HYDRA

150L GS PART

Sectional Control Valve

Simple, compact and heavy duty designed sectional valve from
1 - 12 sections for open and closed centred hydraulic systems.

Features

Simple, compact and heavy duty designed sectional valve from 1 to 12 sections for open and closed center hydraulic systems.

- ► Fitted with a main pressure relief valve and a load check valve on every working section
- ► Available with parallel, tandem or series circuit.
- ► Optional carryover port.
- ► A wide variety of auxiliary valves.
- ► Intermediate sections for several types of circuit.
- ► Available manual, pneumatic, hydraulic, electro--hydraulic, and remote with flexible cables spool control kits.
- ► Diameter 20 mm (0.79 in) interchangeable spools.

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 LIMITEDIS 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 (46 cSt) viscosity at 40°C *(104°F)* **temperature.**

Nominal flow rating		**150 l/min.**	*39 US gpm*
Max. flow		**170 l**	*45 US gpm*
Operating pressure (max.)	**Series-parallel (tandem) circuit**	**315 bar**	*4600 psi*
Back pressure (max.)	**T outlet port**	**25 bar**	*360 psi*
Internal leakage (standard) A(B)T	**p=100 bar** *(1450 psi)*	**3cm³/min.**	*0.18 in³/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 mm²/s**	*from 15 to 75 cSt*
	min.	**12 mm²/s**	*12 cSt*
	max.	**400 mm²/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*
Tie rods tightening torque (wrench 17)		**50 Nm**	*36 lbft*

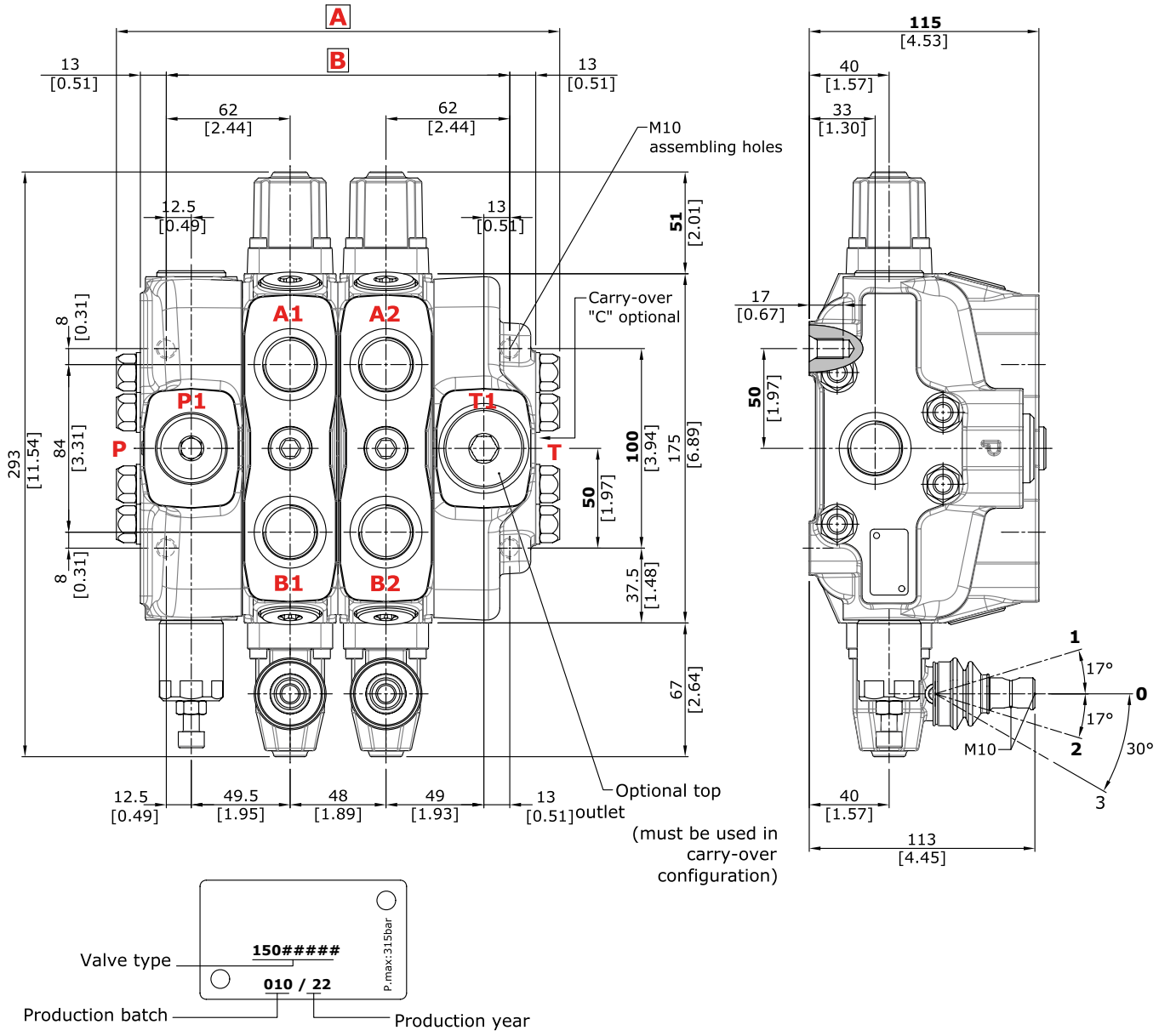
Standard threads

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**	**UN-UNF**
P inlet	**G 3/4**	**1 5/16-12 (SAE 16)**
A and B ports	**G 3/4**	**1 1/16-12 (SAE 12)**
T outlet and C carry-over	**G 1**	**1 5/16-12 (SAE 16)**
PILOT PORTS		
Hydraulic	**G 1/4**	**-**
Pneumatic	**G 1/8**	**-**

Valve general information

Dimensional data



TYPE	A		B		Weight	
	mm	*in*	mm	*in*	Kg	*lb*
150L GS16/1	174	*6.85*	124	*4.88*	13	*28.7*
150L GS16/2	**222**	*8.74*	172	*6.77*	18.5	*40.8*
150L GS16/3	270	*10.63*	**220**	*8.66*	24	*52.9*
150L GS16/4	318	*12.52*	268	*10.55*	29.5	*65*
150L GS16/5	366	*14.41*	316	*12.44*	35	*77.2*
150L GS16/6	417	*16.42*	364	*14.33*	40.5	*89.3*

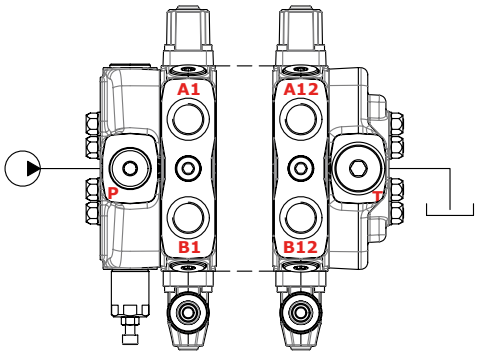
TYPE	A		B		Weight	
	mm	*in*	mm	*in*	Kg	*lb*
150L GS16/7	463	*18.23*	412	*16.22*	46	*101.4*
150L GS16/8	**510**	*20.08*	460	*18.11*	51.5	*113.5*
150L GS16/9	558	*21.97*	508	*20.00*	57	*125.7*
150L GS16/10	606	*23.86*	556	*21.89*	62.5	*137.8*
150L GS16/11	654	*25.75*	604	*23.78*	68	*149.9*
150L GS16/12	702	*27.64*	652	*25.67*	73.5	*162*

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

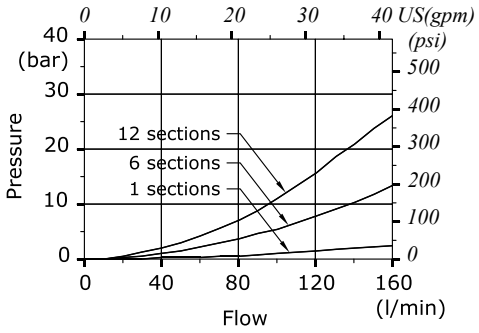
Performance data (pressure drop vs. flow)

Open centre

From side inlet to side outlet.

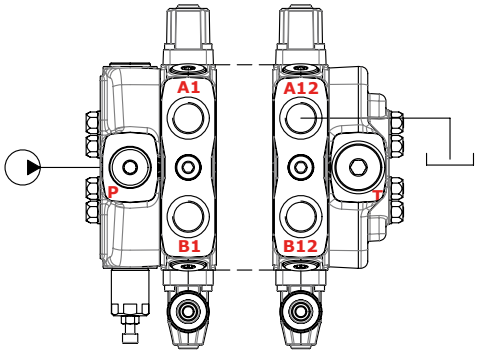


P ⇒ T pressure drop

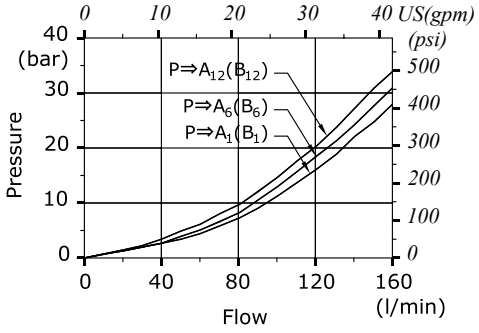


Inlet to work port

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

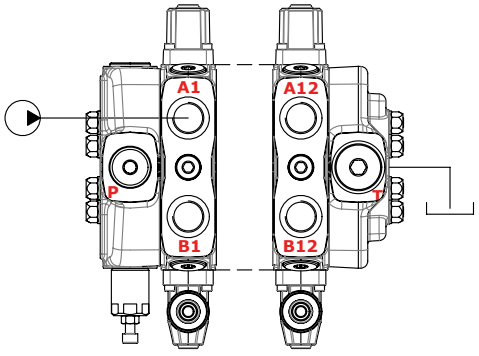


P ⇒ A(B) pressure drop

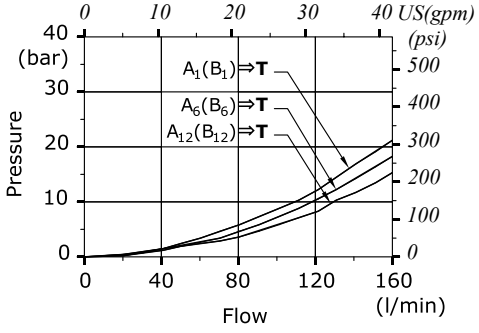


Work port to outlet

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



A(B) ⇒ T pressure drop

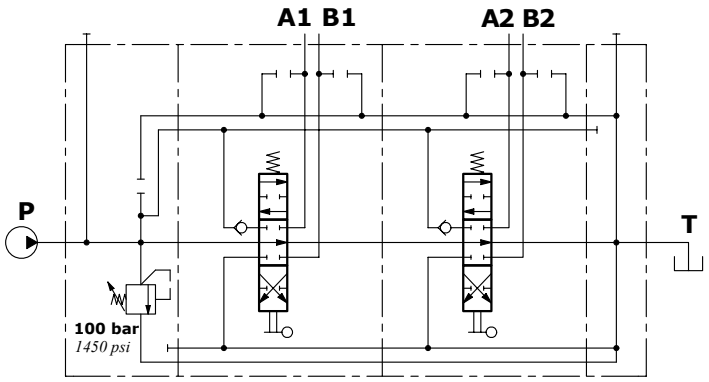


Valve general information

Hydraulic circuit

Parallel circuit

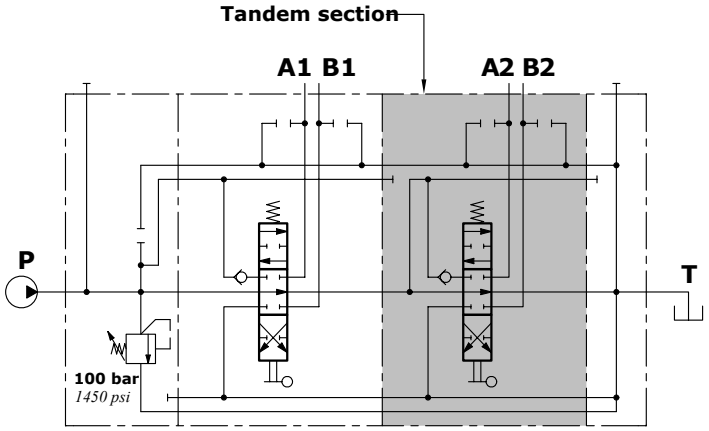
Standard configuration with open centre and side inlet and outlet.



Description example
150L GS16/2/AC(YG-100)/18L/18L/RC

Series-parallel (tandem) circuit

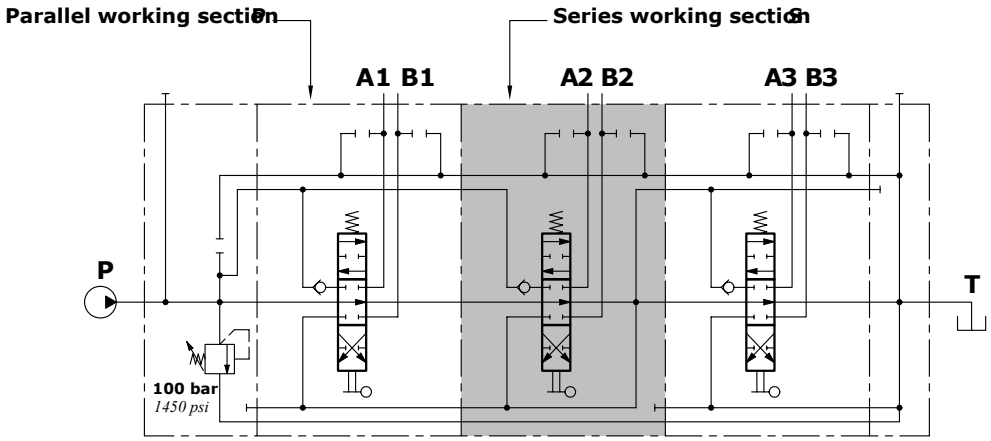
It needs a special working section kit.
Tandem section is fed from the free flow pressure line; it's excluded when an up strem section is operated.



Description example
150L GS16/2/AC(YG-100)/18L/18L/RC

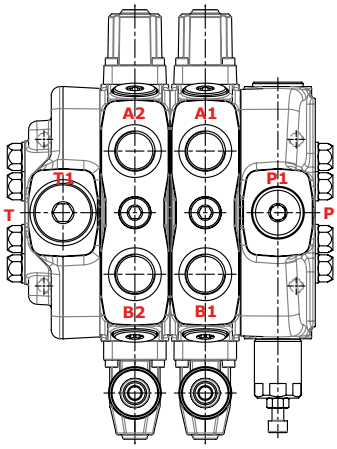
Hydraulic circuit

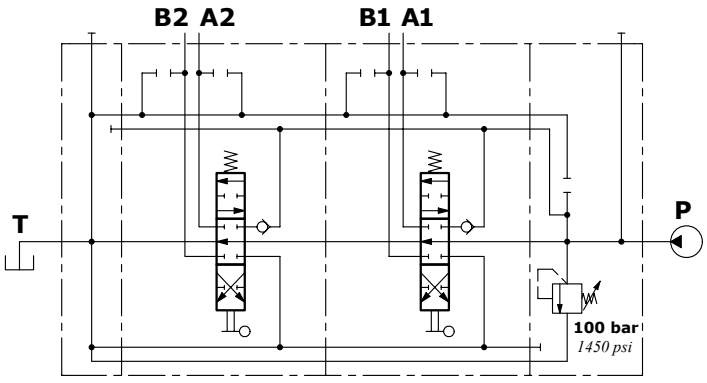
Series circuit



Description example
150L GS16/3/AC(YG-100)/18L/18L/18L/RC

Right inlet directional valve





Description example
150L GS16/2/AC(YG-100)/18L/18L/RC

Valve general information

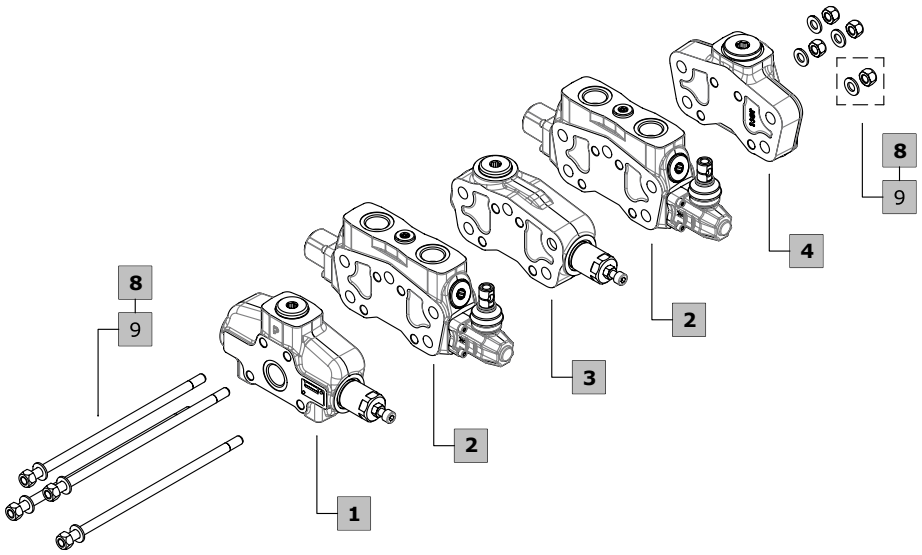
Complete sections ordering codes

Standard configuration with side inlet and outlet

150L GS16 / 2 / AC(YG-100) / P-18L / EI1(YG-100) / P-18L / RC

Nr. of working **section**

1 **2.** **3** **4**



1. Inlet section * page 10

TYPEAC(YG-100)..... CODE 15IN010005
DESCRIPTION With direct pressure relief valve
TYPEAC(XGN-100)..... CODE 15IN010011
DESCRIPTION With pilot pressure relief valve
TYPEAC(SV)..... CODE 15IN010007
DESCRIPTION Without pressure relief valve
TYPEAC(YG-100)R2E..... CODE 15IN010034
DESCRIPTION With direct pressure relief valve and 12VDC electric commutator
TYPEM(LSW-100)ELNW(NC)..... CODE 15IN010066
DESCRIPTION With flow cut-out and LS pressure relief valve
TYPEBCHW(LSW-100)ELNW(NO)..... CODE 15IN010067
DESCRIPTION With unloader operation spool type and LS pressure relief valve

2. Working section * page 23

TYPE	CODE	DESCRIPTION
P-18L	**15W010000**	**Parallel circuit, lever control to combine** with series working section
SP-18L	15W010003	For series-parallel (tandem) circuit, prearranged for port valves, double acting spool with spring return, lever **control**
S-18L	15W010002	Series circuit, double acting spool with spring return, lever control
PHT-18L	**-**	Parallel circuit, prearranged for port valves, double acting spool with spring **return, lever control**

2. Working section * page 23

TYPE	CODE	DESCRIPTION
PHT-18IM	**-**	Parallel circuit, prearranged for port **valves with proportional hydraulic control**
RPHT-18L	15W010022	Parallel circuit, prearranged for valves with fixed setting
RPHT-18IM	15W010023	Parallel circuit, prearranged for valves with fixed setting with proportional **hydraulic control**
RPHSP-18L	15W010024	As RPHT for series-parallel (tandem) **circuit**

3. Intermediate sections * page 54

TYPE	CODE	DESCRIPTION
EI1(YG-100)	**30 08 8867**	**With direct pressure relief valve**
EI1(XGN-100)	**30 08 8866**	**With pilot pressure relief valve**
DFG	**30 08 5776**	**Pressure compensated flow divider section**

4. Outlet section * page 57

TYPE	CODE	DESCRIPTION
RC	**15OU010001**	**With side outlet**
RD	**15OU010003**	**With upper outlet**
RE	**15OU010002**	**With upper outlet and side carry-over sleeve**
RK	**15OU010004**	**With upper outlet, closed center**
RV	**15OU010005**	**With backpressure valve 10 bar** *(145 psi)*

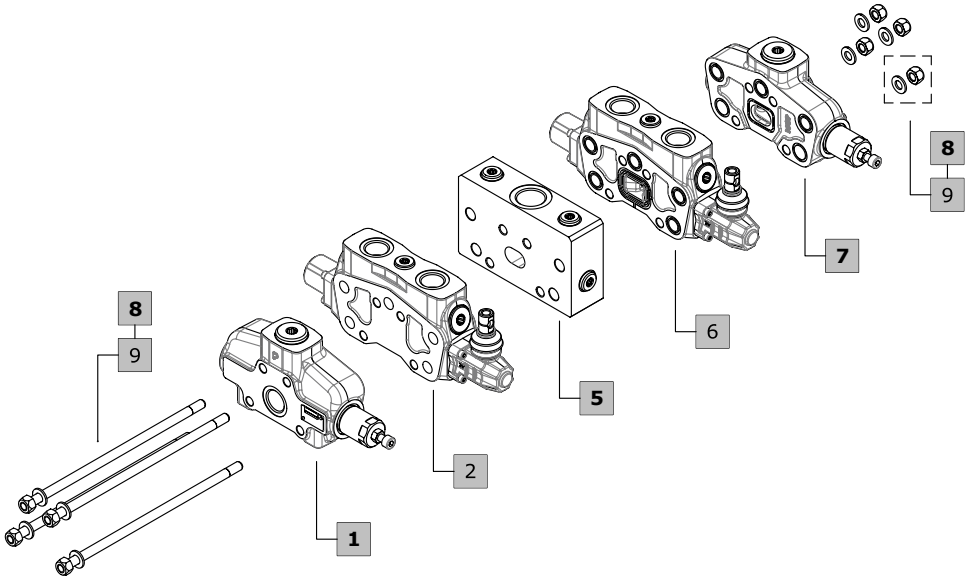
NOTE (*) – Codes are referred to **BSP thread.**

Complete sections ordering codes

Configuration with 2 side inlets and mid return manifold

150L GS16 / 2 / AC(YG-100) / P-18L / CS1 / P-ED-18L / BC(YG-100)

Nr. of working section						
	1	2.	**5**	6		**7**



5. Return manifold * page 53

TYPE	CODE	DESCRIPTION
CS1	**30 08 5781**	Mid return manifold

6. Right inlet working section *

TYPE	CODE	DESCRIPTION
P-ED-18L	15W010006	Parallel circuit, prearranged for port valves, double acting spool with spring return, lever control
SP-ED-18L	15W010005	As previous with series-parallel (tandem) circuit
S-ED-18L	15W010004	As previous with series circuit

7. Right inlet section *

TYPE	CODE	DESCRIPTION
BC(YG-100)	15IN010016	Side inlet with direct pressure relief valve
BC(XGN-100)	15IN010015	Side inlet with pilot pressure relief valve
BC(SV)	15IN010017	Side inlet without pressure relief valve
BD(YG-100)	15IN010019	Upper inlet with direct pressure relief valve
BD(XGN-100)	15IN010018	Upper inlet with pilot pressure relief valve
BD(SV)	15IN010020	Upper inlet without pressure relief valve

8. Assemb. kit without intermediate section

CODE	DESCRIPTION
30 05 6045	Tie rod kit for 1 working section directional valve
30 05 6049	Tie rod kit for 2 working section directional valve
30 05 6050	Tie rod kit for 3 working section directional valve
30 05 6089	Tie rod kit for 4 working section directional valve
30 05 6090	Tie rod kit for 5 working section directional valve
30 05 6093	Tie rod kit for 6 working section directional valve
30 05 6114	Tie rod kit for 7 working section directional valve
30 05 6115	Tie rod kit for 8 working section directional valve
30 05 6051	Tie rod kit for 9 working section directional valve
30 05 6046	Tie rod kit for 10 working section directional valve
30 05 6047	Tie rod kit for 11 working section directional valve
30 05 6048	Tie rod kit for 12 working section directional valve

9. Assemb. kit with intermediate section

CODE	DESCRIPTION
30 05 6050	Tie rod kit for 2 working section directional valve
30 05 6089	Tie rod kit for 3 working section directional valve
30 05 6090	Tie rod kit for 4 working section directional valve
30 05 6093	Tie rod kit for 5 working section directional valve
30 05 6114	Tie rod kit for 6 working section directional valve
30 05 6115	Tie rod kit for 7 working section directional valve
30 05 6051	Tie rod kit for 8 working section directional valve
30 05 6046	Tie rod kit for 9 working section directional valve
30 05 6047	Tie rod kit for 10 working section directional valve
30 05 6048	Tie rod kit for 11 working section directional valve
-	Tie rod kit for 12 working section directional valve

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

Inlet section

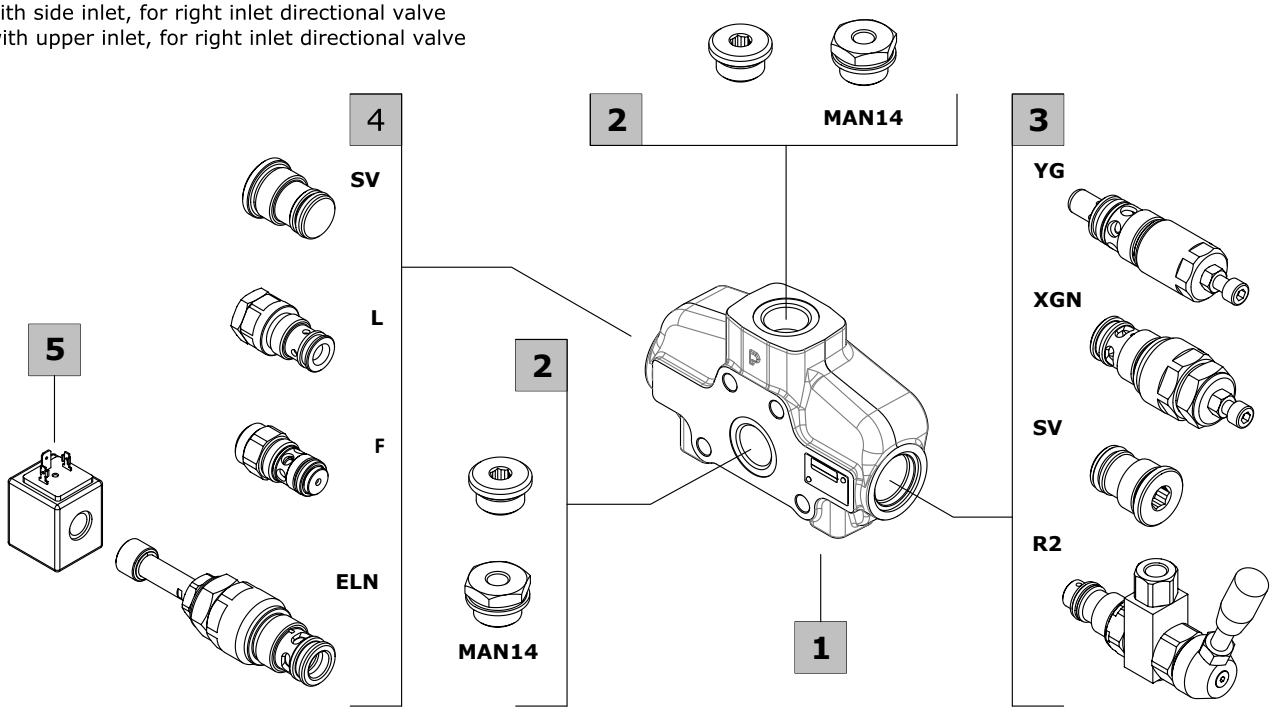
Parts ordering codes

150L GS16 / AC (YG - 100) ELN - MAN14 - 12VDC

1 3 4 2 5

Pressure relief valve setting (bar)

