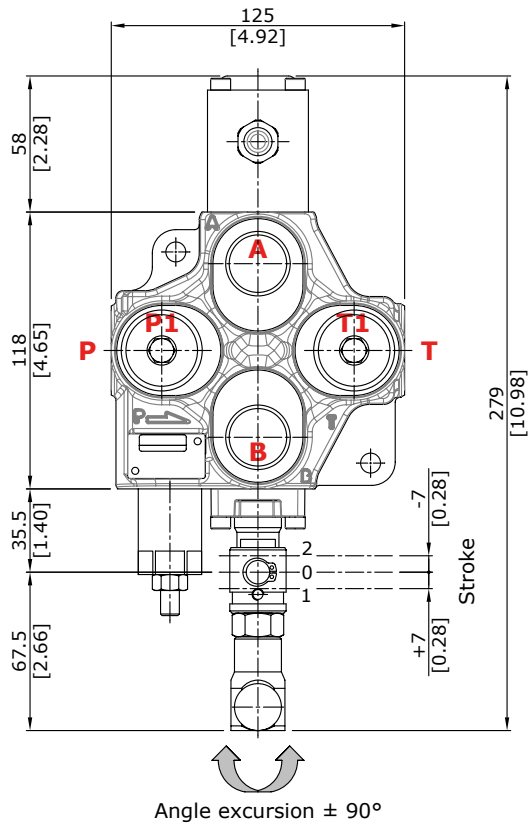


8IM control kit
curve 001 without step



Directional valve with rotary control kit

R type (30 07 5379)



Description example
120L GT16/1(X-100)/1CP R SLP/PSL5

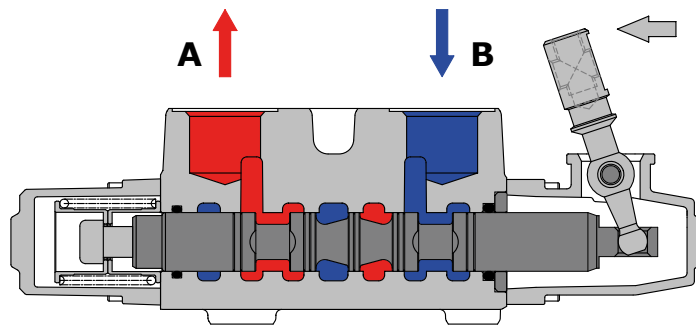
Wrenches and tightening torques

- X = allen wrench 4 - 6 Nm (4.4 lbft)
- Y = wrench 19 - 9.8 Nm (7.23 lbft)
- W = wrench 17 - 9.8 Nm (7.23 lbft)

Sectional drawing

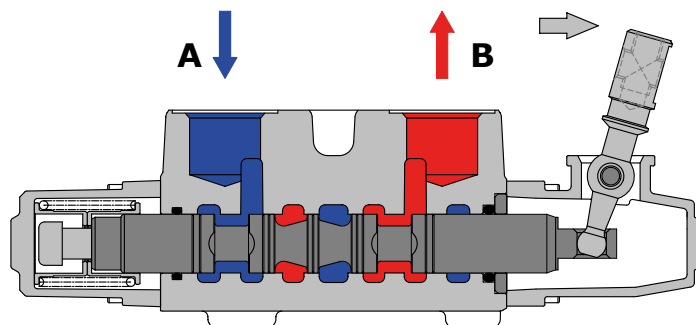
When hand lever pushed (spool out position) P to A port. B to T port.

Position 1



When hand lever pulled (spool in position) P to B port. A to T port.

Position 2

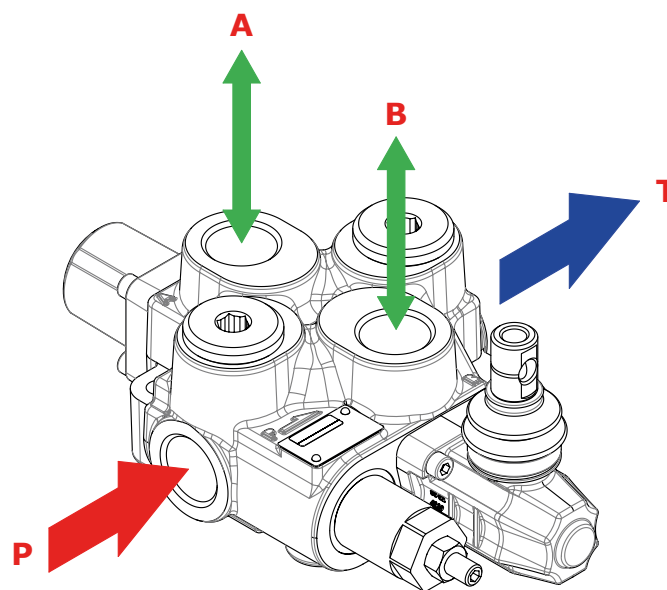


Installation and maintenance

The 120L GT valve is assembled and tested as per the technical specification of this catalogue.

Before the final installation on your equipment, follow the below recommendations:

- 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 lever box and spool control kit, do not use high pressure wash down directly on the valve;
- prior to painting, ensure plastic port plugs are tightly in place.



Fitting tightening torque - Nm (lbft)				
THREAD TYPE	P port	A,B ports	T port	Hydraulic pilot
BSP (ISO 228/1)	G 3/4	G 3/4	G 3/4	G 1/4
With O-Ring seal	90 (66.3)	90 (66.3)	90 (66.3)	25 (18.4)
With copper washer	60 (44.3)	60 (44.3)	60 (44.3)	30 (22.1)
With steel and rubber washer	70 (51.6)	70 (51.6)	70 (51.6)	16 (11.8)
UN-UNF (ISO 11926-1)	1 1/16-12 (SAE 12)	1 1/16-12 (SAE 12)	1 1/16-12 (SAE 12)	9/16-18 (SAE 6)
With O-Ring seal	95 / 70	95 / 70	95 / 70	30 (22.1)

NOTE – These torque are recommended. Assembly tightening torque depends on many factors, including lubrication, coating and surface finish. The manufacturer shall be consulted.