Available configurations
AC: with side inlet, for left inlet (standard) directional valve
AD: with upper inlet, for left inlet (standard) directional valve
BC: with side inlet, for right inlet directional valve
BD: with upper inlet, for right inlet directional valve



1. Inlet cover body * page 11

CODE : 30 08 8854
DESCRIPTION : Standard body

2. Parts *

TYPE	CODE	DESCRIPTION
MAN18	30 05 6102	G1/8 Pressure gauge arrangement
MAN14	30 05 6101	G1/4 Pressure gauge arrangement

3. Inlet relief valve options page 12

TYPE	CODE	DESCRIPTION
Direct pressure relief valve YG type (standard)		
(YG-100)	**30 05 6257**	**Range 60-315 bar** *(870-4570 psi)* **standard setting 100 bar** *(1450 psi)*
Pilot operated pressure relief valve XGN type		
(XGN-100)	**30 05 6235**	**Range 60-315 bar** *(870-4570 psi)* **standard setting 100 bar** *(1450 psi)*
Standard setting is referred to 6 l/min flow.		
(SV)	**30 05 6236**	**Relief valve blanking plug**

4. Inlet valve options page 14

TYPE	CODE	DESCRIPTION
SV	**30 05 6236**	**Relief valve blanking plug** (omit in description)
F	**30 05 6237**	Inlet anti-cavitation valve
L	**-**	Hydraulic pilot unloader valve
R2	**-**	Rotary commutator
Solenoid operated unloader valve		
ELN(NO)	30 05 6277	Without emergency
ELP(NO)	30 05 6278	Push-button emergency
ELT(NO)	30 05 6279	Push and twist type with detent emergency
ELN(NC)	30 05 6280	Without emergency
ELP(NC)	30 05 6281	Push-button emergency
ELT(NC)	30 05 6282	Push and twist type with detent emergency

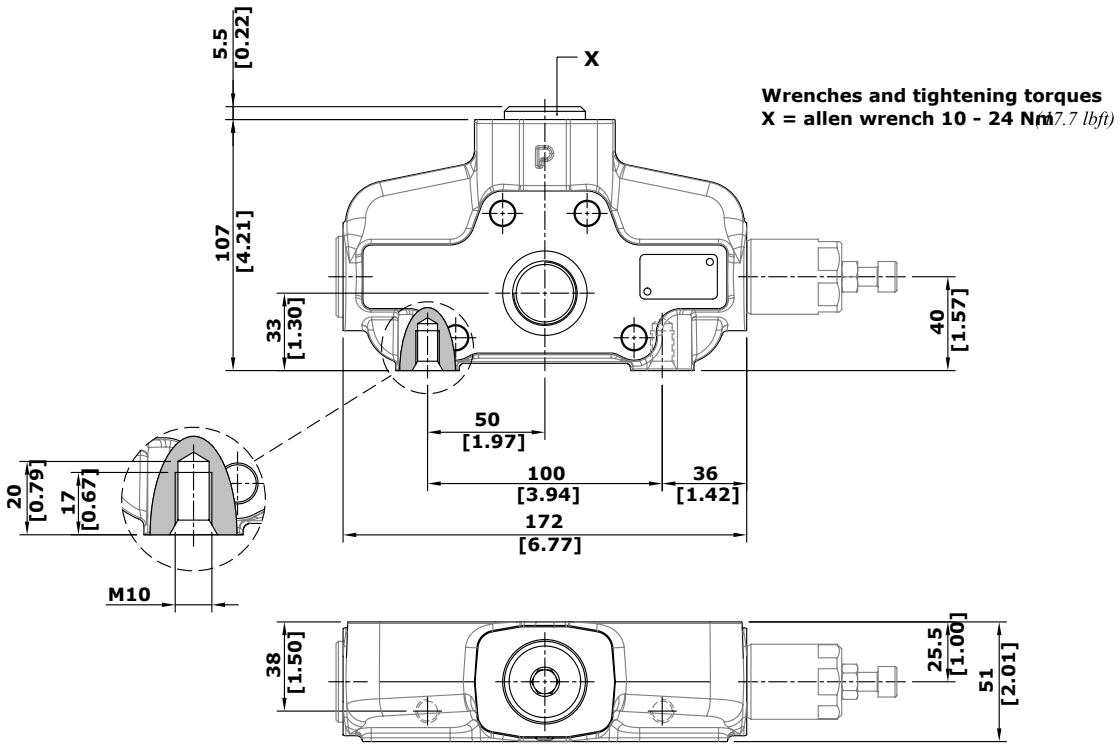
5. Coils

TYPE	CODE	DESCRIPTION
12VDC	20 03 2268	Coil type **BER**, ISO4400 integrated type 12VDC
24VDC	20 03 2269	Coil type **BER**, ISO4400 integrated type 24VDC

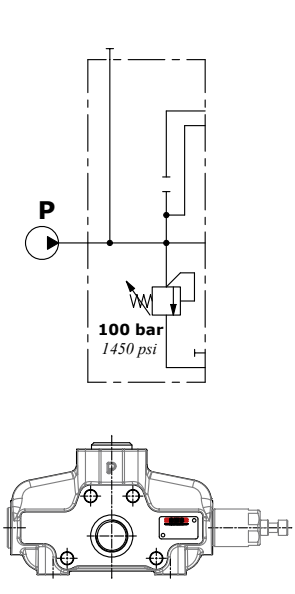
NOTE (*) – Codes are referred to **BSP** thread.

Inlet section

Dimensional data and hydraulic circuit

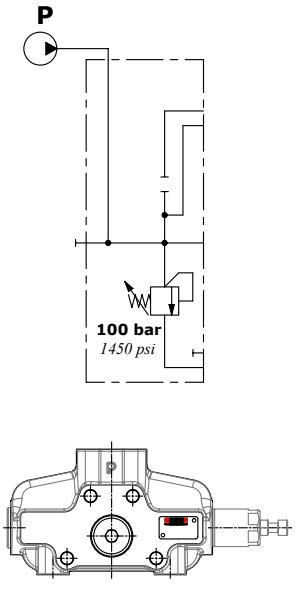


For left inlet directional valve, side port



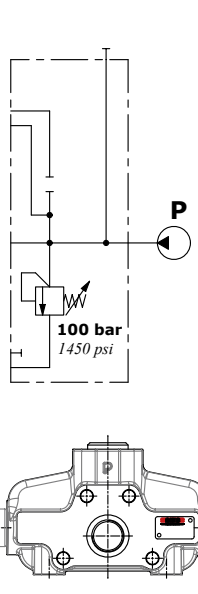
Description example:
AC(YG–100)

For left inlet directional valve, upper port



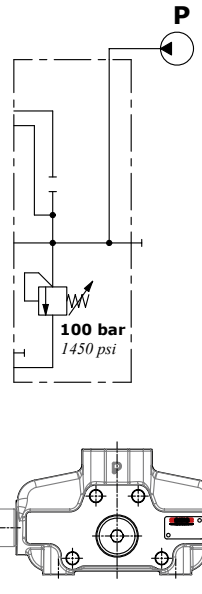
Description example:
AD(YG–100)

For right inlet directional valve, side port



Description example:
BC(YG–100)

For right inlet directional valve, upper port



Description example:
BD(YG–100)

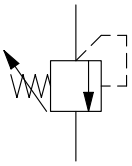
Inlet section

Inlet valve options

Direct overpressure relief valve

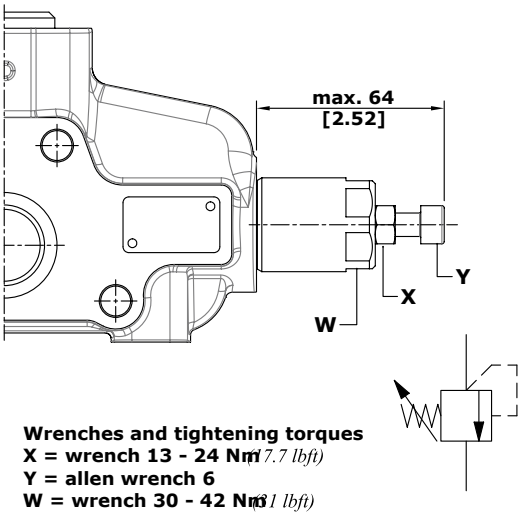
30 05 6257 (Y G - 100)

Configuration — **Valve setting (bar)**



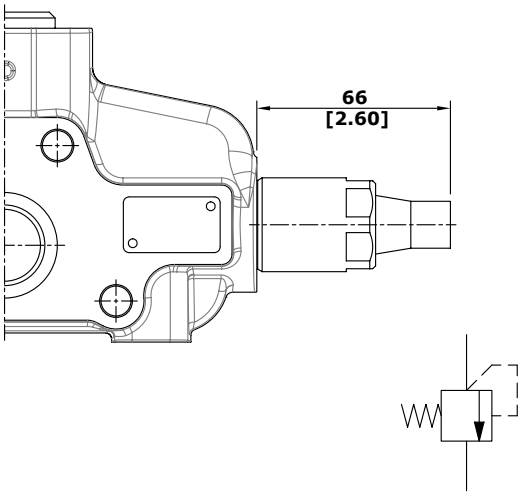
Adjustment type

Configuration G type: adjustable with screw

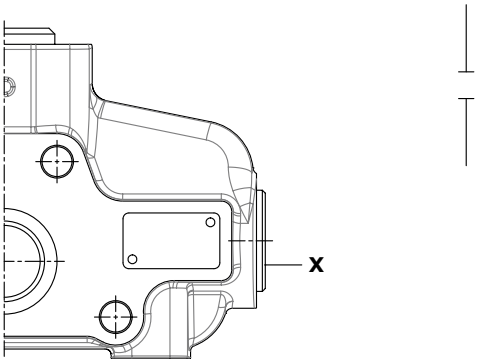


Wrenches and tightening torques
X = wrench 13 - 24 Nm *(17.7 lbft)*
Y = allen wrench 6
W = wrench 30 - 42 Nm *(31 lbft)*

Configuration H type: valve set and locked

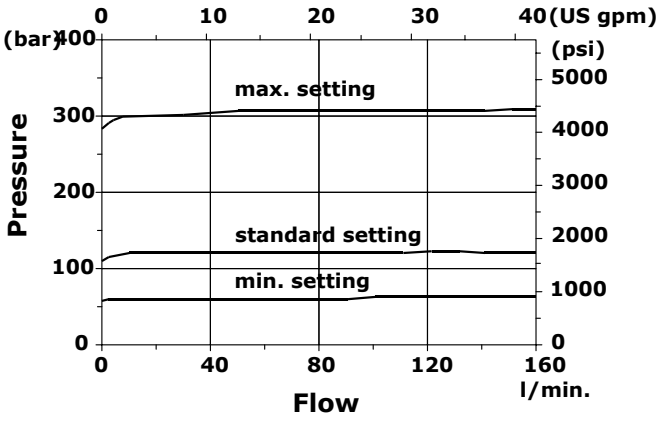


SV: relief valve blanking plug



Wrenches and tightening torques
X = allen wrench 10 - 42 Nm *(31 lbft)*

Performance data

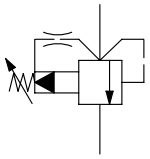


Inlet valve options

Pilot operated overpressure relief valve

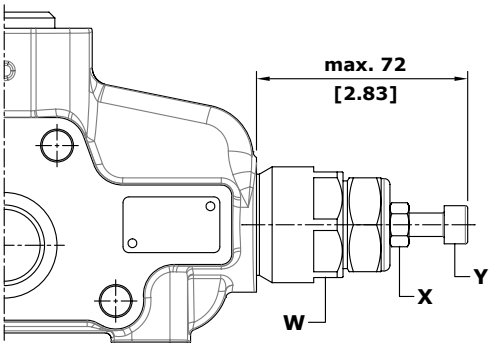
30 05 6235 (X G N - 100)

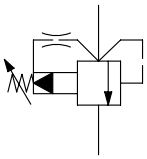
- Configuration
- Without filter
- Valve setting (bar)



Adjustment type

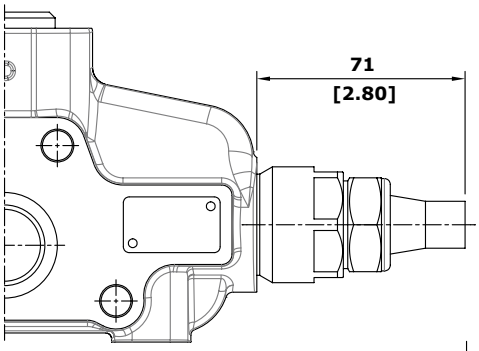
Configuration G type: adjustable with screw

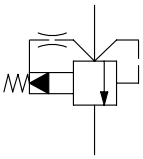




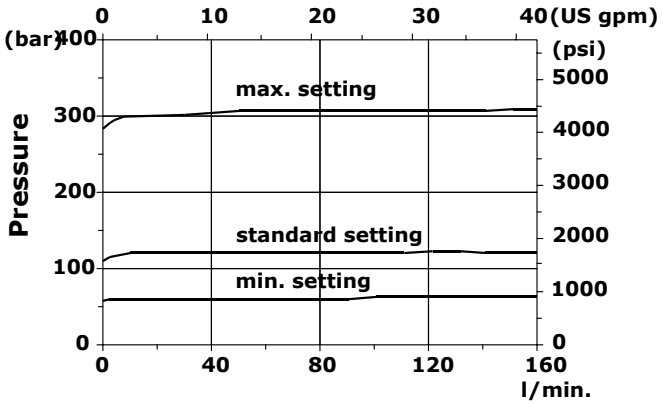
Wrenches and tightening torques
X = wrench 13 - 24 Nm *(17.7 lbft)*
Y = allen wrench 6
W = wrench 36 - 42 Nm *(31 lbft)*

Configuration H type: valve set and locked





Performance data



Inlet section

Inlet valve options

Unloader valves

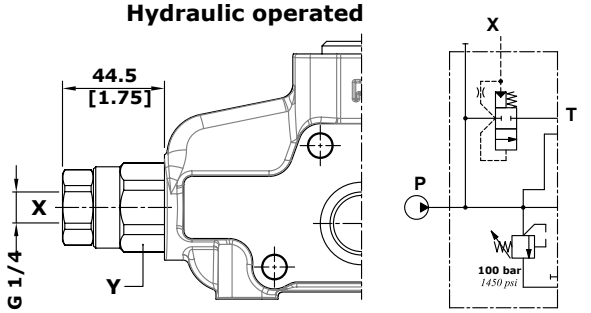
Description example: AC (YG - 106) ELN - 12VDC

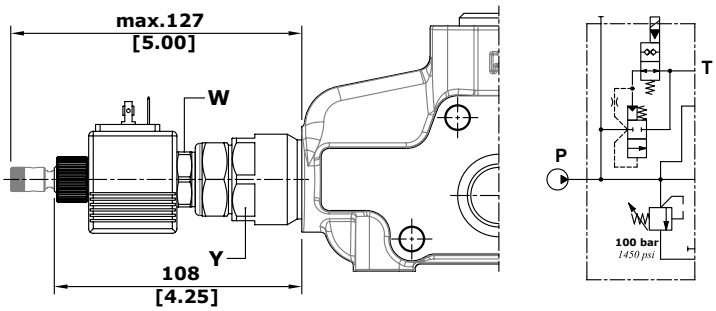
Hydraulic operated valve:
Solenoid operated valve:
ELN
ELP
ELT

Feeding voltage:
for solenoid operated

Solenoid operated
Emergency with push button and spring return; for detent position turn the button after press it.
WARNING: the manual override option is intended for emergency use, not for continuous duty operation.

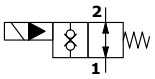
Hydraulic operated



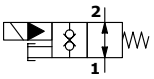


Wrenches and tightening torques
W = wrench 24 - 35 Nm *(26 lbft)*
Y = wrench 36 - 42 Nm *(31 lbft)*

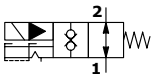
ELN: without emergency



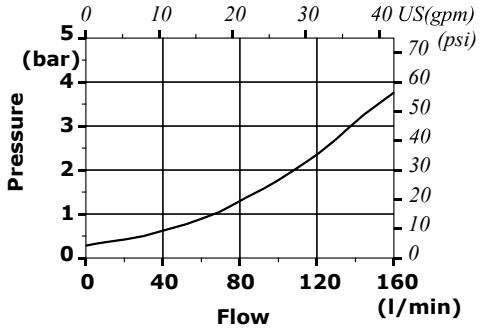
ELP: push button type



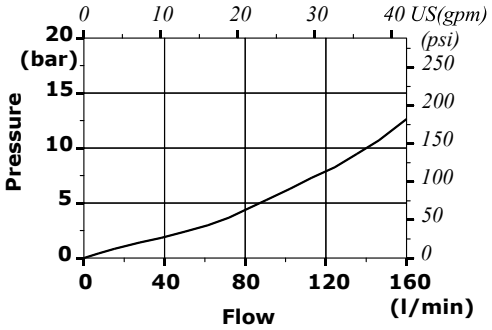
ELT: "push & twist" type



Pressure drop valve L type on 150L GS



Pressure drop valve EL type on 150L GS



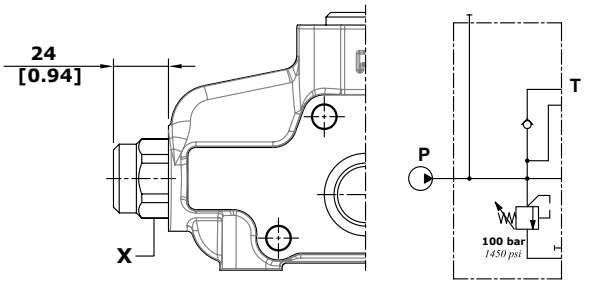
Valve L type features
Nominal flow.....: 120 l/min *(31.7 US gpm)*
Internal leakage.....: 10 cm³/min @ 100 bar
(0.61 in³/min @ 1450 psi)

Valve EL type features
Nominal flow.....: 40 l/min *(10.6 US gpm)*
Max. pressure.....: 350 bar *(5100 psi)*
Internal leakage.....: 50 cm³/min @ 210 bar
(3.05 in³/min @ 3050 psi)

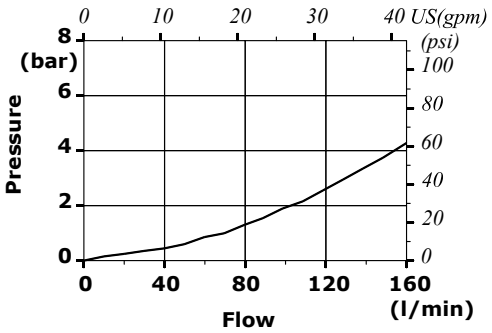
Anti-cavitation valve

Description example: AC (YG - 108)

Wrenches and tightening torques
X = wrench 32 - 9.8 Nm *(7.23 lbft)*



Pressure drop



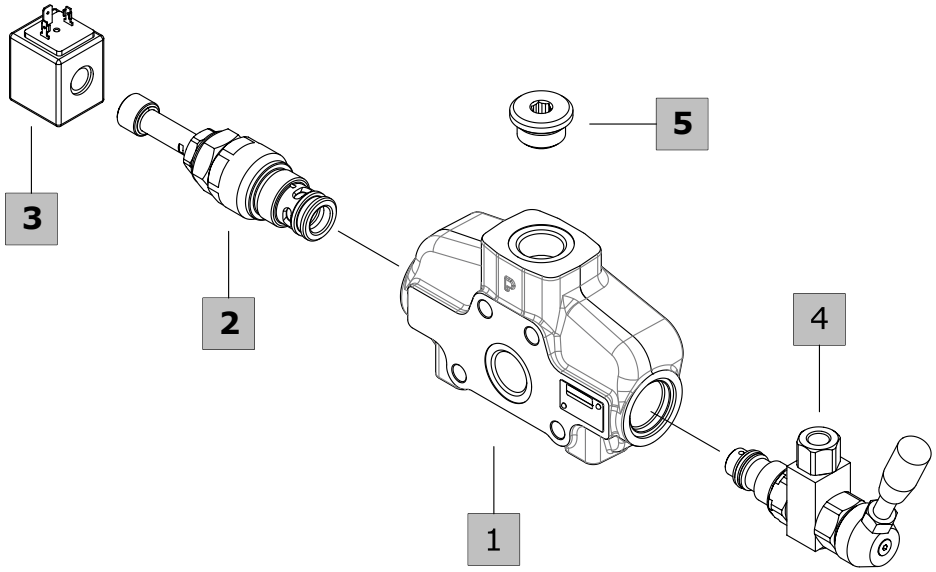
Inlet section for special applications

Configuration with rotary commutator

150L GS16 / AC ELN - 12VDC - R2

1 2 3 4

Available configurations
AC: with side inlet, for left inlet (standard) directional valve
AD: with upper inlet, for left inlet (standard) directional valve
BC: with side inlet, for right inlet directional valve
BD: with upper inlet, for right inlet directional valve



1. Inlet cover body * page 16

CODE : 30 08 8854
DESCRIPTION : Predisposition for rotary commutator

2. Inlet valve options page 12

Standard setting is referred to 6 l/min flow.

INLET RELIEF OPTIONS

TYPE	CODE	DESCRIPTION
SV	30 05 6236	Relief valve blanking plug
Direct pressure relief valve YG type (standard)		
(YG-100)	30 05 6257	Range 60-315 bar *(870-4570 psi)* standard setting 100 bar *(1450 psi)*
Pilot operated pressure relief valve XGN type		
(XGN-100)	30 05 6235	Range 60-315 bar *(870-4570 psi)* standard setting 100 bar *(1450 psi)*

INLET VALVE OPTIONS

TYPE	CODE	DESCRIPTION
F	**30 05 6237**	Inlet anti-cavitation valve
L	-	Hydraulic pilot unloader valve
Solenoid operated unloader valve		
ELN(NO)	30 05 6277	Without emergency
ELP(NO)	30 05 6278	Push-button emergency
ELT(NO)	30 05 6279	Push and twist type with detent emergency
ELN(NC)	30 05 6280	Without emergency
ELP(NC)	30 05 6281	Push-button emergency
ELT(NC)	30 05 6282	Push and twist type with detent emergency

3. Coils

TYPE	CODE	DESCRIPTION
12VDC	20 03 2268	Coil type **BER**, ISO4400 integrated type 12VDC
24VDC	20 03 2269	Coil type **BER**, ISO4400 integrated type 24VDC

4. Commutator *

TYPE	CODE	DESCRIPTION
R2	-	Rotary commutator

5. Parts *

TYPE	CODE	DESCRIPTION
-	30 05 4920	G3/4 Plug

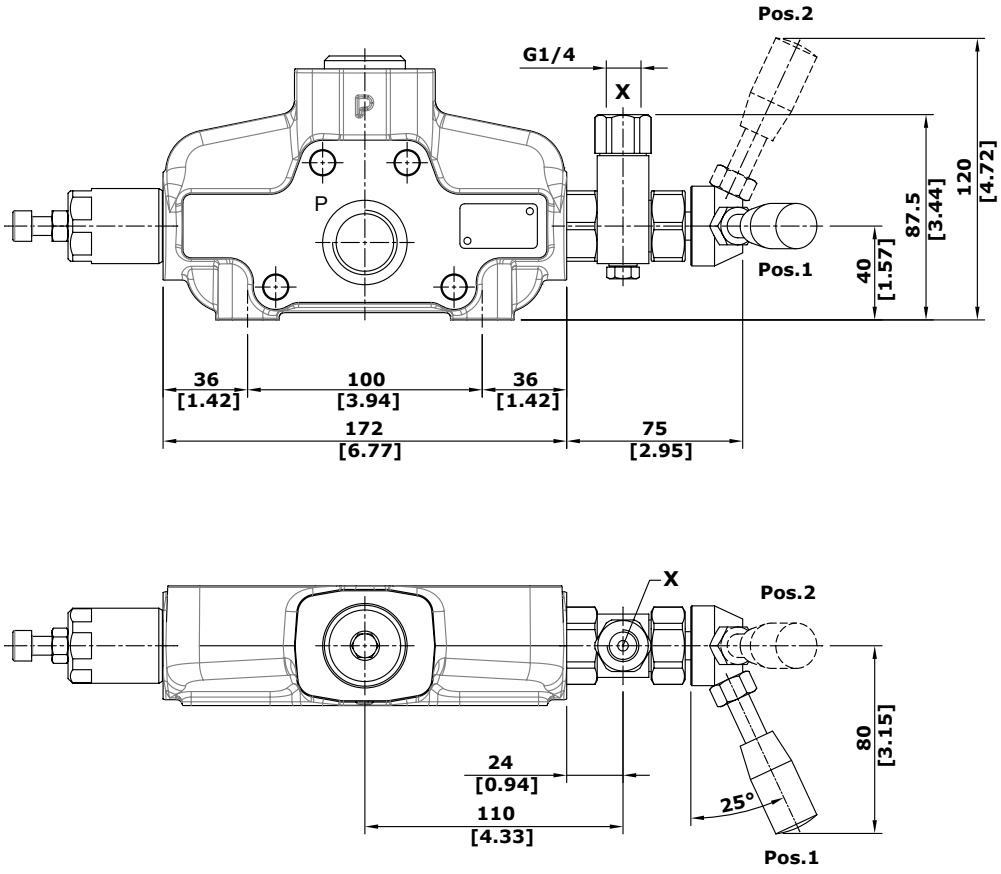
NOTE (*) – Codes are referred to **BSP** thread.

Inlet section for special applications

Configuration with rotary commutator

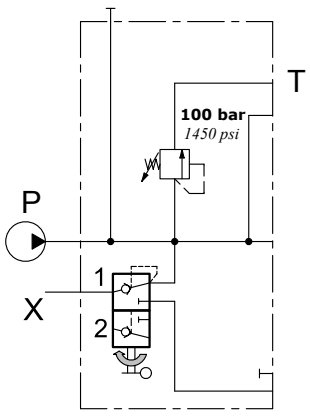
Dimensional data and hydraulic circuit

Drawing and circuit are referred to left inlet directional valve.



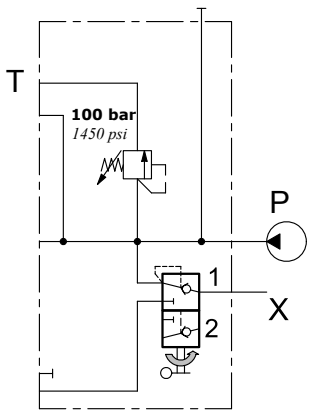
Hydraulic circuit and ordering codes

Left inlet



AC(YG-100)2

Right inlet



BC(YG-100)2

Rotary commutator features
Max. pressure .....: 210 bar *(3050 psi)*
Internal leakage .....: 3 cm^3/min @ 100 bar
(0.18 in^3/min @ 1450 psi)

Inlet section for special applications

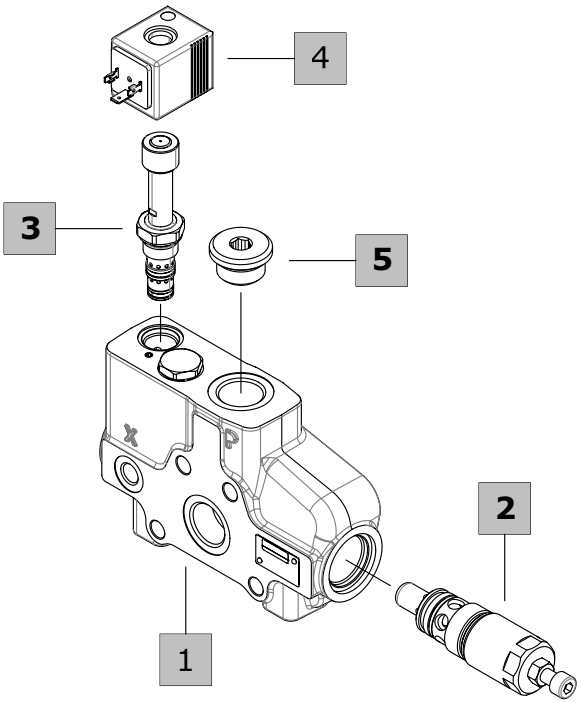
Configuration with electric commutator

150L GS16 / AC (YG - 100) R2E - 12VDC

1 2 3 4

Pressure relief valve setting (bar)

Available configurations
AC: with side inlet, for left inlet (standard) directional valve
AD: with upper inlet, for left inlet (standard) directional valve



1. Inlet cover body * page 18

CODE : 30 08 8534
DESCRIPTION : Predisposition for electric commutator

2. Inlet valve options page 12

Standard setting is referred to 6 l/min flow.

TYPE	CODE	DESCRIPTION
SV	30 05 6236	Relief valve blanking plug
F	**30 05 6237**	Inlet anti-cavitation valve
L	-	Hydraulic pilot unloader valve

KE10K01 direct pressure relief valve YG type (standard)

(YG-100)	30 05 6257	Range 60-315 bar *(870-4570 psi)* standard setting 100 bar *(1450 psi)*

KE10K02 pilot operated pressure relief valve XGN type

(XGN-100)	30 05 6235	Range 60-315 bar *(870-4570 psi)* standard setting 100 bar *(1450 psi)*

Solenoid operated unloader valve

ELN(NO)	30 05 6277	Without emergency
ELP(NO)	30 05 6278	Push-button emergency
ELT(NO)	30 05 6279	Push and twist type with detent emergency
ELN(NC)	30 05 6280	Without emergency
ELP(NC)	30 05 6281	Push-button emergency
ELT(NC)	30 05 6282	Push and twist type with detent emergency

3. Electric commutator

TYPE	CODE	DESCRIPTION
R2E	20 03 2336	Electric commutator, ISO4400 connector

4. Coils

TYPE	CODE	DESCRIPTION
12VDC	20 03 2268	Coil type **BER**, ISO4400 integrated type 12VDC

5. Parts *

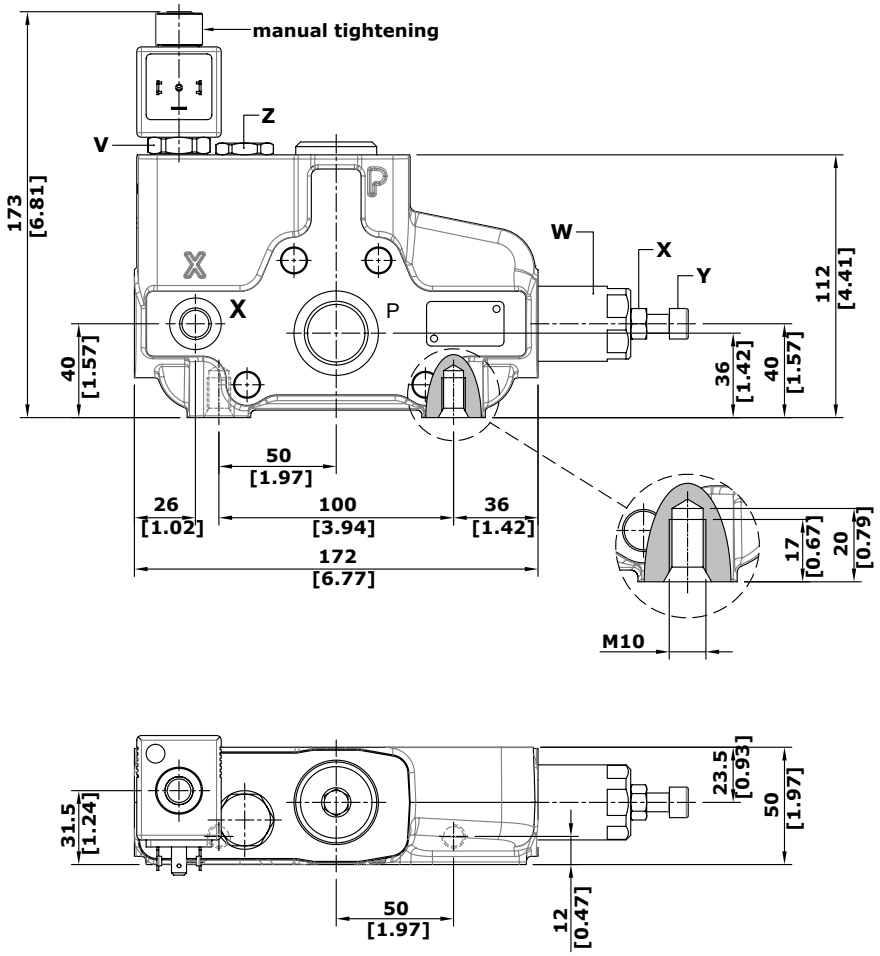
TYPE	CODE	DESCRIPTION
-	30 05 4920	G3/4 Plug
MAN18	30 05 6102	G1/8 Pressure gauge arrangement
MAN14	30 05 6101	G1/4 Pressure gauge arrangement

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

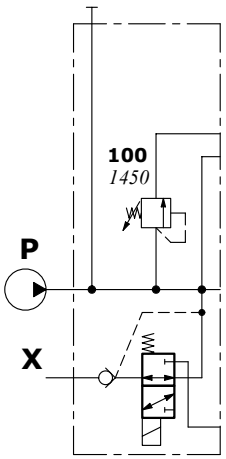
Inlet section for special applications

Configuration with electric commutator

Dimensional data and hydraulic circuit



Wrenches and tightening torques
X = wrench 13 - 24 Nm *(17.7 lbft)*
Y = allen wrench 6
W = wrench 30 - 42 Nm *(31 lbft)*
V = wrench 24 - 30 Nm *(22.1 lbft)*
Z = wrench 22 - 30 Nm *(22.1 lbft)*



Electric commutator features
Max. pressure.....: 250 bar *(3600 psi)*
Nominal flow.....: 25 l/min *(6.6 US gpm)*
Internal leakage.....: 40 cm^3/min @ 210 bar
(2.44 in^3/min @ 3050 psi)

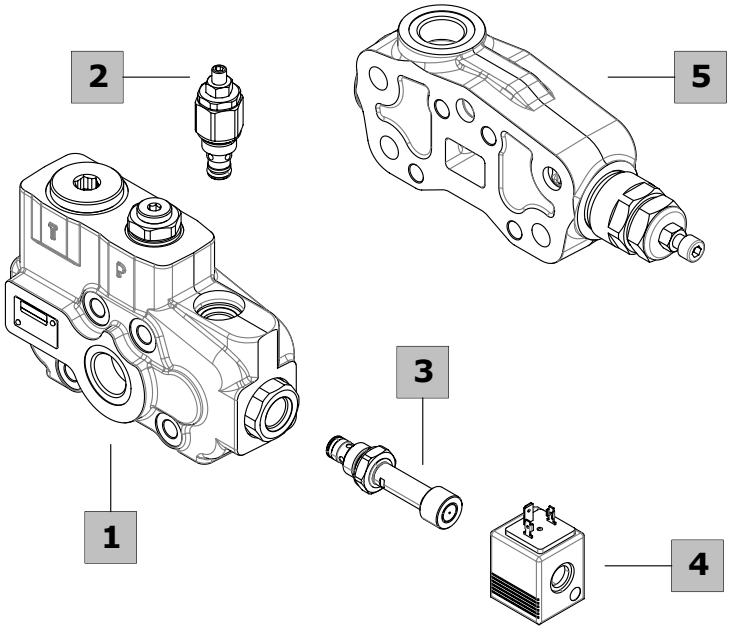
Inlet section for special applications

Configuration with flow cut-out

150L GS16 / M (LSW - 100) ELN(NC) - MAN14 - 12VDC

1 — 2 — 3 — 1 — 4

3 → Pressure relief valve setting (bar)



1. Inlet cover body * page 20

CODE : 30 09 7387
DESCRIPTION : With flow cut-out

2. Main relief valve page 20

Standard setting is referred to 6 l/min flow.

TYPE	CODE	DESCRIPTION
LSW(N)	30 05 6335	Range 71-180 bar (1030-2610 psi) standard setting 100 bar (1450 psi)
LSW(B)	30 05 6334	Range 181-280 bar (2625-4060 psi) standard setting 230 bar (3335 psi)
LSW(G)	30 05 6250	Range 281-350 bar (4075-5075 psi) standard setting 320 bar (4640 psi)
SV	30 05 6318	Relief valve blanking plug

3. Unloader valve options page 20

TYPE	CODE	DESCRIPTION
ELN(NO)	20 03 2270	Without manual emergency, NO circuit
ELP(NO)	20 03 2272	Push-button manual emergency, NO circuit
ELT(NO)	20 03 2306	"Push&twist" manual emergency, NO circuit

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

3. Unloader valve options (continued)

TYPE	CODE	DESCRIPTION
ELN(NC)	20 03 2271	Without manual emergency, NC circuit
ELP(NC)	20 03 2273	Push-button manual emergency, NC circuit
ELT(NC)	20 03 2307	"Push&twist" manual emergency, NC circuit

4. Coils

TYPE	CODE	DESCRIPTION
12VDC	20 03 2268	Coil type BER, ISO4400 integrated type 12VDC

5. Intermediate section * page 55

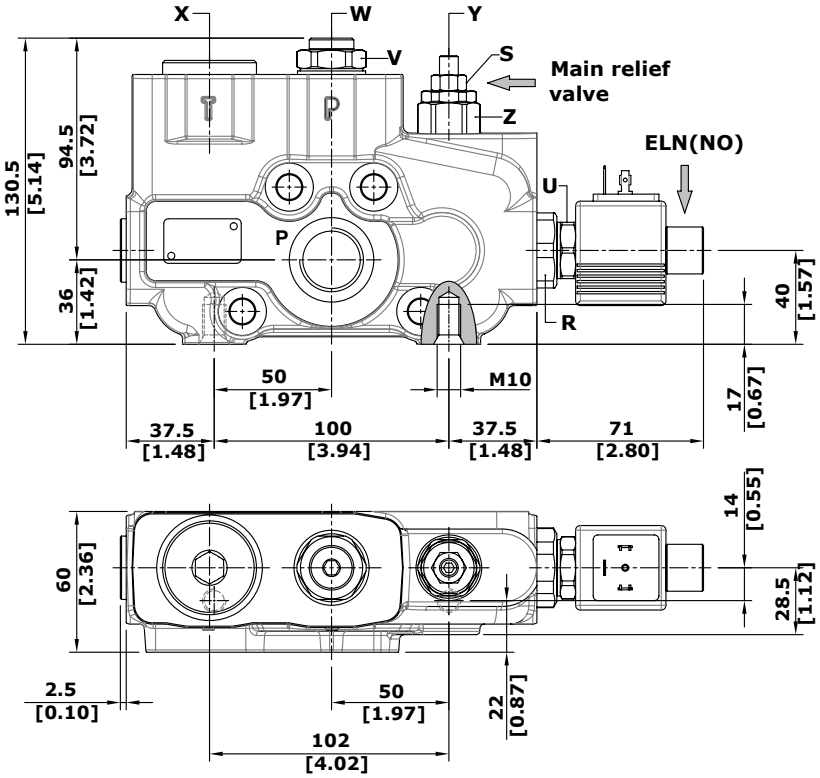
TYPE	CODE	DESCRIPTION
EIM(XGN-100)	30 08 8634	Intermediate section with pressure relief valve

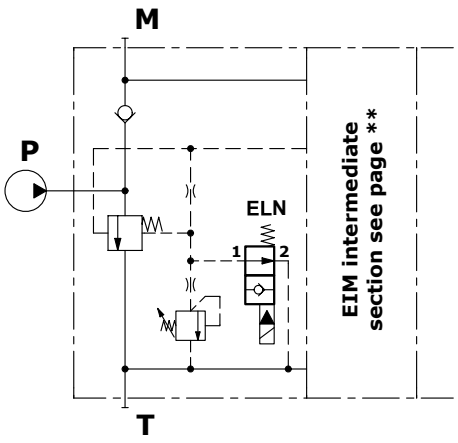
NOTE: Inlet cover with flow cut-out must be always combined with EIM intermediate section. (See page 55).

Inlet section for special applications

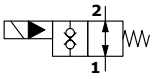
Configuration with flow cut-out

Dimensional data and hydraulic circuit

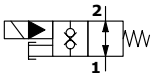




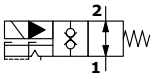
ELN: without emergency



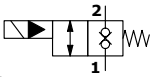
ELP: push button type



ELT: "push & twist" type



ELN(NC): without emergency



Wrenches and tightening torques
X = wrench 12 - 42 Nm *(8.1 lbft)*
Y = allen wrench 4
W = allen wrench 6 - 24 Nm *(17.7 lbft)*
V = wrench 27 - 24 Nm *(17.7 lbft)*
U = wrench 24 - 30 Nm *(22.1 lbft)*
Z = wrench 24 - 30 Nm *(22.1 lbft)*
R = wrench 32 - 42 Nm *(8.1 lbft)*
S = wrench 13 - 24 Nm *(17.7 lbft)*

Legenda
ELN: without emergency
ELP: push button emergency override
ELT: "push&twist" emergency override
ELN(NC): without emergency NC circuit

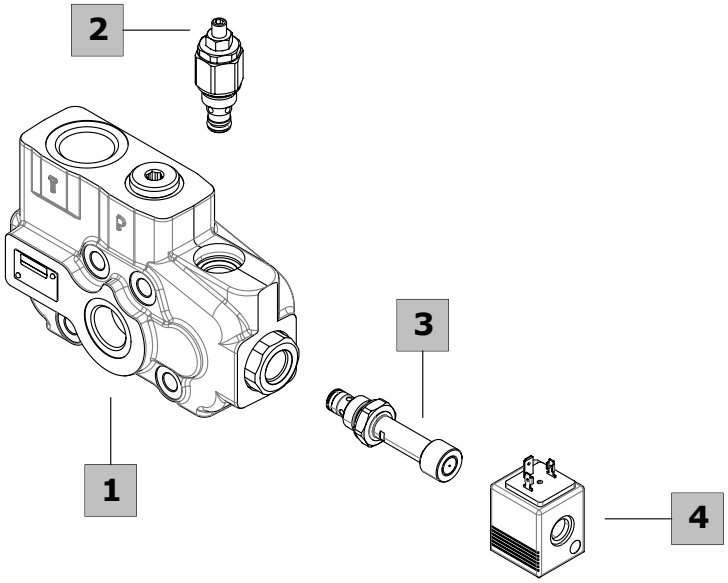
Inlet section for special applications

Configuration with unloader operation spool type

150L GS16 / BCHW (LSW - 100) ELN(NO) - 24VDC

1 **2** **3** **4**

Pressure relief valve setting (bar)



1. Inlet cover body * page 22

CODE : 30 09 7403
DESCRIPTION : With unloader operation spool type

2. Main relief valve page 20

Standard setting is referred to 6 l/min flow.

TYPE	CODE	DESCRIPTION
LSW(N)	30 05 6335	Range 71-180 bar (1030-2610 psi) standard setting 100 bar (1450 psi)
LSW(B)	30 05 6334	Range 181-280 bar (2625-4060 psi) standard setting 230 bar (3335 psi)
LSW(G)	30 05 6250	Range 281-350 bar (4075-5075 psi) standard setting 320 bar (4640 psi)
SV	30 05 6318	Relief valve blanking plug

3. Unloader valve options page 22

TYPE	CODE	DESCRIPTION
ELN(NO)	20 03 2270	Without manual emergency, NO circuit
ELP(NO)	20 03 2272	Push-button manual emergency, NO circuit
ELT(NO)	20 03 2306	"Push&twist" manual emergency, NO circuit

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

3. Unloader valve options (continued)

TYPE	CODE	DESCRIPTION
ELN(NC)	20 03 2271	Without manual emergency, NC circuit
ELP(NC)	20 03 2273	Push-button manual emergency, NC circuit
ELT(NC)	20 03 2307	"Push&twist" manual emergency, NC circuit

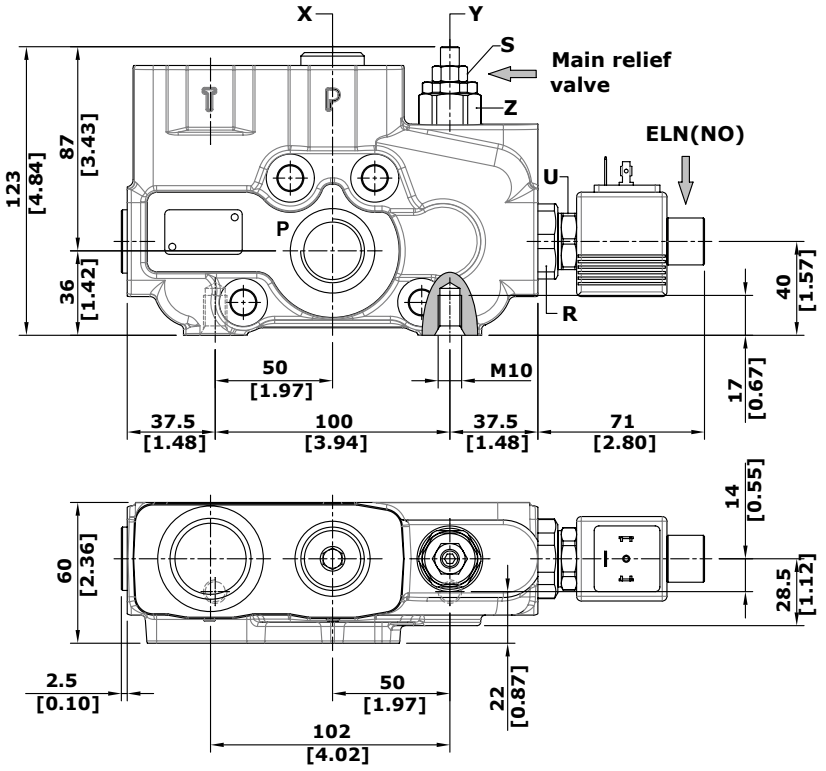
4. Coils

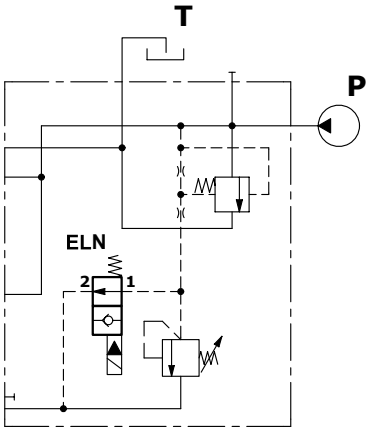
TYPE	CODE	DESCRIPTION
24VDC	20 03 2269	Coil type DIN, ISO4400 integrated type 24VDC

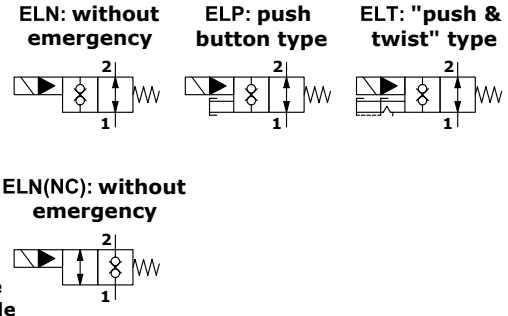
Inlet section for special applications

Configuration with unloader operation spool type

Dimensional data and hydraulic circuit







Wrenches and tightening torques
X = allen wrench 8 - 24 Nm *(17.7 lbft)*
Y = allen wrench 4
U = wrench 24 - 30 Nm *(22.1 lbft)*
Z = wrench 24 - 30 Nm *(22.1 lbft)*
R = wrench 32 - 42 Nm *(31 lbft)*
S = wrench 13 - 24 Nm *(17.7 lbft)*

Legenda
ELN: without emergency
ELP: push button emergency override
ELT: "push&twist" emergency override
ELN(NC): without emergency NC circuit

Parts ordering codes (mechanical control)

Description example:

150L GS16 / P - 1 8 L . U 1 (100)

1 2 3 4 5a

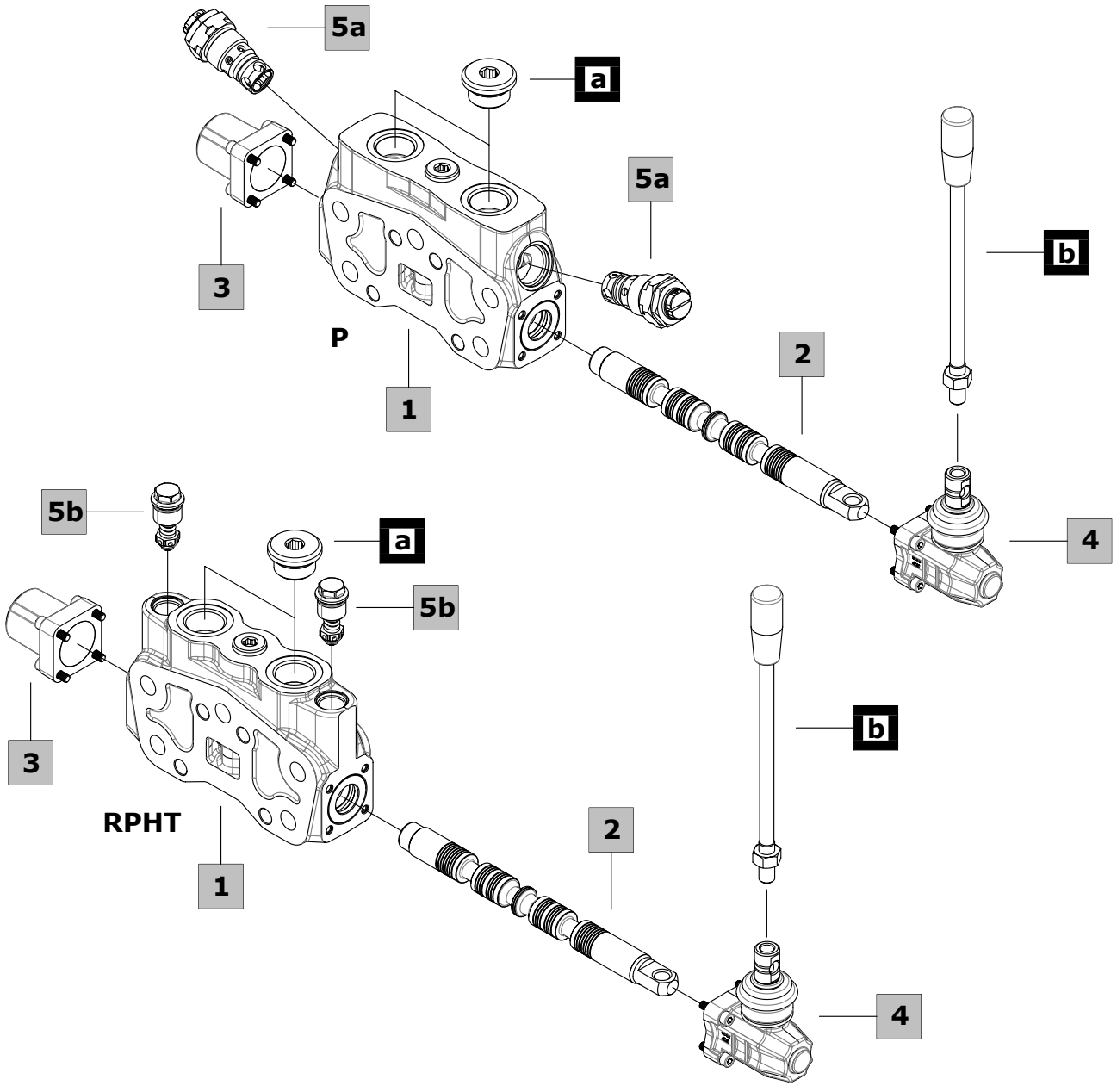
Pressure relief valve setting (bar)

1 mounted on A port.
2 mounted on B port.
3 mounted on A and B port.

150L GS16 / RPHT - 1 8 L . U 1 (100)

1 2 3 4 5b

Pressure relief valve fixed setting (bar)



Working section

Parts ordering codes (mechanical control)

1. Working section kit * — page 26

TYPE	CODE	DESCRIPTION
P	30 08 5692	For parallel circuit, for valve with **series circuit**
SP	30 08 5880	For tandem circuit
S	30 08 5882	For series circuit
P5DY	30 08 5858	For parallel circuit and floating circuit
P8PF	30 08 5881	Regenerative control kit, **for 8CR, 9BCR-10BCR e 8EI3CR spool positioners**
PHT	-	For parallel circuit
RPHT	30 08 8570	For parallel circuit with upper arrangement for fixed setting port valves
RPHSP	30 08 8571	For tandem circuit with upper arrangement for fixed setting port valves
RPH5DY	30 08 8572	For parallel circuit with floating circuit with **upper arrangement for fixed setting port** valves
RPH8PF	30 08 8574	For parallel circuit with regenerative circuit **with upper arrangement for fixed setting** port valves

Include body, seals, rings and load check valve.

2. Spools — page 27

TYPE	CODE	DESCRIPTION
1	30 01 3604	Double acting, 3 positions, with A and B **closed in neutral position**
1(11A)	30 01 3675	As previous, **need 11A spool positioner and dedicated working section kit**
1CS	30 01 3678	As type 1, sensitive type
1A	30 01 3607	Double acting, 3 positions, with A open **to tank in neutral position**
1B	30 01 3608	Double acting, 3 positions, with B open **to tank in neutral position**
1AH	30 01 3609	**Double acting, 3 positions, with A partially open to tank in neutral position**
1BH	30 01 3610	Double acting, 3 positions, with B partially **open to tank in neutral position**
1D	30 01 3774	As type 1, sensitive type for flow up to 100 l/min *(26.42 USgpm)*
1TX	30 01 3775	Double acting with A and B closed in neutral position, B partially connect to tank in position 1, A partially connect to tank in position 2
1TYD	30 01 3780	As previous, B with restricted connection **to tank**
1TYA	30 01 3781	As previous, A with restricted connection **to tank**
2	30 01 3605	Double acting, 3 positions, with A and B **open to tank in neutral position**
2H	30 01 3606	Double acting, 3 positions, with A and B **partially open to tank in neutral position**
3	30 01 3611	Single acting on A, 3 positions, B plugged; requires G3/4 plug
4	30 01 3612	Single acting on B, 3 positions, A plugged; requires G3/4 plug
5DY	30 01 3614	Double acting spool with A and B closed in **neutral position, 4 positions, with spool in, floating 4th position: need dedicated positioner kit 13NZ type and working section kit P5DY and RPH5DY type**
8PF	30 01 3613	Double acting 3 positions, regenerative circuit **in 3rd position with spool in: need dedicated positioners kit**

3. "A" side spool positioners — page 29

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 in neutral 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**
8IZ	30 07 7542	Unilateral hydraulic proportional **spool control kit**
11A	30 07 7601	With detent in positions 1 and 2, **automatic release in neutral position**
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
13NZ	30 07 5419	4 positions with spring return in neutral position and detent in pos.3: **for 5DY spool**
11NZ	30 07 7547	Detent in positions neutral, 1,2 and detent in pos.3: **for 5DY spool**

Positioner kit for **8PF** regenerative spools:

8CR	**30 07 5575**	With spring return in neutral position

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

Parts ordering codes (mechanical control)

4. "B" side options — page 40

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)
LCB	30 07 5433	Joystick lever for 2 sections operation
SL	-	Without lever box
SLP	30 07 5406	Without lever box, with dust-proof plate
TQ	30 07 5398	Flexible cable connection; for CT cables
LEB	30 07 5409	Safety lever box, vertical configuration
SLCZ	30 07 5347	Without lever box, with endcap.

5a Adjustable port valves — page 48

Valves standard setting is referred to 6 l/min

TYPE	CODE	DESCRIPTION
P3T	30 05 4941	Valve blanking plug
C	-	Anticavitation valve
Anti-shock valve		
P	30 05 6196	From 0 to 315 bar / *0 to 4600 psi* standard setting 100 bar / *1450 psi*
Anti-shock and anti-cavitation valve		
U	30 05 4938	From 0 to 315 bar / *0 to 4600 psi* standard setting 100 bar / *1450 psi*

5b Fixed setting port valves — page 51

TYPE	CODE	DESCRIPTION
For RPH... working section kit		
P3T	30 05 6234	Valve blanking plug
C	30 05 6307	Anticavitation valve

Fixed setting antishock and anticavitation valves:

setting is referred to 6 l/min

TYPE : **U 100** (100 = setting (bar)) CODE : 30 05 02 **100** (100 = setting (bar))

U020	30 05 02020	Setting 20 bar *(290 psi)*
U030	30 05 02030	Setting 30 bar *(435 psi)*
U040	30 05 02040	Setting 40 bar *(580 psi)*
U050	30 05 02050	Setting 50 bar *(725 psi)*
U060	30 05 02060	Setting 60 bar *(870 psi)*
U080	30 05 02080	Setting 80 bar *(1160 psi)*
U100	30 05 02100	Setting 100 bar *(1450 psi)*
U110	30 05 02110	Setting 110 bar *(1595 psi)*
U125	30 05 02125	Setting 125 bar *(1800 psi)*
U140	30 05 02140	Setting 140 bar *(2030 psi)*
U150	30 05 02150	Setting 150 bar *(2175 psi)*
U160	30 05 02160	Setting 160 bar *(2320 psi)*
U175	30 05 02175	Setting 175 bar *(2550 psi)*
U190	30 05 02190	Setting 190 bar *(2750 psi)*
U200	30 05 02200	Setting 200 bar *(2900 psi)*
U210	30 05 02210	Setting 210 bar *(3050 psi)*
U220	30 05 02220	Setting 220 bar *(3190 psi)*
U230	30 05 02230	Setting 230 bar *(3350 psi)*
U240	30 05 02240	Setting 240 bar *(3500 psi)*
U250	30 05 02250	Setting 250 bar *(3600 psi)*
U260	30 05 02260	Setting 260 bar *(3750 psi)*
U270	30 05 02270	Setting 270 bar *(3900 psi)*
U280	30 05 02280	Setting 280 bar *(4050 psi)*
U290	30 05 02290	Setting 290 bar *(4200 psi)*
U300	30 05 02300	Setting 300 bar *(4350 psi)*

5b Fixed setting port valves (continued)

TYPE	CODE	DESCRIPTION
U310	30 05 02310	Setting 310 bar *(4500 psi)*
U320	30 05 02320	Setting 320 bar *(4650 psi)*
U330	30 05 02330	Setting 330 bar *(4800 psi)*
U340	30 05 02340	Setting 340 bar *(4930 psi)*
U350	30 05 02350	Setting 350 bar *(5075 psi)*
U360	30 05 02360	Setting 360 bar *(5220 psi)*
U370	30 05 02370	Setting 370 bar *(5365 psi)*
U380	30 05 02380	Setting 380 bar *(5510 psi)*
U390	30 05 02390	Setting 390 bar *(5650 psi)*
U400	30 05 02400	Setting 400 bar *(5800 psi)*
U410	30 05 02410	Setting 410 bar *(5950 psi)*
U420	30 05 02420	Setting 420 bar *(6090 psi)*

6. Complete controls * — page 44

TYPE	CODE	DESCRIPTION
ON/OFF Hydraulic control		
8IM	30 07 5414	ON/OFF Hydraulic control
8IMF3	30 07 7569	With screws spool stroke adjusting.
13IM	30 07 5421	For floating circuit. **need P5DY working section and 5DY spool type**
Proportional hydraulic kit		
8IMSPSD	**30 07 7559**	**With spool position sensor esecution. (ON/OFF)**
8IMSPSL	**30 07 7562**	**With spool position sensor esecution.**
Positioner kit for 8PF regenerative spools:		
8IMCR	-	**ON/OFF**hydraulic control kit
Rotative control type		
R	30 07 5379	Rotative control type

a. Port plugs *

TYPE	CODE	DESCRIPTION
G3/4	30 05 4920	G3/4 Plug

b. Optional handlevers

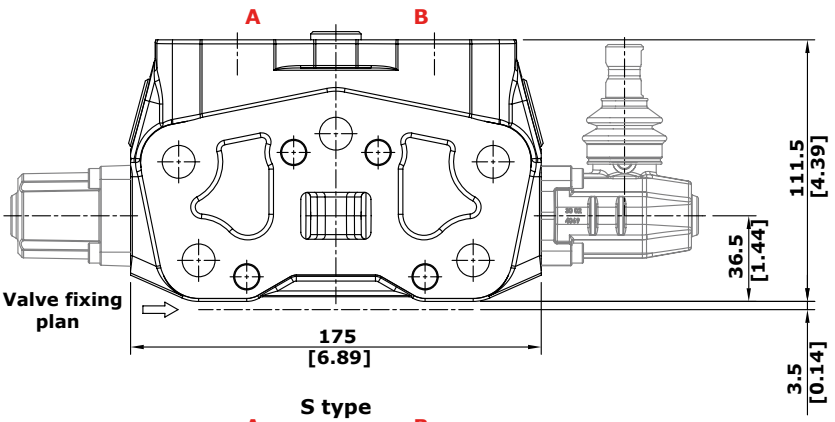
TYPE	CODE	DESCRIPTION
M10x225	20 03 2381	Lenght L = 225mm / *8.86in*

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

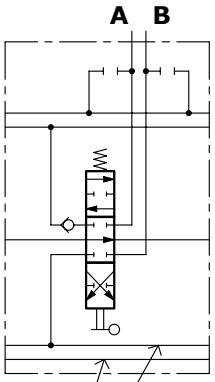
Working section

Dimensional data and hydraulic circuit

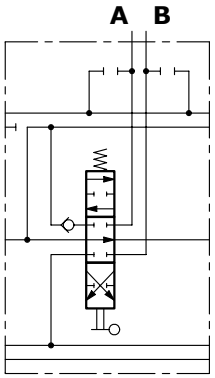
P type
(Dimensions are the same for SP/P5DY/P8PF/PHT type)



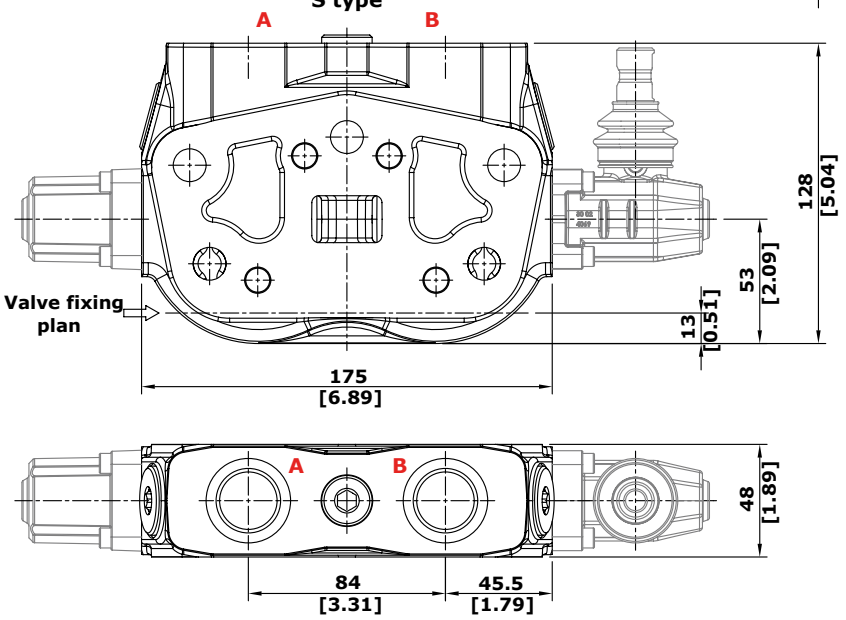
P type



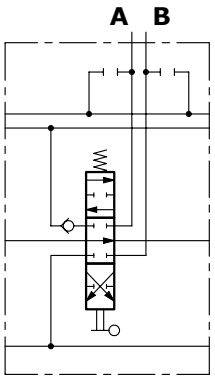
SP type



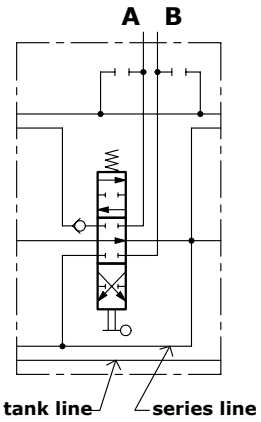
S type



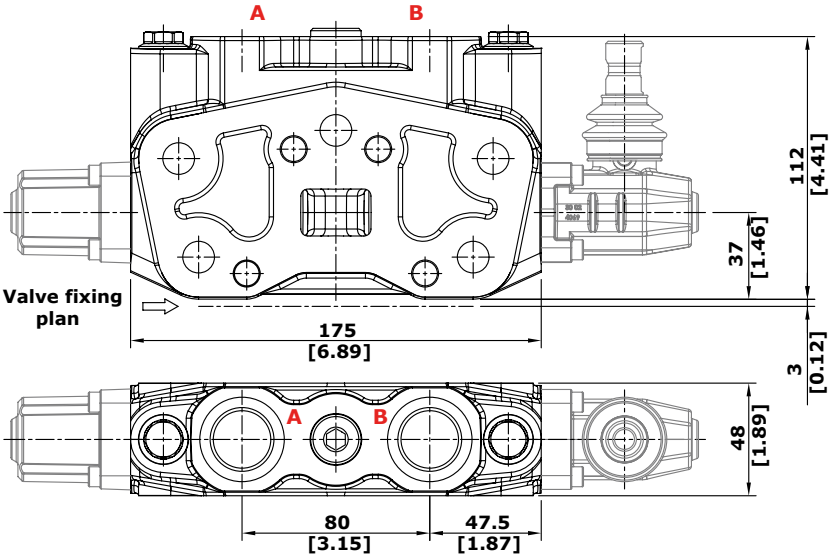
PHT type



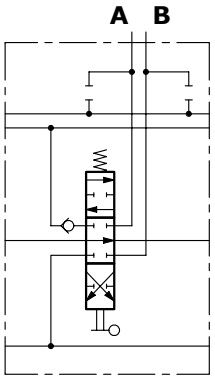
S type



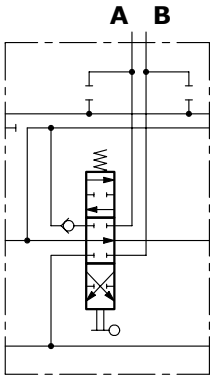
RPHT type
(Dimensions are the same for RPHSP/RPH5DY/RPH8PF type)



RPHT type

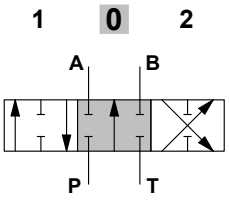


RPHSP type



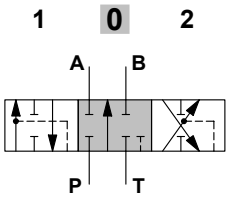
Spools options

1 (30 01 3604), 1CS (30 01 3678), 1D (30 01 3774) spool type
Double acting, 3 positions, with A and B closed in neutral position



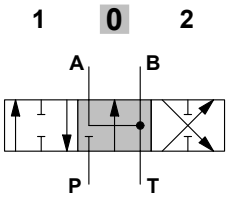
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

1(11A) (30 01 3675)
Double acting, 3 positions, with A and B closed in neutral position



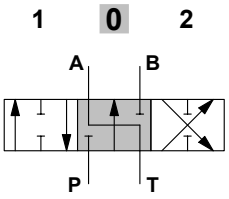
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

2 (30 01 3605) spool type
Double acting, 3 positions, with A and B open to tank in neutral position



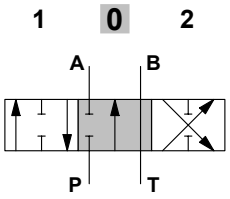
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

1A (30 01 3607) spool type
Double acting, 3 positions, with A open to tank in neutral position



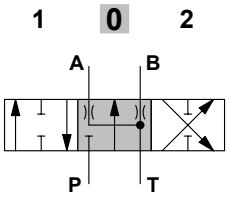
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

1B (30 01 3608) spool type
Double acting, 3 positions, with B open to tank in neutral position



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

2H (30 01 3606) spool type
Double acting, 3 positions, with A and B partially open to tank in neutral position



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

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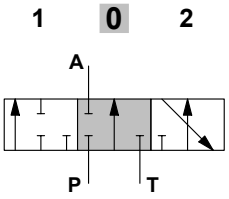
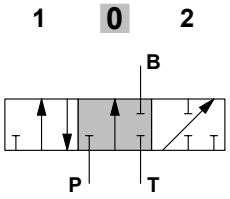
3 (30 01 3611) spool type
Single acting on A, 3 positions, B plugged; requires G3/4 plug



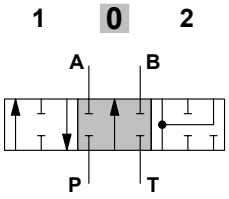
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

4 (30 01 3612) spool type
Single acting on B, 3 positions, A plugged; requires G3/4 plug



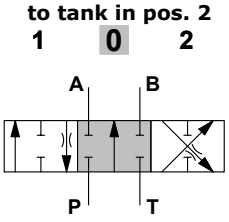
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

8PF (30 01 3613) spool type
Double acting, 3 positions, regenerative circuit in 3rd position (pos.2) with spool in



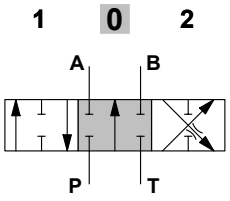
Spool stroke
position 1: + 5.7 mm *(+ 0.22 in)*
position 2: - 5.7 mm *(- 0.22 in)*

1TX (30 01 3775) spool type
Double acting with A and B closed in neutral position, B partially connect to tank in pos. 1, A partially connect to tank in pos. 2



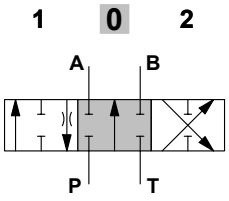
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

1TYA (30 01 3781) spool type
Double acting with A and B closed in neutral position, A partially connect to tank in pos. 2



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

1TYD (30 01 3780) spool type
Double acting with A and B closed in neutral position, B partially connect to tank in pos. 1

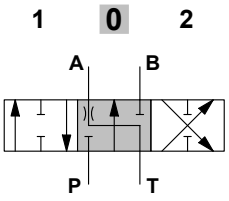


Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

Working section

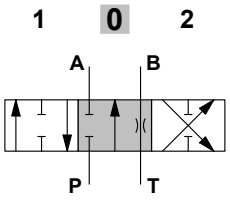
Spools options

1AH (30 01 3609) spool type
Double acting, 3 positions, with A partially open to tank in neutral position



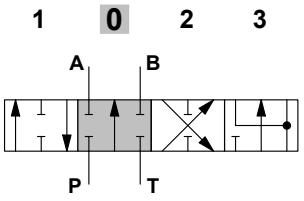
Spool stroke
position 1: + 7 mm *(+ 0.28 in)*
position 2: - 7 mm *(- 0.28 in)*

1BH (30 01 3610) spool type
Double acting, 3 positions, with B partially open to tank in neutral position



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

5DY (30 01 3614) spool type
Double acting, with A and B closed in neutral position, 4 positions, floating in position 3, with spool in



Spool stroke
position 1: + 6 mm *(+ 0.24 in)*
position 2: - 6 mm *(- 0.24 in)*
position 3: - 12 mm *(- 0.47 in)*

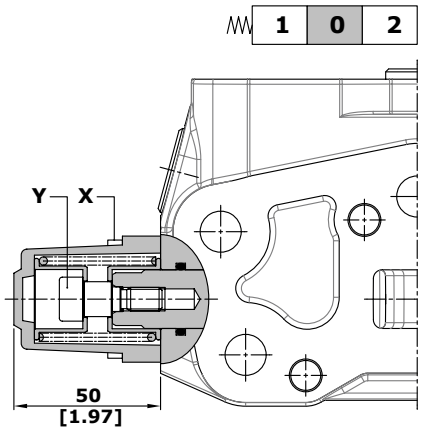
Working section

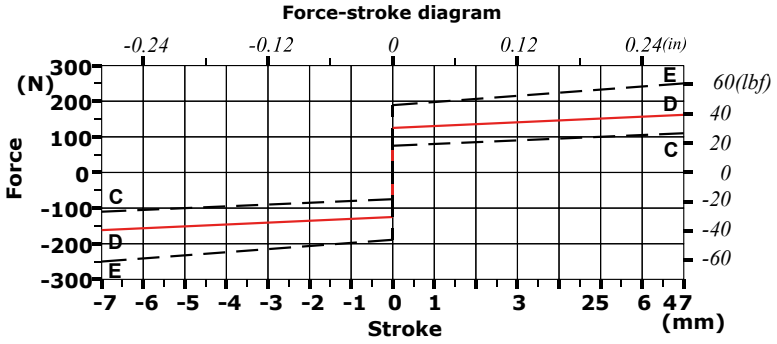
"A" side spool positioners

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).

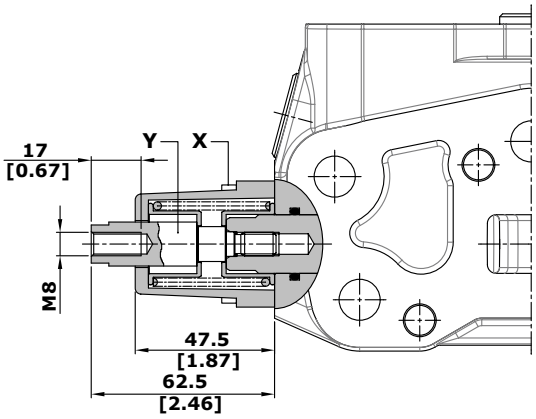




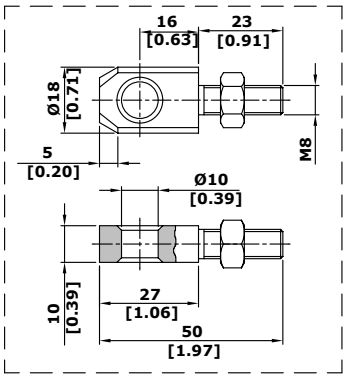
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

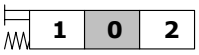
8D type (30 07 5383)

With M8 female threaded pin extension for dual control.



Spool end joint dimensions (optional)

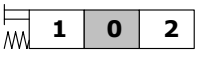


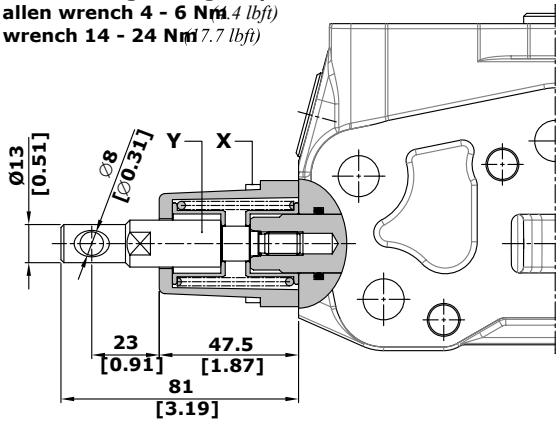


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 13 - 24 Nm *(17.7 lbft)*

8D1 type (30 07 5402)

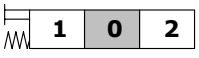
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 14 - 24 Nm *(17.7 lbft)*

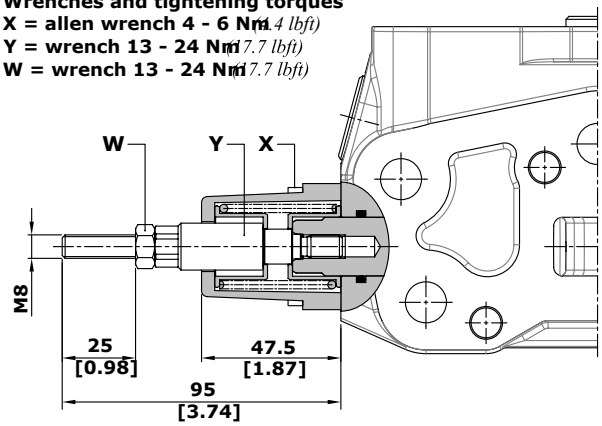




8D2 type (30 07 5384)

Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 13 - 24 Nm *(17.7 lbft)*
W = wrench 13 - 24 Nm *(17.7 lbft)*



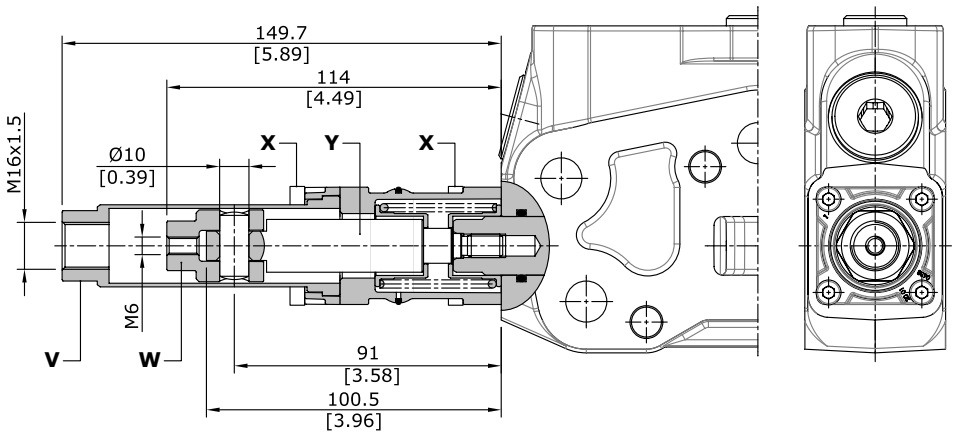


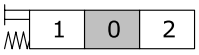
Working section

"A" side spool positioners

With spring return in neutral position

8TL type (30 07 5397)

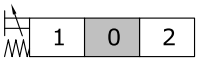


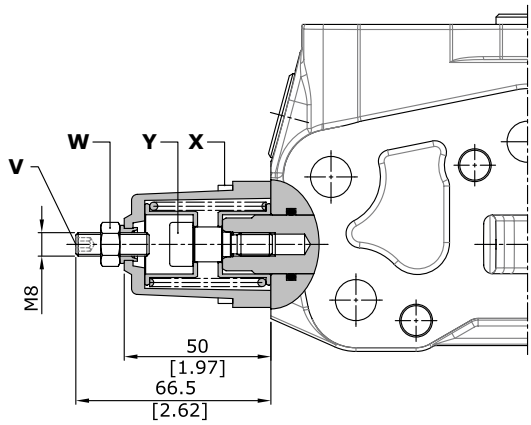


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = wrench 10 - 24 Nm *(17.7 lbft)*
W = wrench 17
V = wrench 24

8F2 type (30 07 5377)

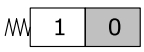
With spool stroke adjustment in position 2 (P→**B)**



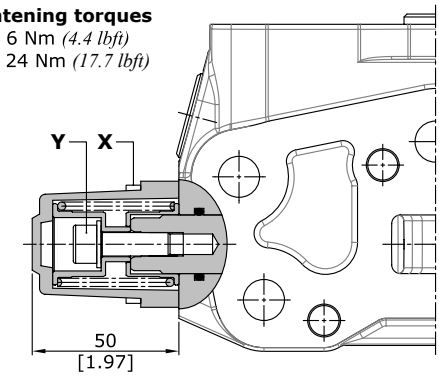


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*
W = wrench 13 - 24 Nm *(17.7 lbft)*
V = allen wrench 4

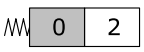
19 type (30 07 5436)



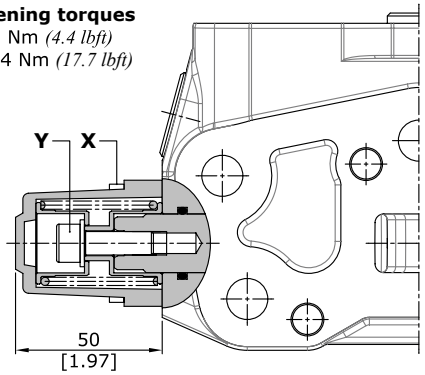
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*



20 type (30 07 5437)



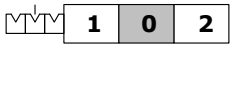
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

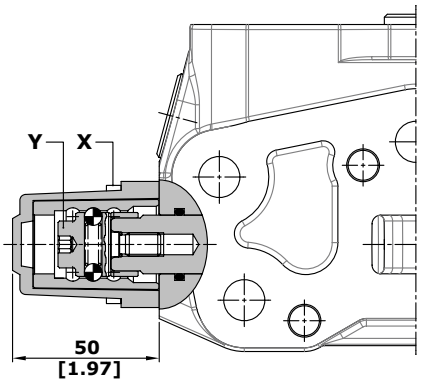


"A" side spool positioners

With detent

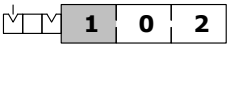
11 type (30 07 5378)

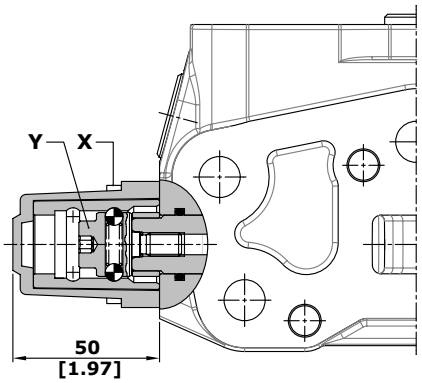




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

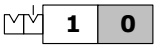
12 type (30 07 5438)

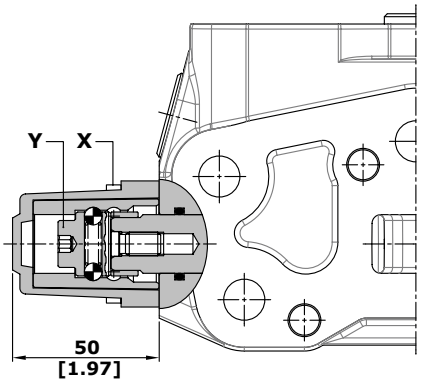




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

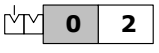
15 type (30 07 5439)

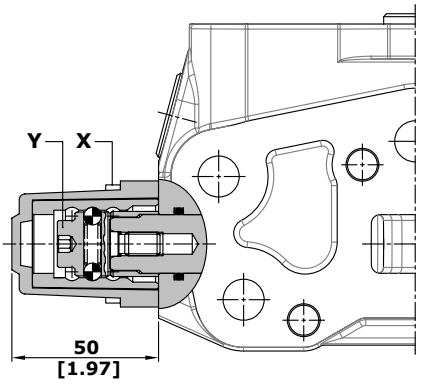




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

16 type (30 07 5440)





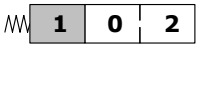
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

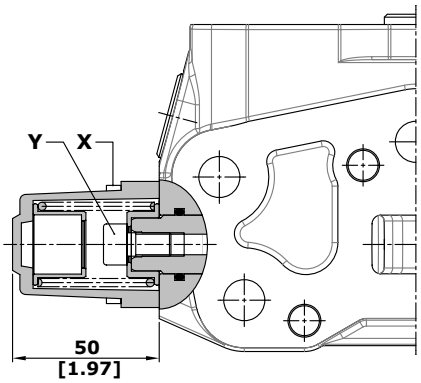
Working section

"A" side spool positioners

With spring return

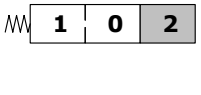
17 type (30 07 5441)

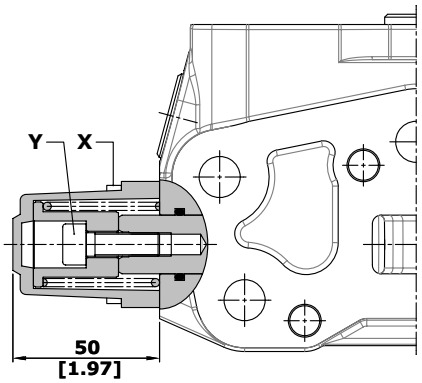




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

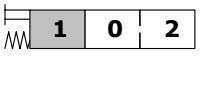
18 type (30 07 5381)

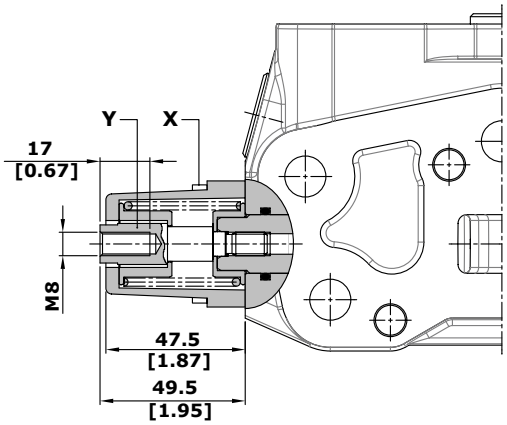




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

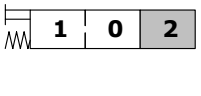
17D type (30 07 5442)

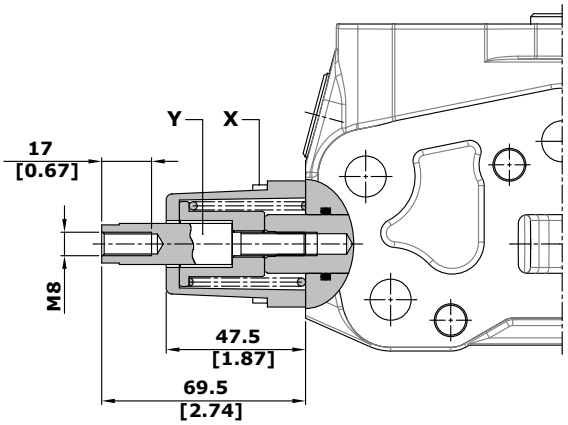




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 13 - 24 Nm *(17.7 lbft)*

18D type (30 07 5382)



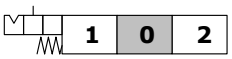


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 13 - 24 Nm *(17.7 lbft)*

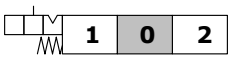
"A" side spool positioners

With detent and spring return to neutral position from either directions

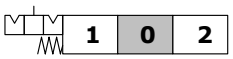
9B type (30 07 5386)
detent in position 1
(curve A)



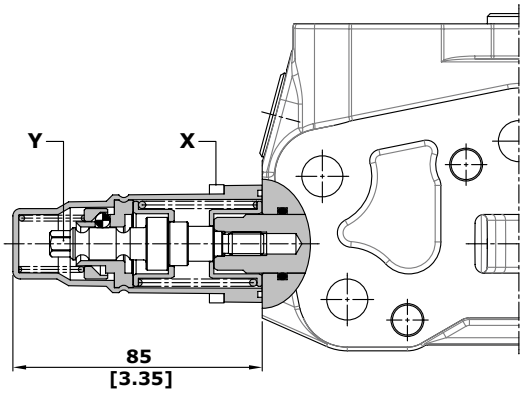
10B type (30 07 5387)
detent in position 2
(curve B)



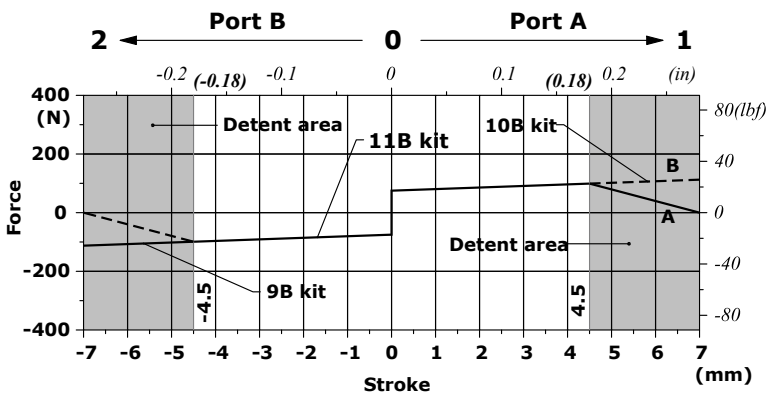
11B type (30 07 5388)
detent in position 1 and 2
(curves A and B)



11B type



Detent force-stroke

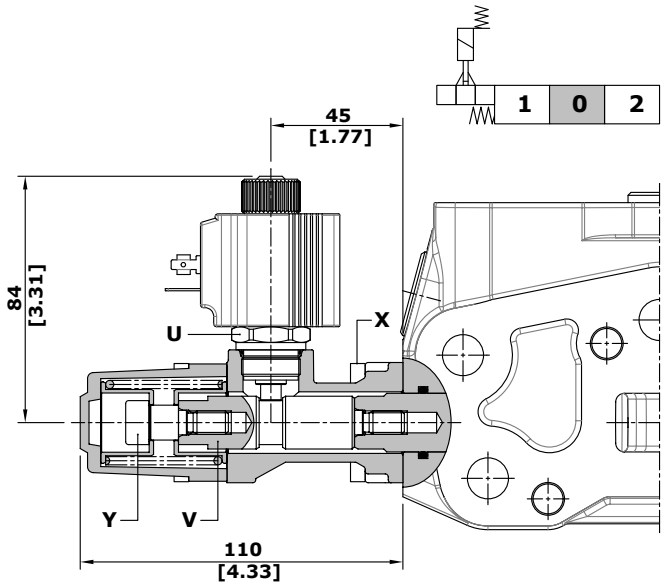


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = wrench 8 - 9 Nm *(6.6 lbft)*

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 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*
V = wrench 15 - 24 Nm *(17.7 lbft)*
U = wrench 24 - 24 Nm *(17.7 lbft)*

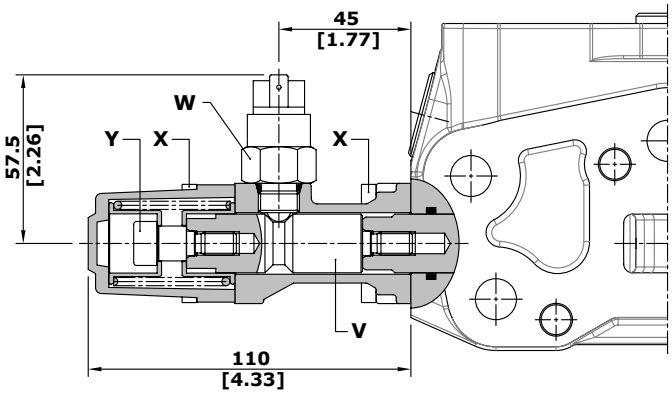
Working section

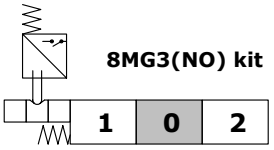
"A" side spool positioners

With microswitch

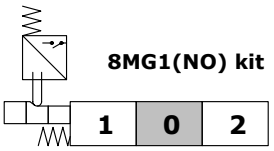
8MG3(NO) type (30 07 5562)

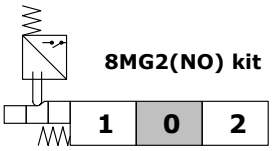
With spring return in neutral position and microswitch operated in both directions.
Also available 8MG1(NO) (microswitch operated in position 1) and 8MG2(NO) (microswitch operated in position 2) configurations; dimension are the same of 8MG3(NO) configuration.
Same configurations are available with normally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





Other configurations



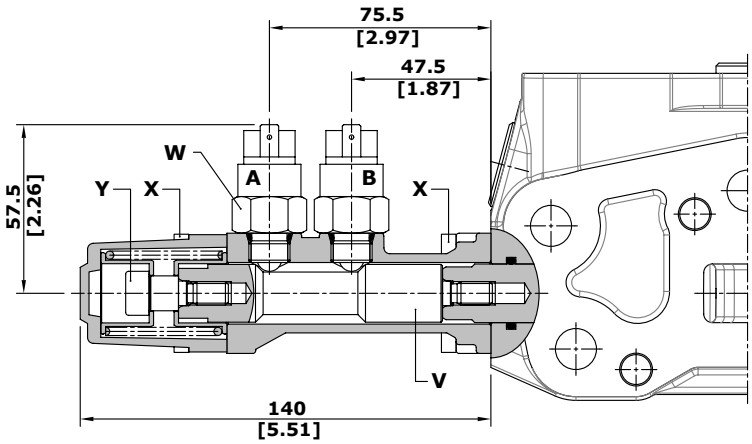


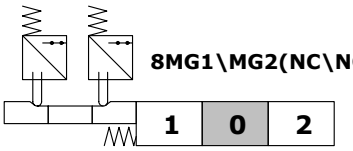
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*
W= wrench 22 - 42 Nm *(31 lbft)*
V = wrench 17 - 9.8 Nm *(7.2 lbft)*

Operating features
MICROSWITCH
Mechanical life : $5x10^6$ operations
Electrical life (resistive load) : $5x10^4$ operations 10A / 12VDC
: $5x10^4$ operations 3A / 24VDC

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

With double microswitch in position 1 and 2.





Positions	A	B
1	●/ ●	● ●
0	● ●	● ●
2	● ●	● / ●

Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*
W= wrench 22 - 42 Nm *(31 lbft)*
V = wrench 17 - 9.8 Nm *(7.2 lbft)*

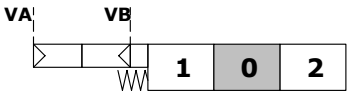
Operating features
MICROSWITCH
Mechanical life : $5x10^6$ operations
Electrical life (resistive load) : $5x10^4$ operations 10A / 12VDC
: $5x10^4$ operations 3A / 24VDC

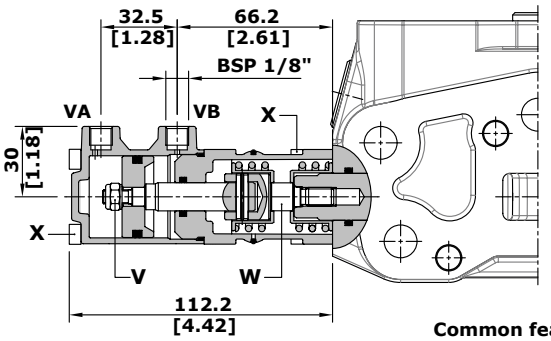
"A" side spool positioners

ON/OFF pneumatic kit and proportional pneumatic kit

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

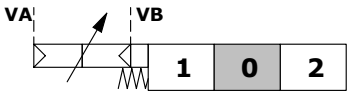
With spring return to neutral position.

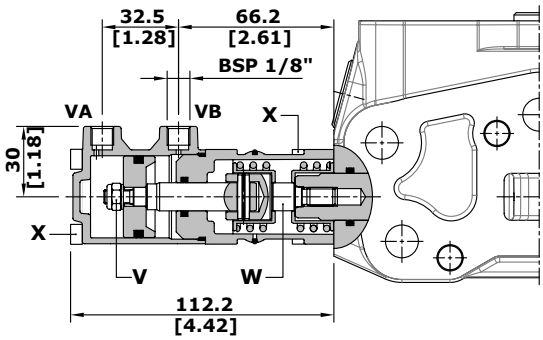




Proportional pneumatic: 8PF type (30 07 5596)

With spring return to neutral position.





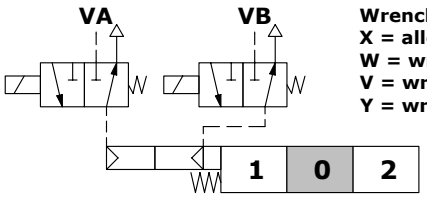
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
W = wrench 17 - 24 Nm *(17.7 lbft)*
V = wrench 13 - 9 Nm *(6.6 lbft)*

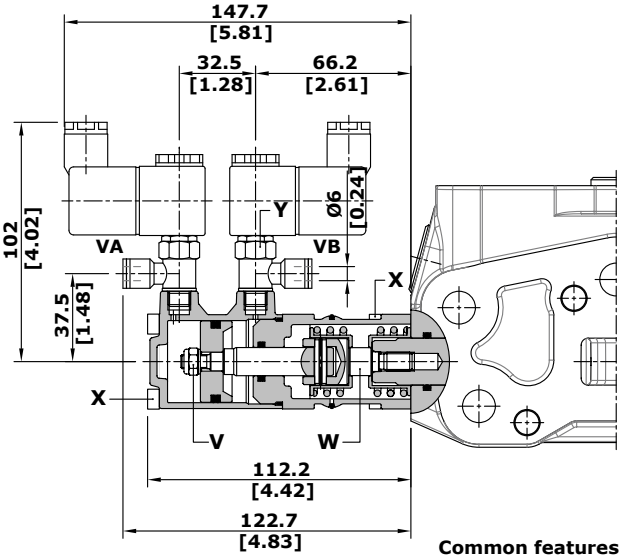
Common features
Pilot pressure.....: min. 5.5 bar *(min. 80 psi)*
: max. 10 bar *(min. 145 psi)*

ON/OFF electro-pneumatic kit

Electro-pneumatic: 8EP3 type

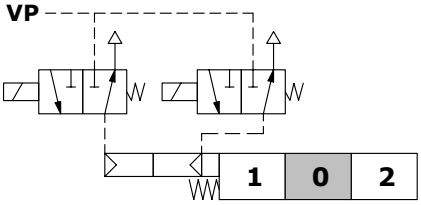
With spring return to neutral position.

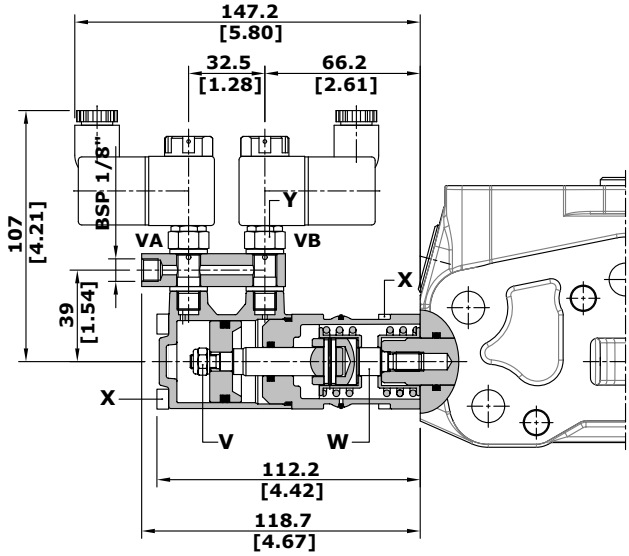




Electro-pneumatic: 8EP4 type

With spring return to neutral position.





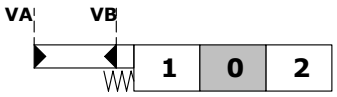
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
W = wrench 17 - 24 Nm *(17.7 lbft)*
V = wrench 13 - 9 Nm *(6.6 lbft)*
Y = wrench 15 - 6 Nm *(4.4 lbft)*

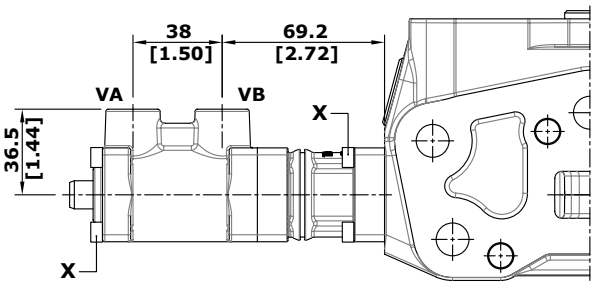
Common features
Pilot pressure.....: min. 5.5 bar *(min. 80 psi)*
: max. 10 bar *(min. 145 psi)*

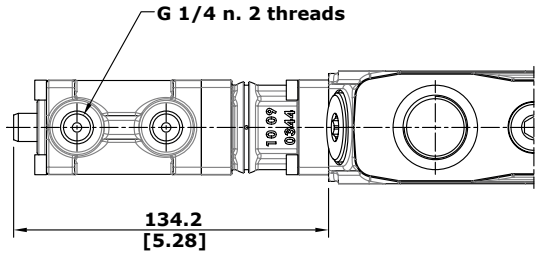
Working section

"A" side spool positioners

Unilateral hydraulic proportional spool control kit 8IZ (30 07 7542)



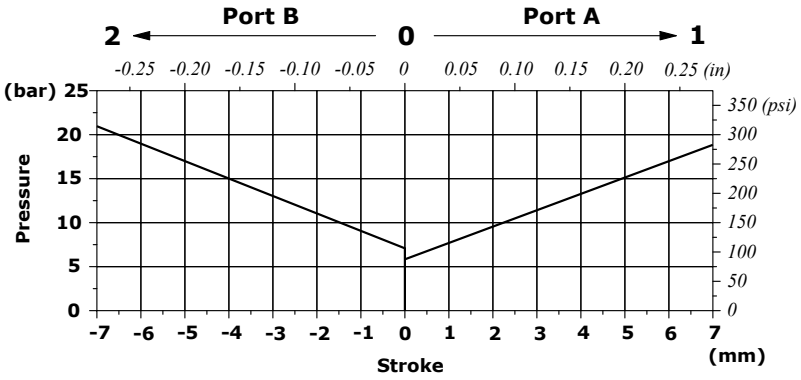




Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*

Features
adjustment range .....: from 8 to 22 bar
(from 110 to 310 psi)

Pressure - stroke diagram

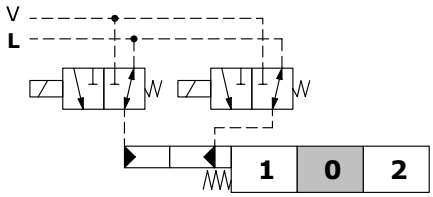


Working section

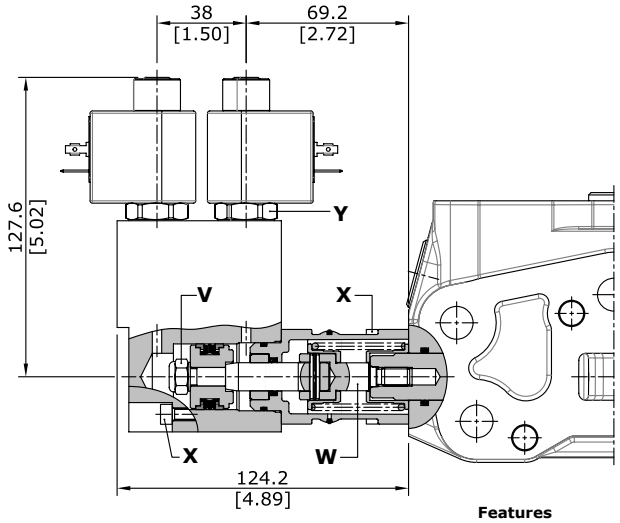
"A" side spool positioners

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

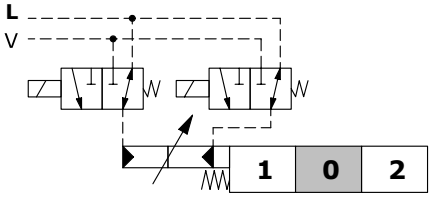
ON/OFF electro-hydraulic: 8EI3 type

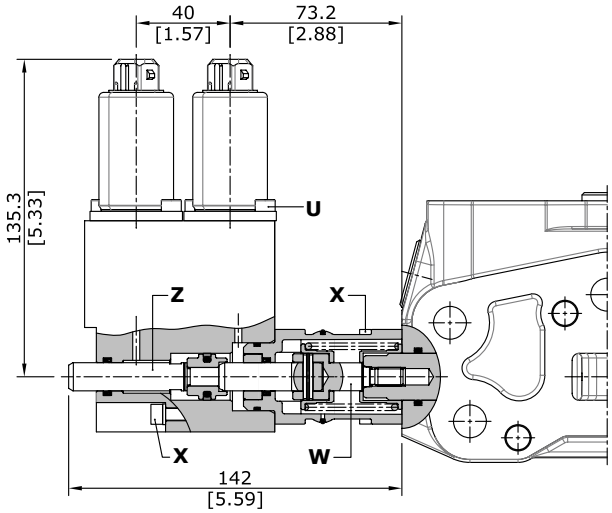


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
W = wrench 17 - 24 Nm *(17.7 lbft)*
V = wrench 13 - 9 Nm *(6.6 lbft)*
Y = wrench 24 - 9.8 Nm *(7.2 lbft)*
Z = wrench 11 - 9 Nm *(6.6 lbft)*
U = allen wrench 4



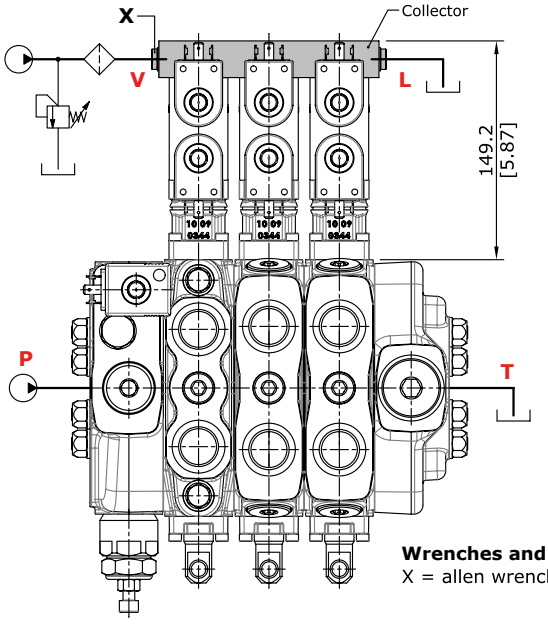
Proportional electro-hydraulic: 8EI3F type



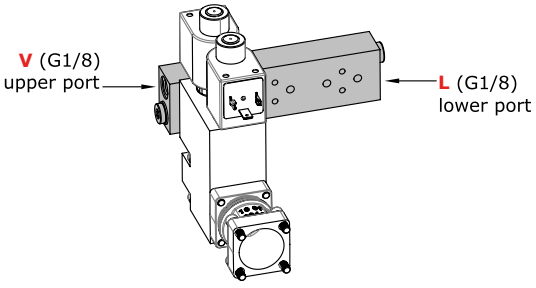


Features
Pilot pressure.....: min. 10 bar / *145 psi*
: max. 50 bar / *725 psi*
Max backpressure on drain L.....: 25 bar / *360 psi*

Collector kit for external pilot and drain



Wrenches and tightening torques
X = allen wrench 5 - 24 Nm *(17.7 lbft)*



COLLECTOR KIT CODES		
Type	**Code ***	**Description**
KE1S0	30 07 5537	Kit for one section
KE2S0	30 07 5532	Kit for 2 sections
KE3S0	30 07 5533	Kit for 3 sections
KE4S0	30 07 5534	Kit for 4 sections
KE5S0	30 07 5535	Kit for 5 sections
KE6S0	30 07 5536	Kit for 6 sections
KE7S0	-	Kit for 7 sections

(*) codes are referred to BSP thread

Description example:
150L GS16/3/AC(XGN-100)R2E/RP8EI3SLP/8EI3SLP/18EI3SLP/RCKE3S0-12VDC

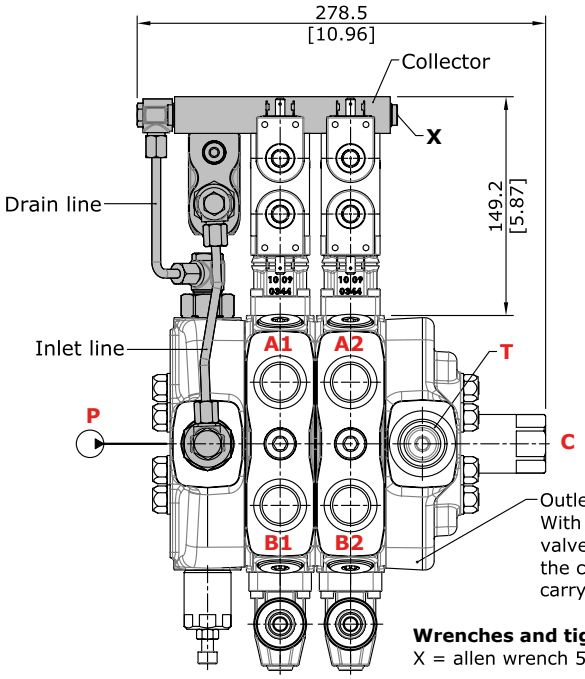
Working section

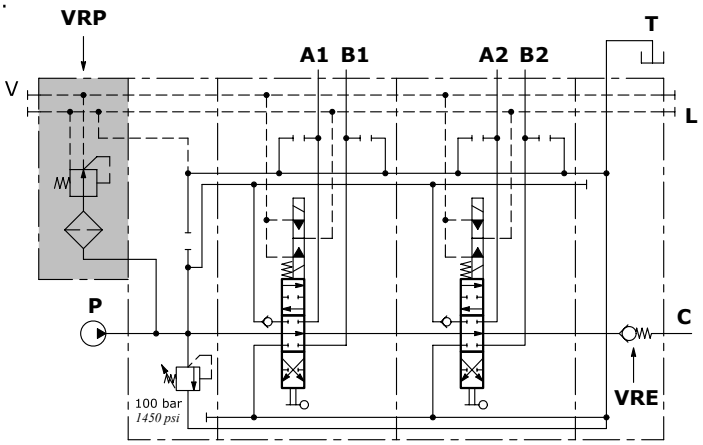
"A" side spool positioners

ON/OFF electro-hydraulic kit 8EI3 type

Collector kit for internal pilot and drain

The kit include collecctor, VRP pressure reducing valve and pipes.





Outlet cover type **RV** With backpressure valve (not included in the collector kit) and carry-over.

Wrenches and tightening torques
X = allen wrench 5 - 24 Nm *(17.7 lbft)*

COLLECTOR KIT CODES		
Type	**Code ***	**Description**
KE1R3	30 07 5500	Kit for one section
KE2R3	30 07 5507	Kit for 2 sections
KE3R3	30 07 5508	Kit for 3 sections
KE4R3	30 07 5509	Kit for 4 sections
KE5R3	30 07 5510	Kit for 5 sections
KE6R3	30 07 5511	Kit for 6 sections
KE7R3	-	Kit for 7 sections

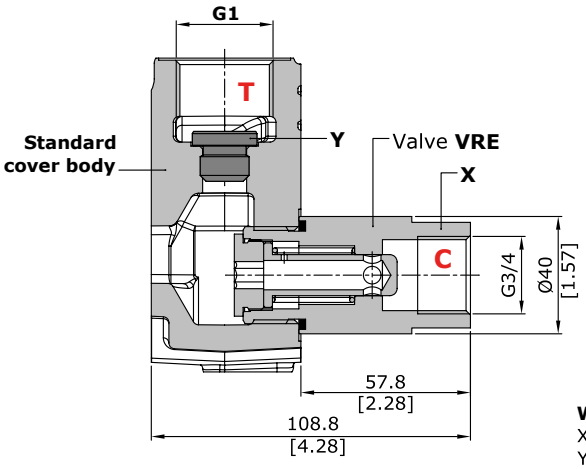
(*) codes are referred to BSP thread

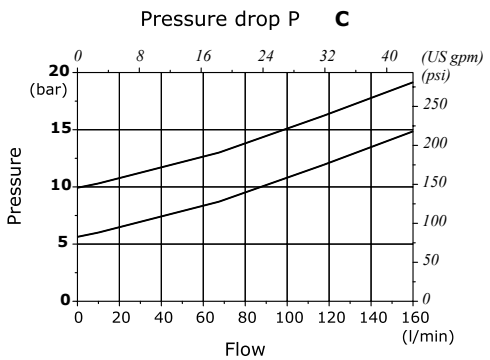
Description example:
150L GS16/2/AC(YG-100)/ 18EI3L/18EI3L/ RV–KE2R3–24VDC

Features
VRP VALVE
Output pressure.....: 25 bar / *363 psi*
Max. flow..... : 8 l/min
Filtering..... : 80 µ

VRE backpressure valve

Valve assembled on flow through passage to provide pilot pressure to the actuator.
It's available as **VRE** for inlet flow lower 80 l/min *(21.13 US gpm)* or **VRE(6)** for inlet flow upper 80 l/min *(21.13 US gpm)*: see diagram.





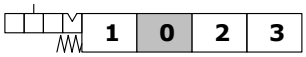
Wrenches and tightening torques
X = wrench 36 - 42 Nm *(31 lbft)*
Y = Allen wrench 8 - 42 Nm *(31 lbft)*

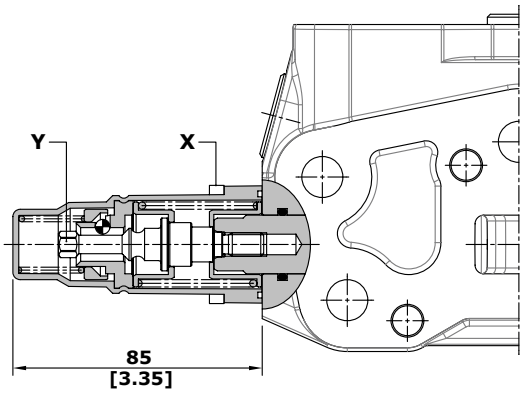
"A" side spool positioners

Particular positioner kits for special spools

13NZ type (30 07 5419)

4 positions with spring return in neutral and detent in position 3: for 5DY spool.

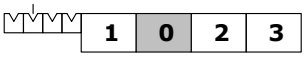


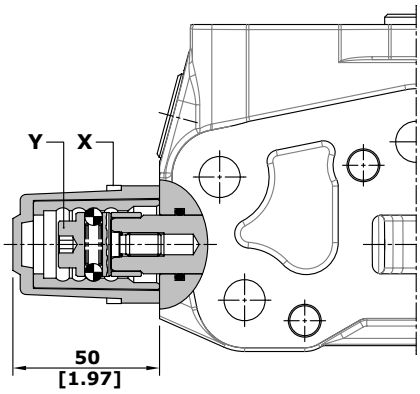


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 8 - 9 Nm *(6.6 lbft)*

11NZ type (30 07 7547)

4 positions, detent in all positions

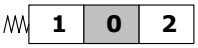




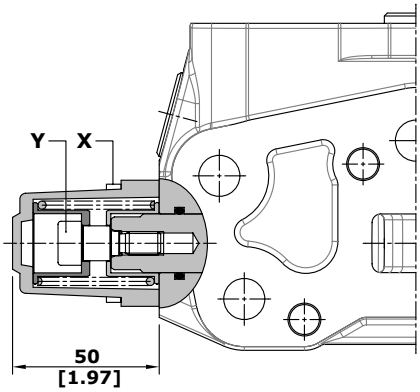
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

8CR type (30 07 5575)

3 positions with spring return in neutral and reduced spool stroke:for 8PF spool.



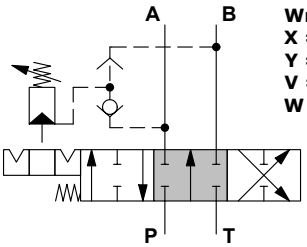
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*



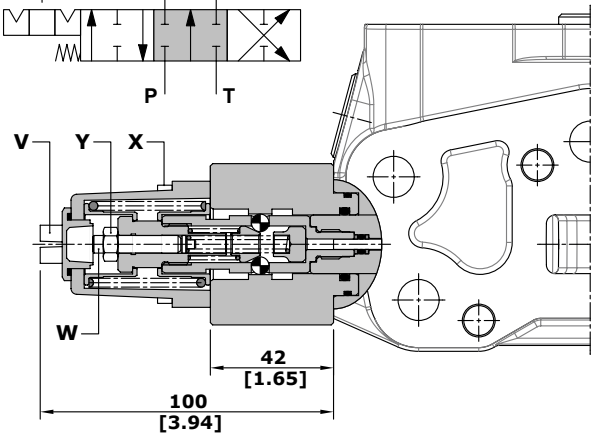
11A type (30 07 7601)

With detent in position 1 and 2, and automatic release in neutral position.

1 **0** 2



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 10 - 9.8 Nm *(7.23 lbft)*
V = wrench 13 - 9.8 Nm *(7.23 lbft)*
W = allen wrench 3



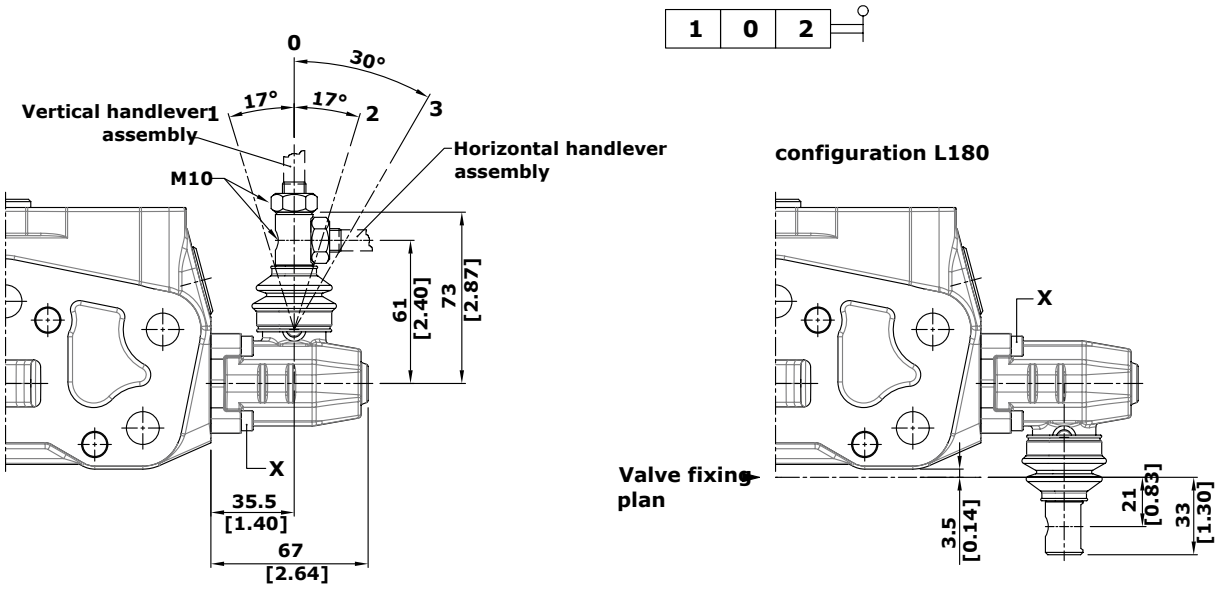
Working section

"B" side options

Lever control

L type (30 07 5403)

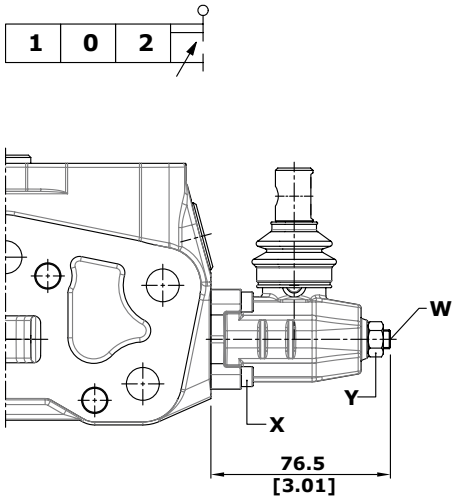
Alluminium lever pivot box with protective rubber bellow; it can be roated 180° (configuration L180).



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

LF1 type (30 07 5405)

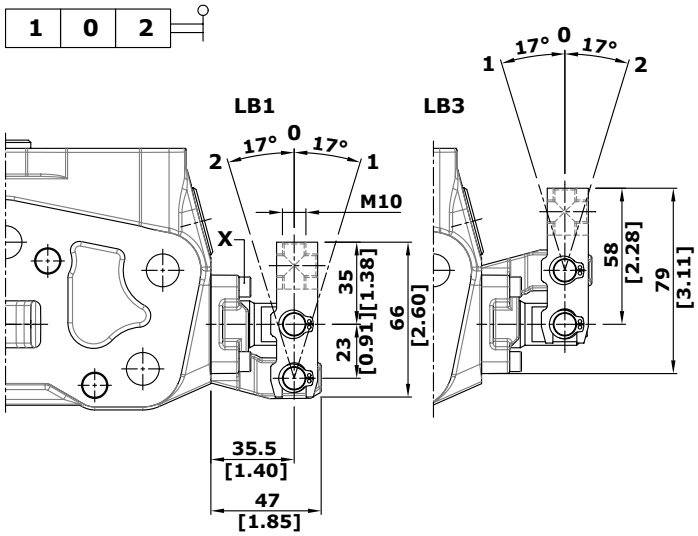
With spool stroke adjustment in position 12 (0). It can be roated 180° (configuration L1180).



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

LB type (30 07 5407)

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



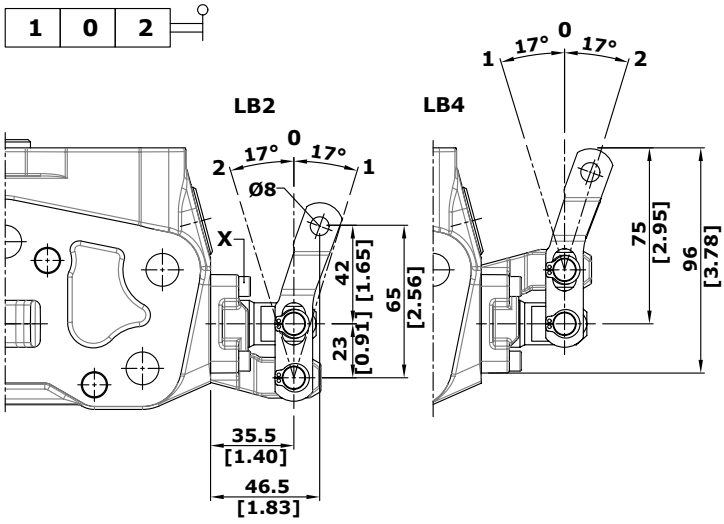
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*

"B" side options

Lever control

LB type (30 07 5571)

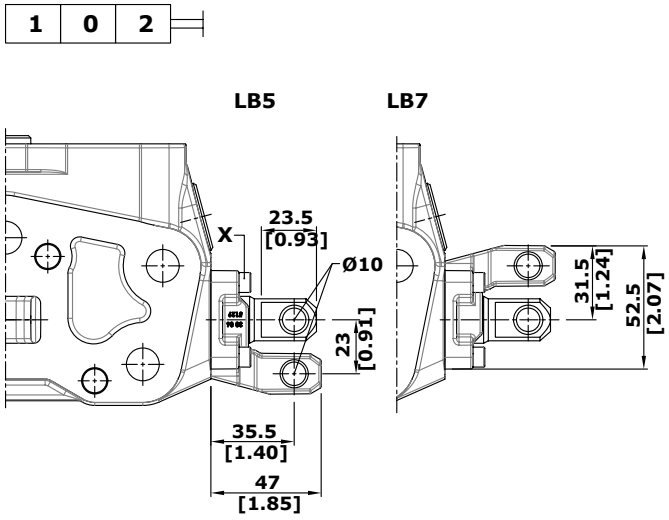
Steel construction, LB2 with pivot placed down and LB4 with pivot placed over.



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*

LB type (30 07 7556)

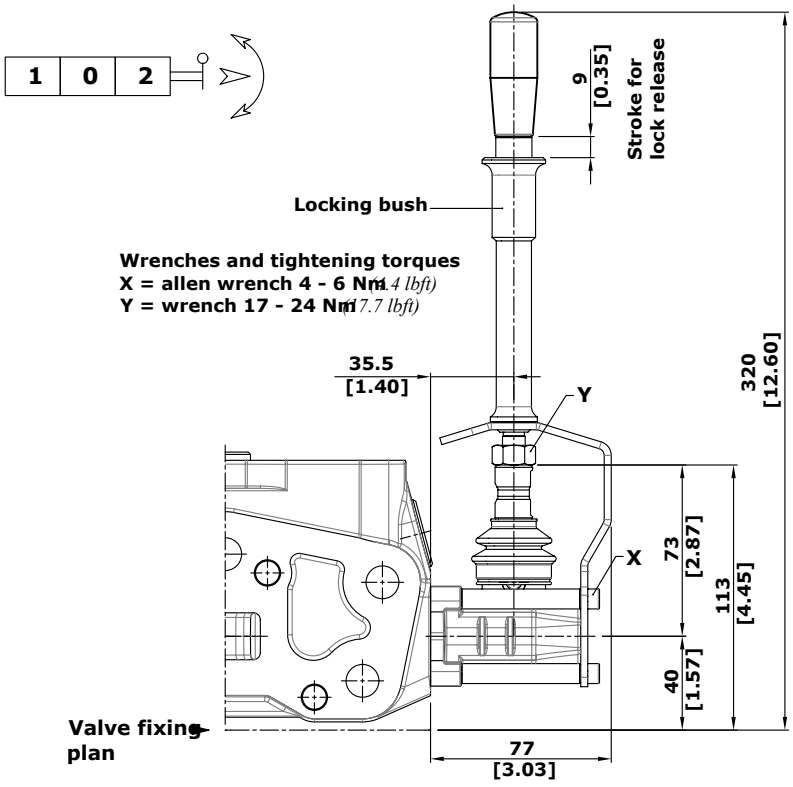
Steel construction, LB5 with pivot placed down and LB7 with pivot placed over.



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*

Safety lever LEB type (30 07 5409)

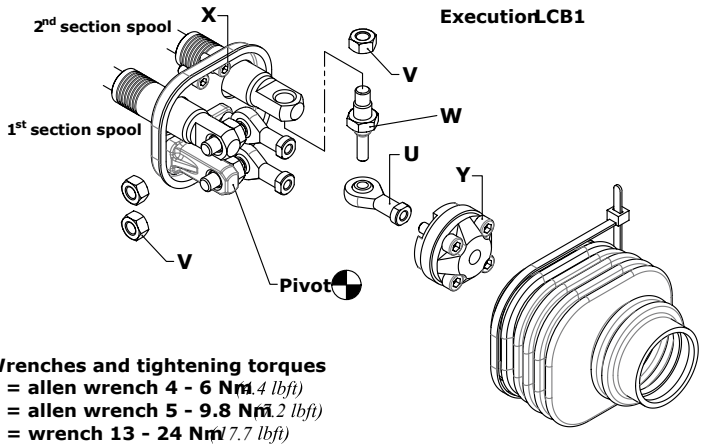
Safety levers with lock in neutral complete with handlever; lift handlever knob to operate.



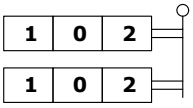
Working section

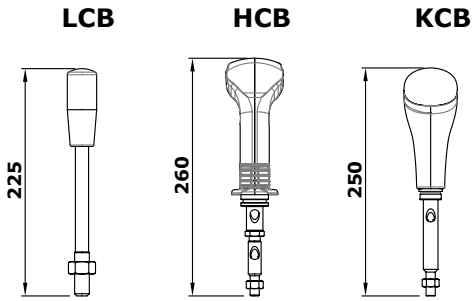
"B" side options

LCB mechanical joystick for two sections control (30 07 5433)



Execution LCB1

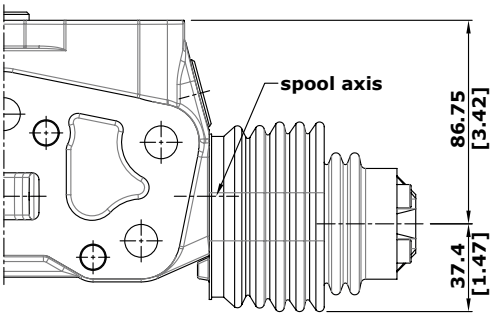


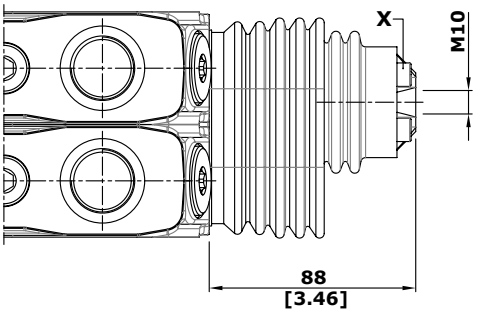


Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = allen wrench 5 - 9.8 Nm *(7.2 lbft)*
V = wrench 13 - 24 Nm *(17.7 lbft)*
U = wrench 10
W = wrench 15 - 24 Nm *(17.7 lbft)*

Description example
150L GS16/2/AC(YG-100)/LCB1/18 LCB1/RC

Dimensions and movement scheme for left inlet directional valve

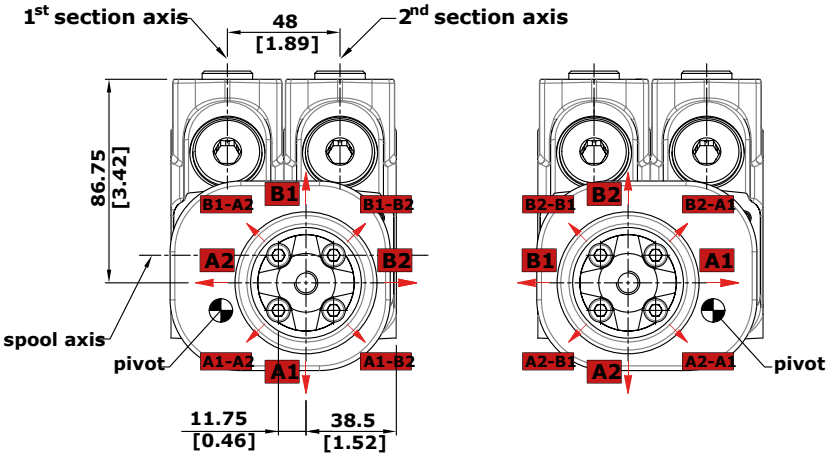




Wrenches and tightening torques
X = allen wrench 5 - 9.8 Nm *(7.2 lbft)*

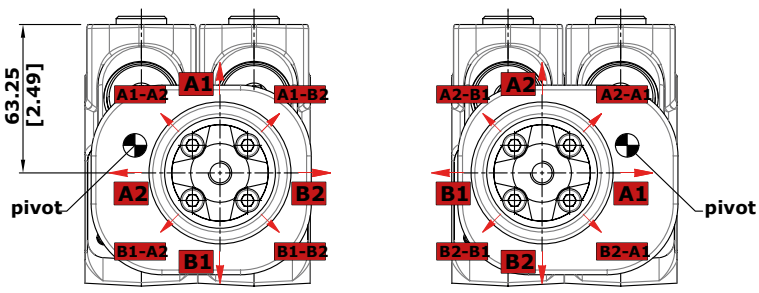
Execution LCB1
pivot placed down on the left

Execution LCB2
pivot placed down on the right



Execution LCB3
pivot placed above on the left

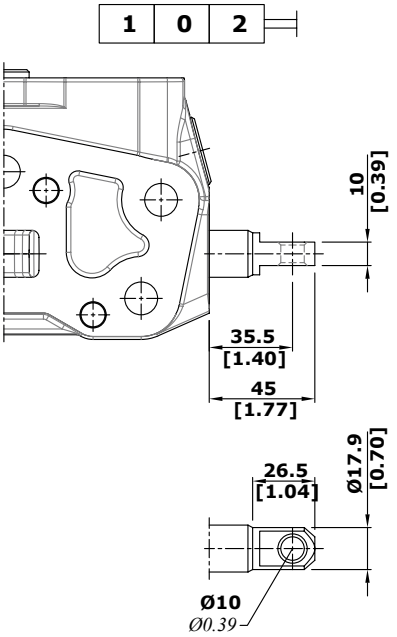
Execution LCB4
pivot placed above on the right



NOTE : Due to limited space in case of LCB3 or LCB4 configuration the assembly of port valves is not possible.

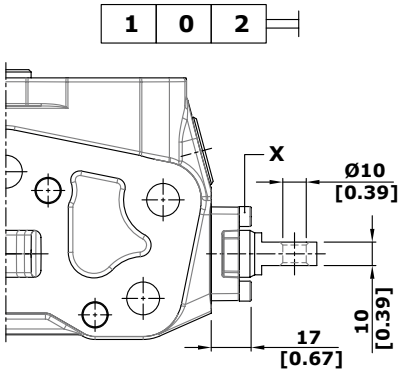
"B" side options

SL type



SLP type (30 07 5406)

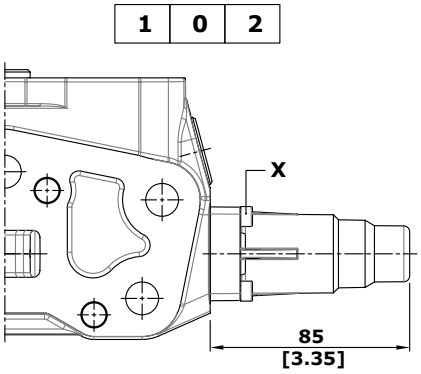
Mechanical control with dust-proof plate kit



Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*

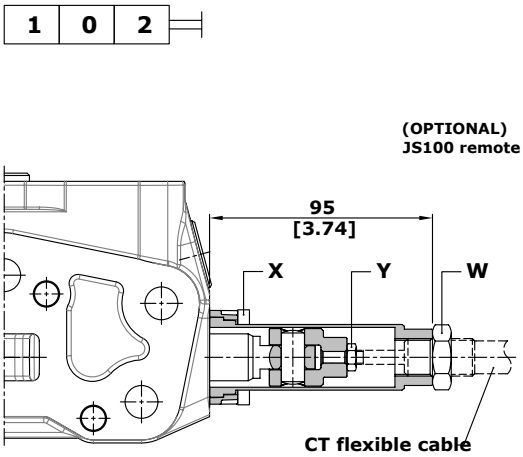
SLCZ type (30 07 5347)

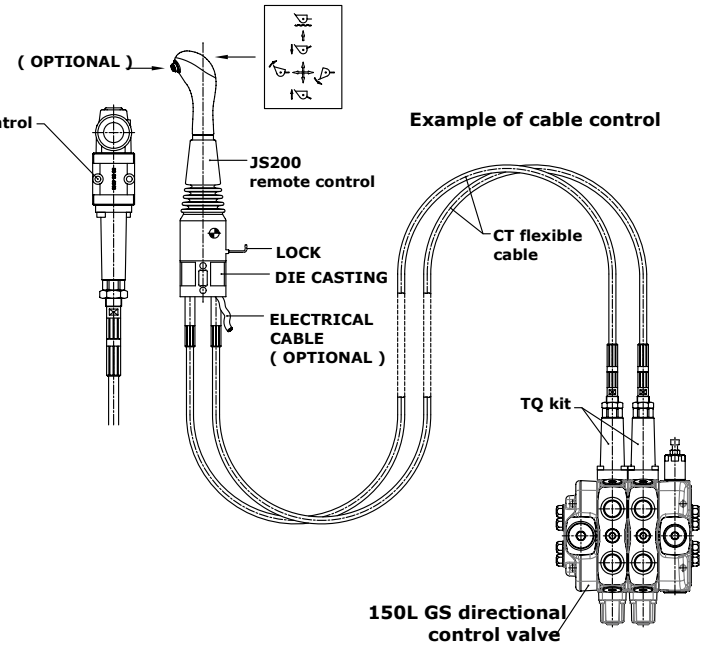
Protection cap usable with pneumatic, electropneumatic, and electrohydraulic spool positioners.



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 *(3.4 lbft)*
Y = wrench 10 - 9.8 Nm *(7.2 lbft)*
W = wrench 24 - 24 Nm *(17.7 lbft)*

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

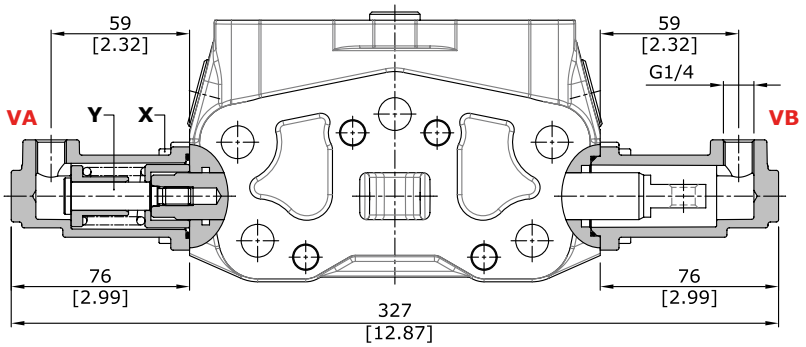
Working section

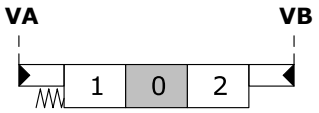
Complete controls

Proportional hydraulic controls

8IM type (30 07 5414)

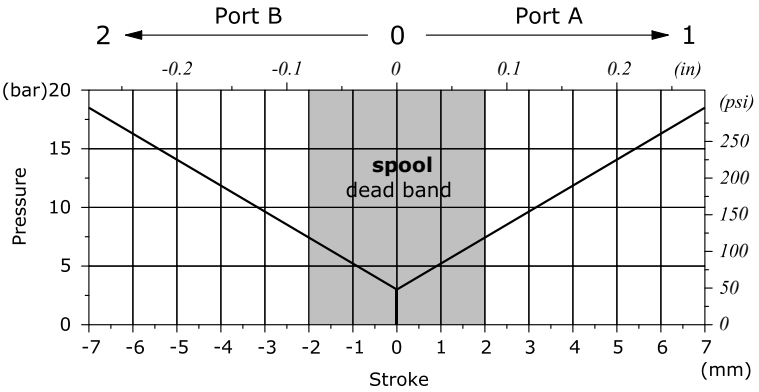
It can be used with standard spools and body





Diagrams and features of proportional hydraulic controls

Pressure - stroke diagram
(for controls represented)

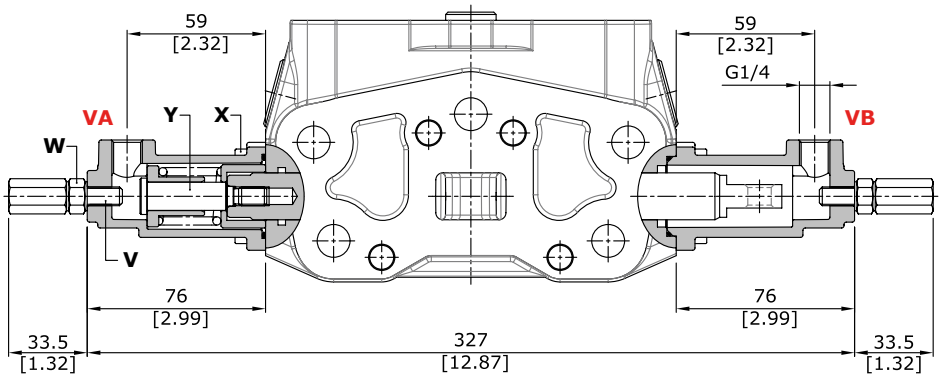


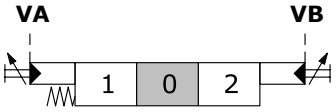
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 9 Nm *(6.6 lbft)*

Operating features
Pilot pressure : max. 50 bar *(725 psi)*
Internal leakage A(B)→ T (Δ = 100 bar - *(1450 psi)*
/ T = 40°C)
..... : max. 6cm^3/min - *0.37 in^3/min*

8IMF3 type (30 07 7569)

Configuration with screws for spool stroke adjustment.





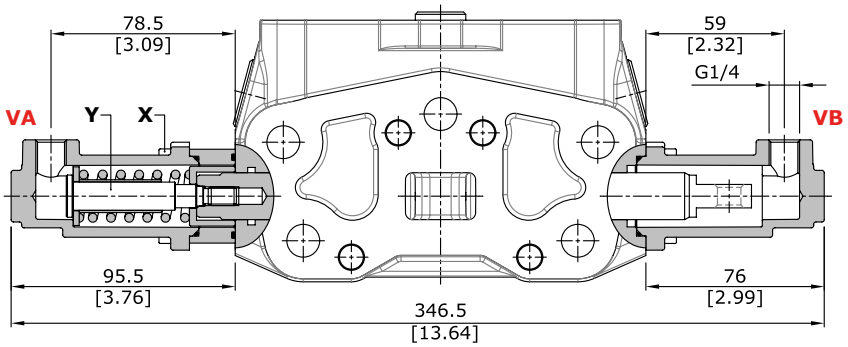
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 9 Nm *(6.6 lbft)*
V = allen wrench 4
W = wrench 13 - 24 Nm *(17.7 lbft)*

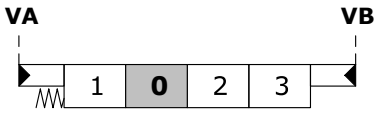
Complete controls

Proportional hydraulic control

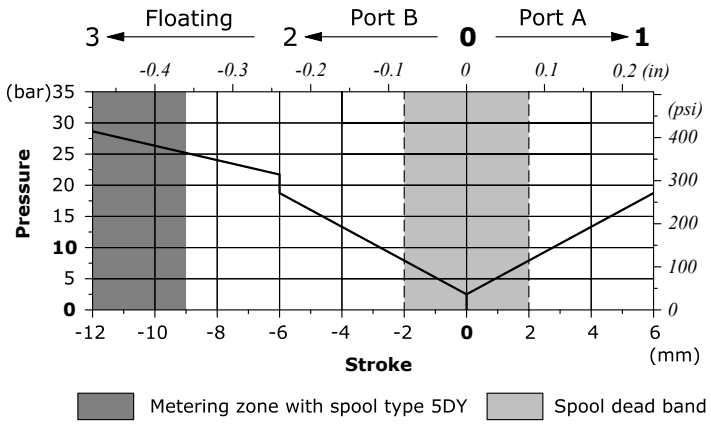
13IM type (30 07 5421)

For floating circuit.





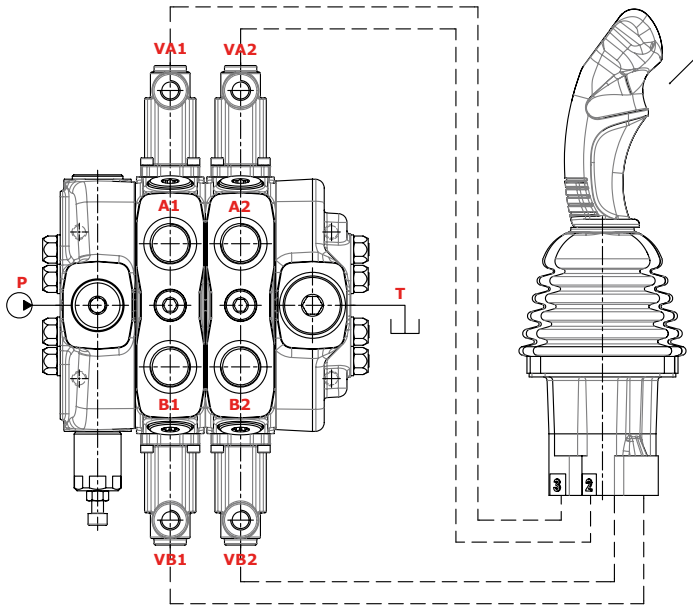
Pressure - stroke diagram



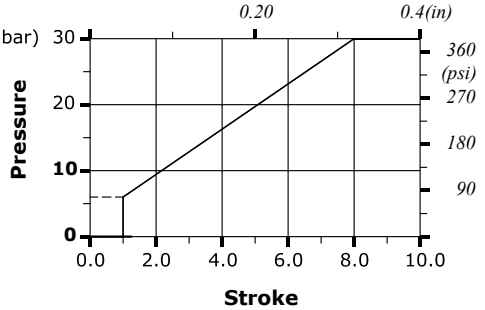
Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(4.4 lbft)*
Y = allen wrench 6 - 9 Nm *(6.6 lbft)*

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

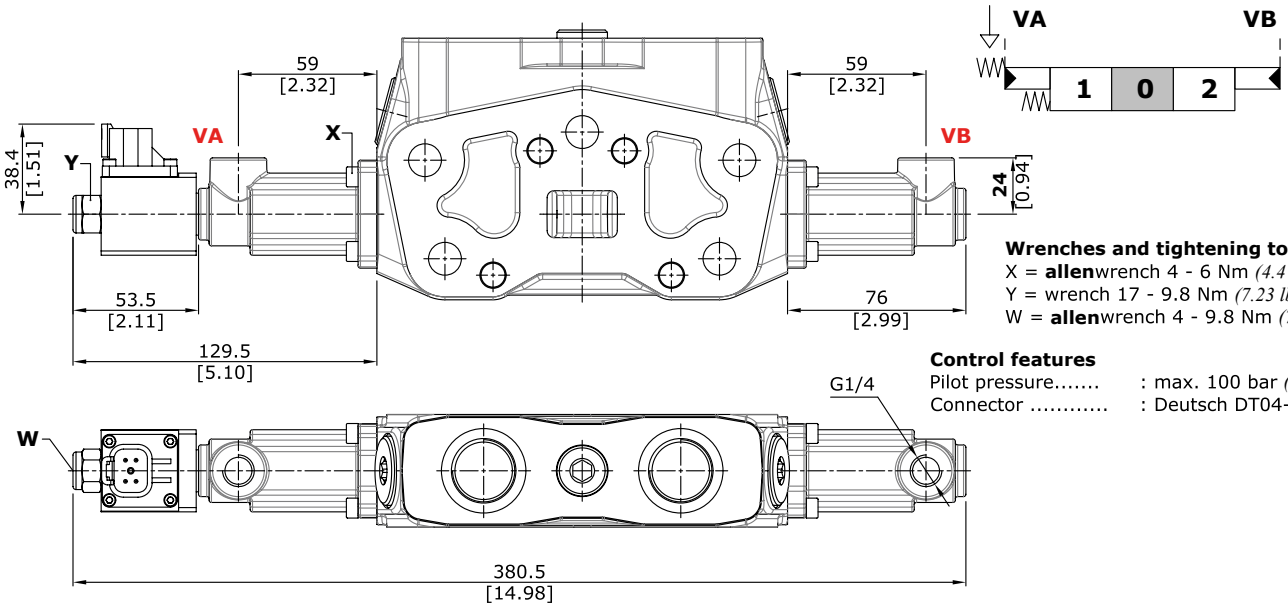


Working section

Proportional hydraulic control type

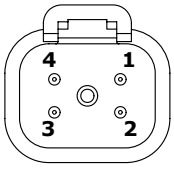
8IMSPSD (30 07 7559), 8IMSPSL (30 07 7562)

With spool position sensor.



Wrenches and tightening torques
X = **allen**wrench 4 - 6 Nm *(4.4 lbft)*
Y = wrench 17 - 9.8 Nm *(7.23 lbft)*
W = **allen**wrench 4 - 9.8 Nm *(7.23 lbft)*

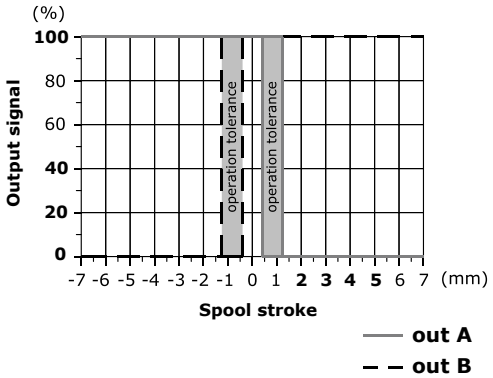
Control features
Pilot pressure..... : max. 100 bar *(1450 psi)*
Connector ..... : Deutsch DT04-4P



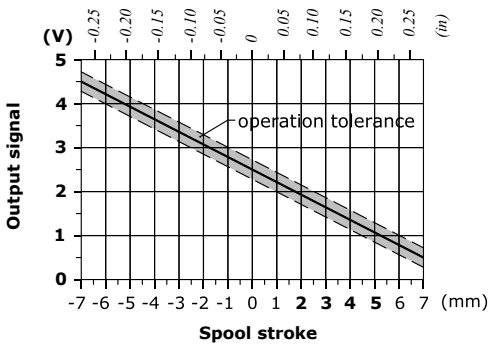
Connector PIN-OUT		
	Functions	
Pin	for 5V supply	for 8-32V supply
1	+5V	signal OUT
2	N.C.	GND
3	GND	Vb+
4	**signal Out**	not connected

Spool position sensor features
Voltage supply range..... : from 9 to 32 VDC or 5 VDC
Current absorption..... : <10 mA
Mechanical life..... : $3x10^6$
Connector type..... : Deutsch DT04-4P
Weather protection..... : IP 67 - IP 69K
Working temperature..... : -40/+105 °C
Minimum load resistance..... : 10 KΩ
Working pressure max..... : 350 bar • 5100 psi
Max. mechanical stroke..... : ± 10mm
Max. electrical stroke..... : ± 10mm

Output signal (SPSD example) vs. spool stroke



Output Voltage-spool stroke diagram

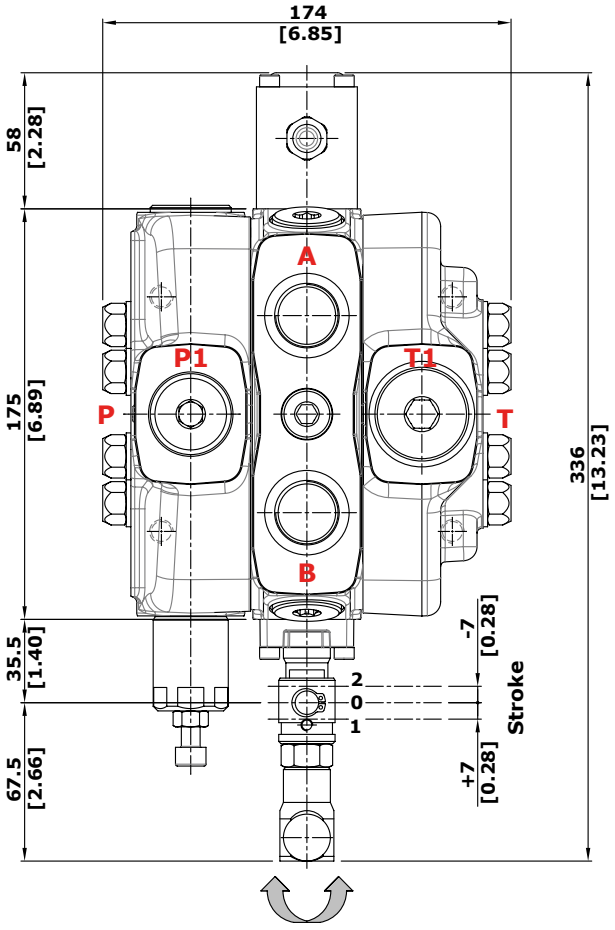


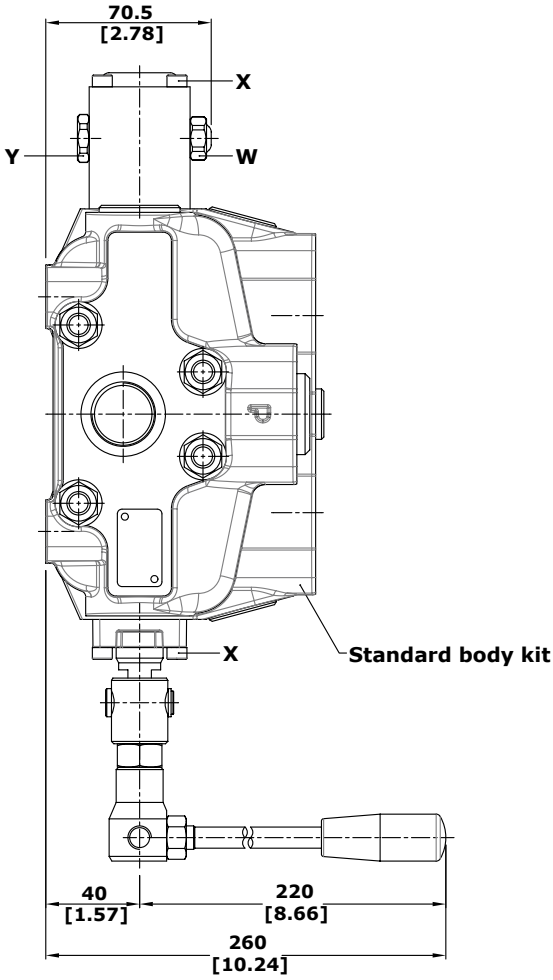
Output signal
Range.....: from 0.5 to 4.5 V
Linearity.....: ± 5%
Spool in neutral..... : 2.5 ± 0.2 V
Max current..... : 1 mA
Mechanical vibrations,
shock, bumps..... : IEC 68-2-6,27,29
EMC compatibility..... : ISO 13766 - ISO 15982

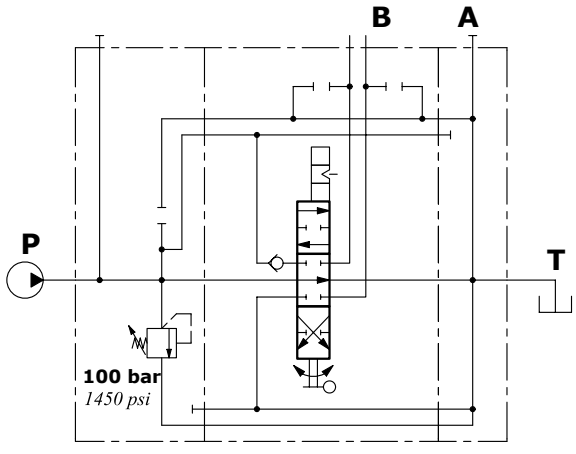
Special configurations

Directional valve with rotary control kit

R type (30 07 5379)







Description example
150L GS16/1/AC(YG-100)/Y SLP/RC

Wrenches and tightening torques
X = allen wrench 4 - 6 Nm *(3.4 lbft)*
Y = wrench 19 - 9.8 Nm *(7.23 lbft)*
W = wrench 17 - 9.8 Nm *(7.23 lbft)*

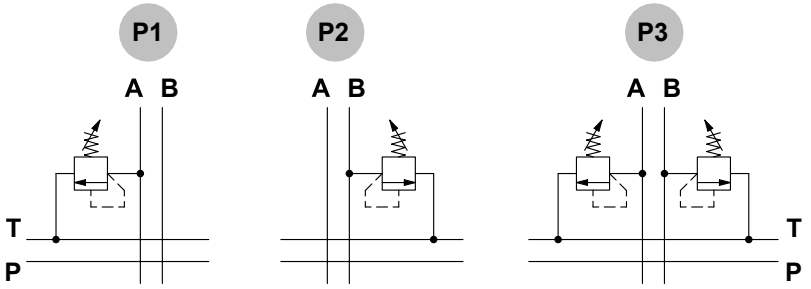
Working section

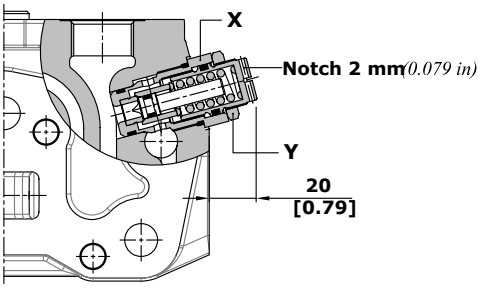
Port valves

Antishock valves

P1 (100)

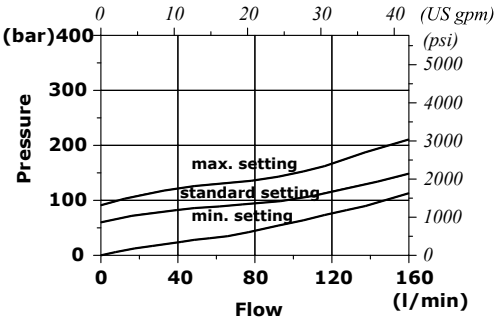
- Valve setting (bar)
- 1 mounted on A port
- 2 mounted on B port
- 3 mounted on A and B ports



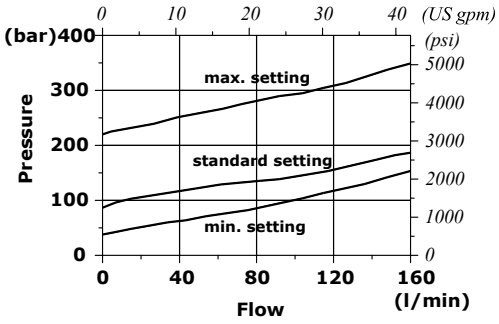


Wrenches and tightening torques
X = wrench 30 - 42 Nm *(31 lbft)*
Y = wrench 27 - 24 Nm *(17.7 lbft)*

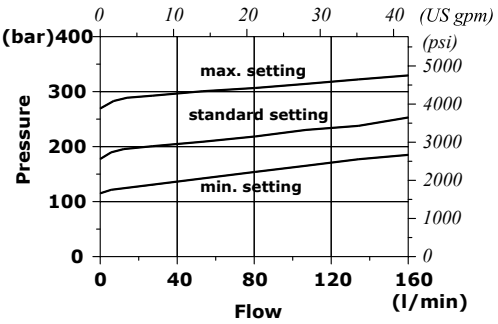
From 50 to 120 bar *(from 725 to 1750 psi)*



From 100 to 250 bar *(from 1450 to 3600 psi)*



From 160 to 315 bar *(from 2300 to 4600 psi)*

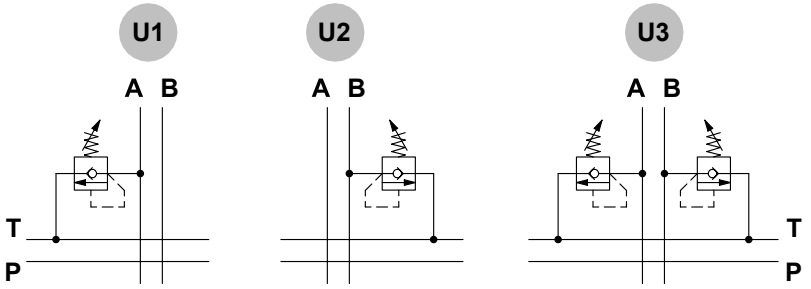


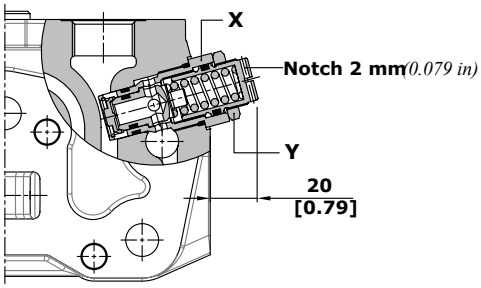
Port valves

Antishock and anticavitation valves

U1 (100)

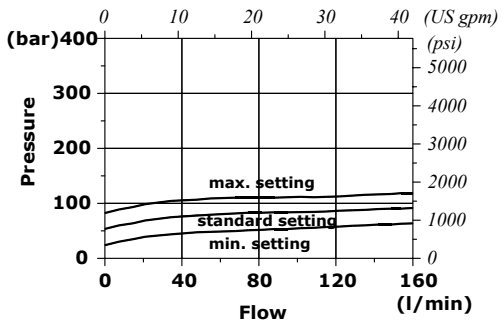
- Valve setting (bar)
- 1 mounted on A port
- 2 mounted on B port
- 3 mounted on A and B ports



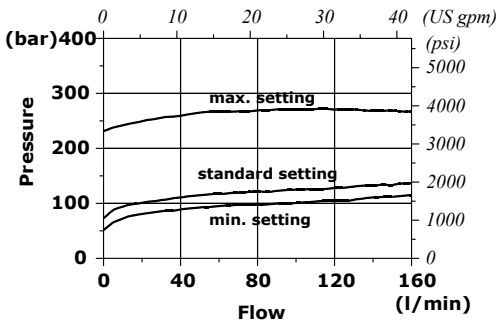


Wrenches and tightening torques
X = wrench 30 - 42 Nm *(31 lbft)*
Y = wrench 27 - 24 Nm *(17.7 lbft)*

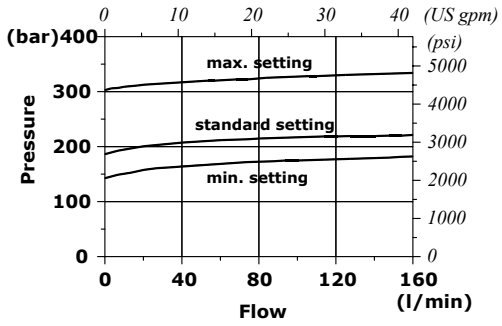
From 35 to 90 bar *(from 510 to 1300 psi)*



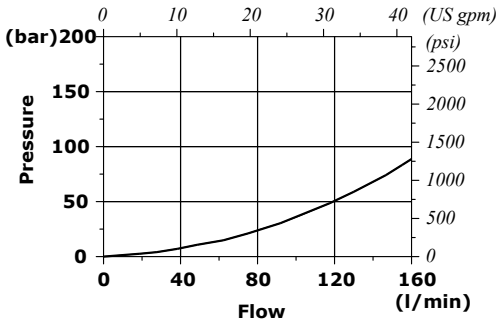
From 100 to 250 bar *(from 1450 to 3600 psi)*



From 180 to 350 bar *(from 2600 to 5100 psi)*



Pressure drop P T



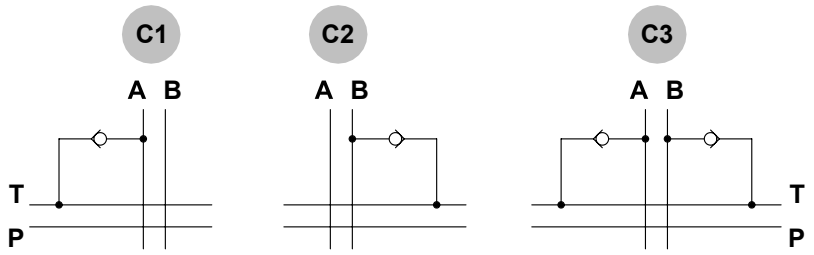
Working section

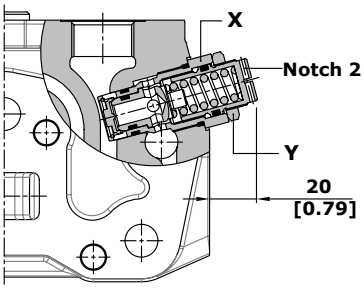
Port valves

Anticavitation valve

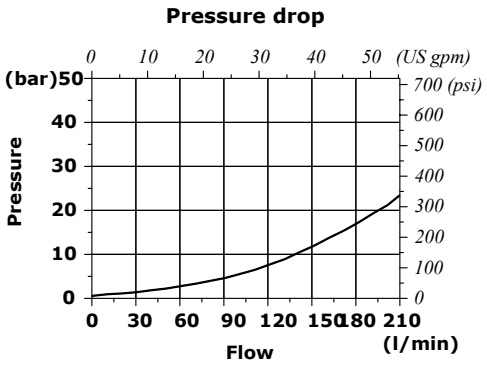
C1

1 mounted on A port
2 mounted on B port
3 mounted on A and B ports





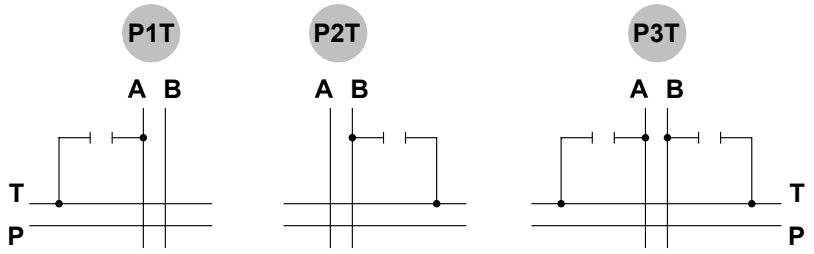
Wrenches and tightening torques
X = wrench 30 - 42 Nm (3.1 lbft)
Y = wrench 27 - 24 Nm (17.7 lbft)

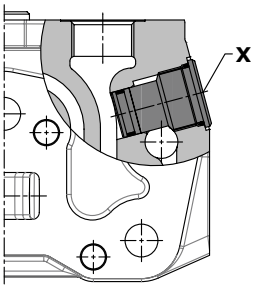


Valve blanking plug

P 3 T

1 mounted on A port
2 mounted on B port
3 mounted on A and B ports





Wrenches and tightening torques
X = Allen wrench 10 - 42 Nm (3.1 lbft)

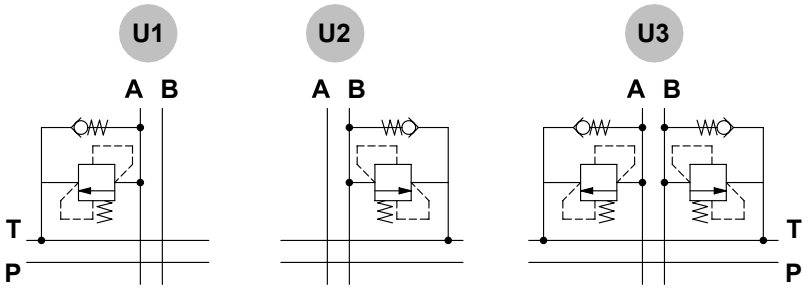
Port valves

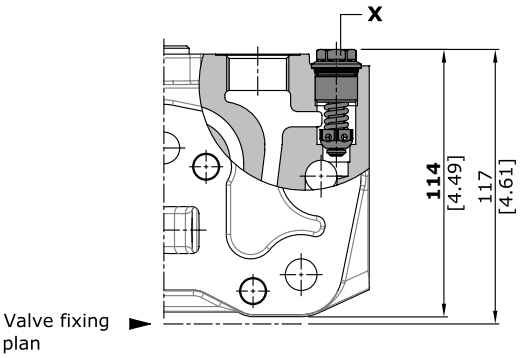
Fixed setting antishock and anticavitation valves

For RPHT, RPHSP, RPH5DY, RPH8PF working port.

U1 (100)

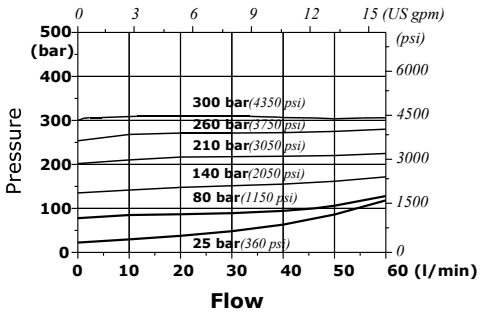
- Valve setting (bar)
- **1** mounted on A port
- **2** mounted on B port
- **3** mounted on A and B ports



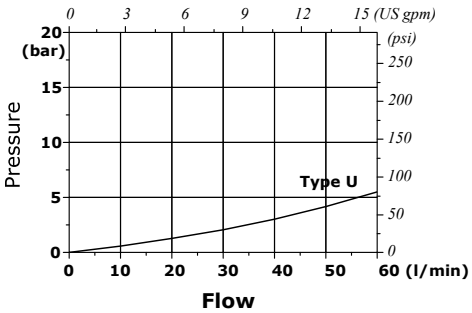


Wrenches and tightening torques
X = wrench 15 - 24 Nm *(17.7 lbft)*

Setting example
(10 l/min *2.6 Us gpm*)



Pressure drop
(in anticavitation)



Working section

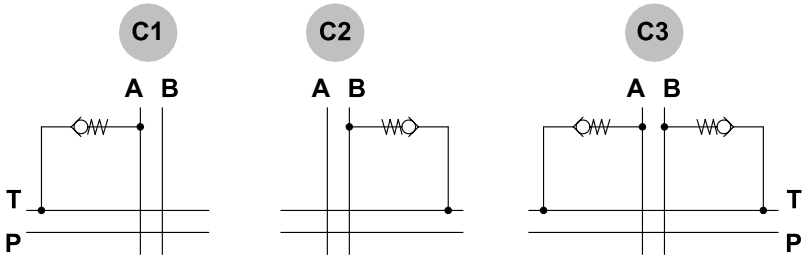
Port valves

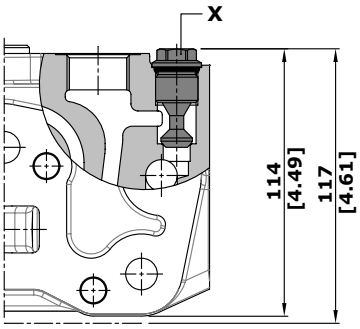
Anticavitation valve

For RPHT, RPHSP, RPH5DY, RPH8PF working port.

C1

1 mounted on A port
2 mounted on B port
3 mounted on A and B ports

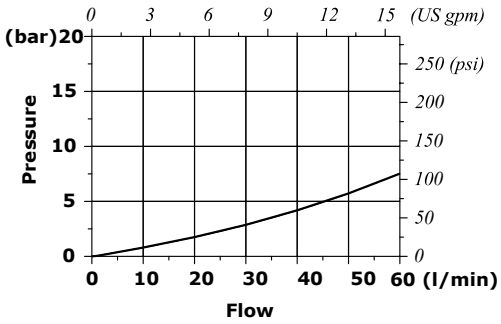




Valve fixing plan

Wrenches and tightening torques
X = wrench 15 - 24 Nm *(11.1 - 17.7 lbft)*

Pressure drop (in anticavitation)

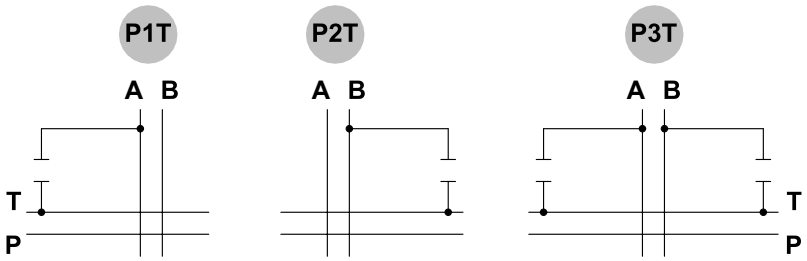


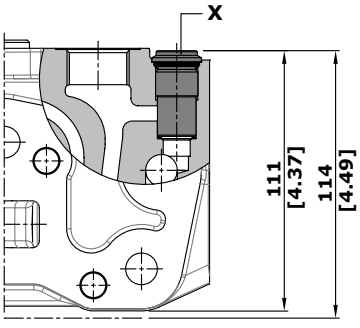
Valve blanking plug

For RPHT, RPHSP, RPH5DY, RPH8PF working port.

P 3 T

1 mounted on A port
2 mounted on B port
3 mounted on A and B ports





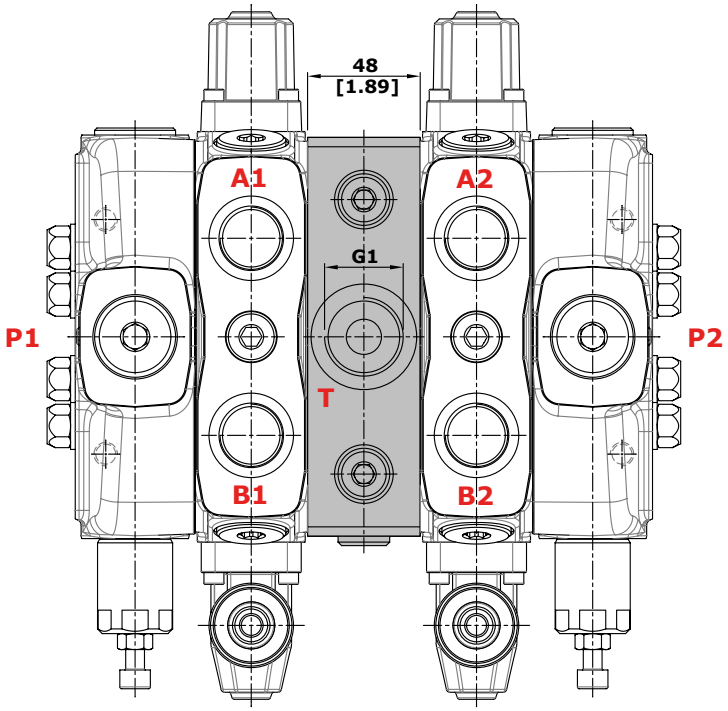
Valve fixing plan

Wrenches and tightening torques
X = allen wrench 8 - 24 Nm *(11.1 - 17.7 lbft)*

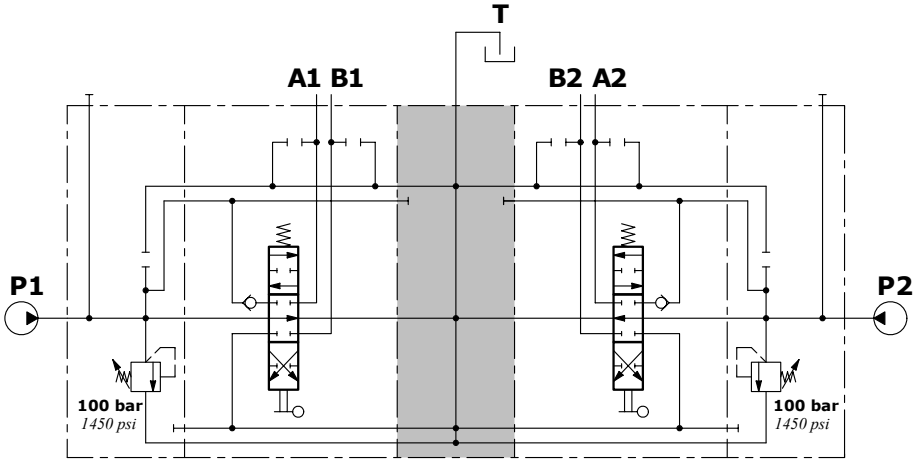
Intermediate section

CS1 mid return manifold

Mid return manifolds for directional valve with left and right inlet both; they allow 2 independent circuits with common outlet.



Hydraulic circuit



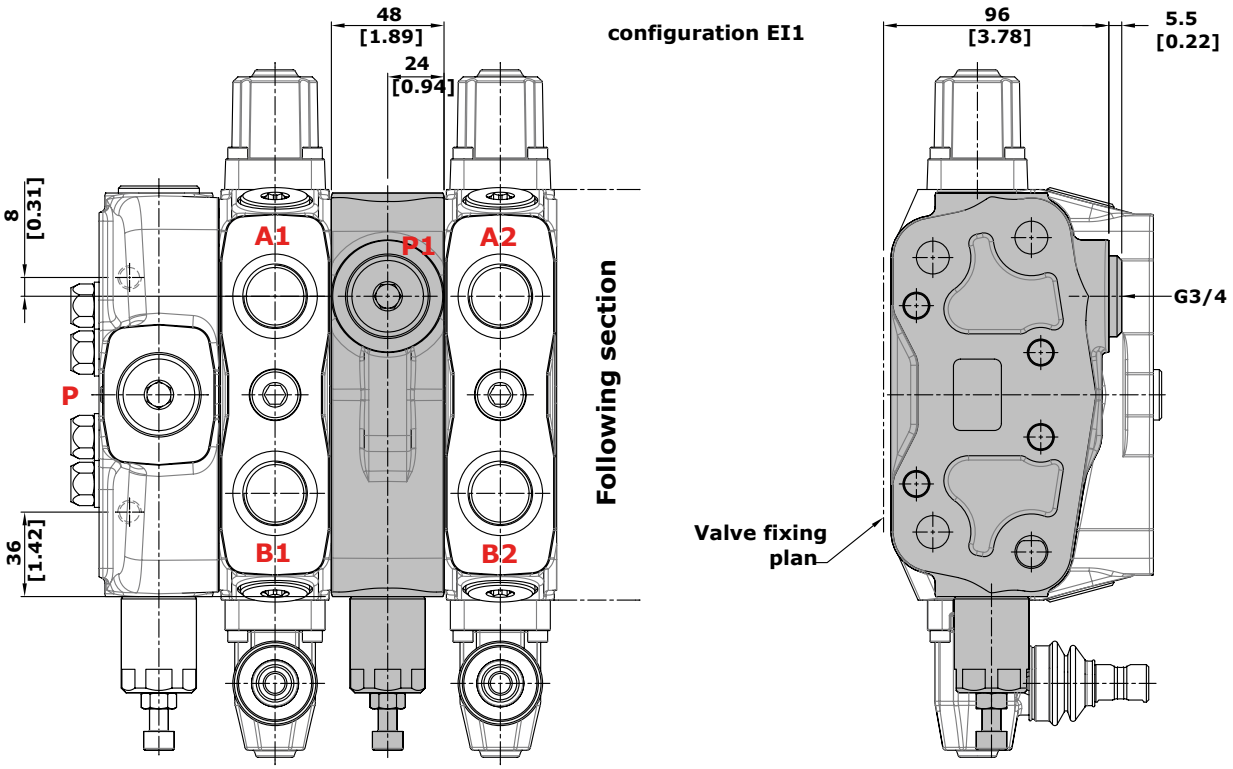
Description example:
150L GS16/2/AC(YG-100)/18L/BC(YG-100)

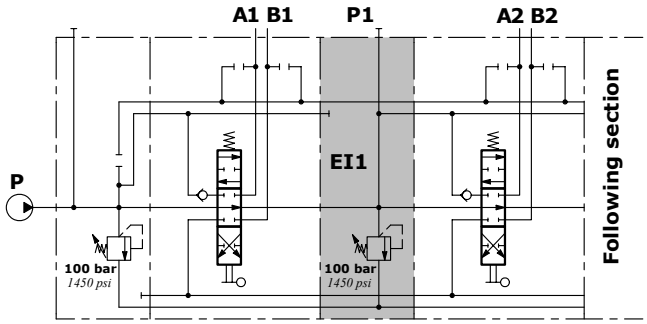
Intermediate section

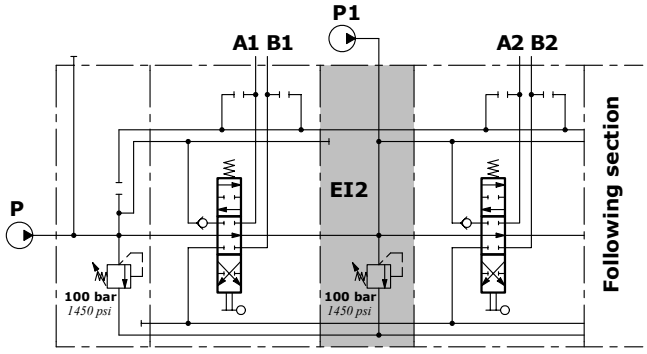
Service relief valve section

EI configuration

The operation of up stream section exclude the EI downstream section.
The pressure of the downstream sections should be adjusted at least 20 bar below the relief valve setting.
Execution EI2, without plug, is prearranged for a second inlet.



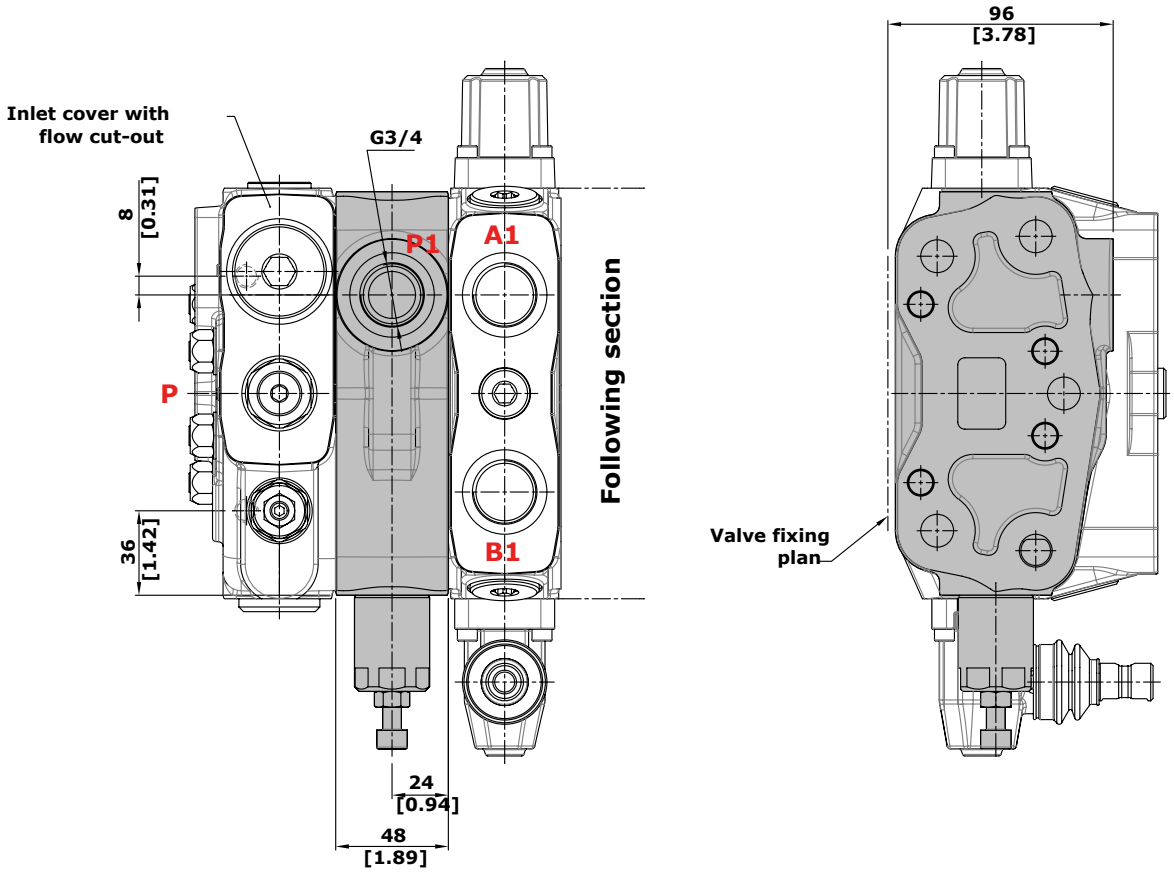


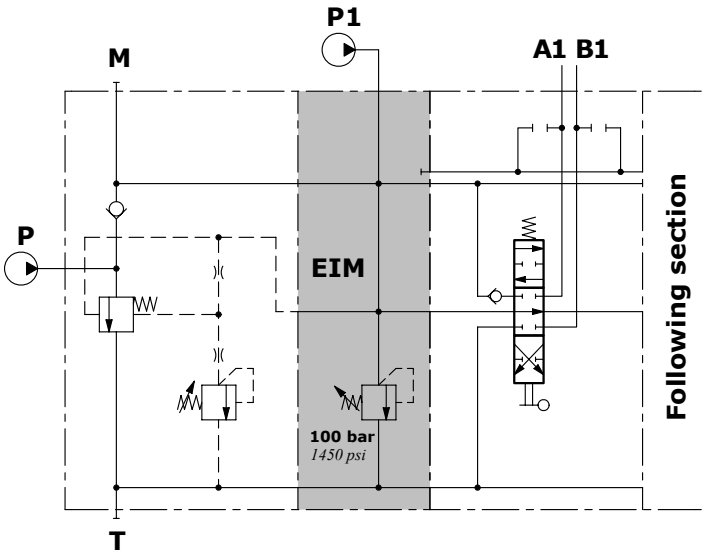


Intermediate section

Service relief valve section

EIM configuration

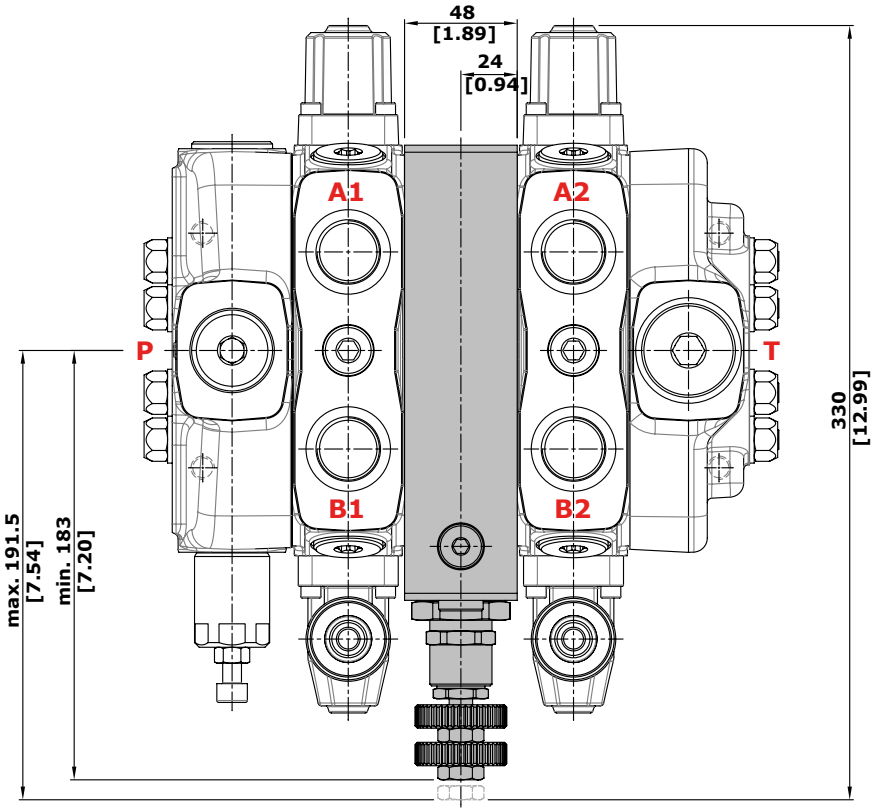




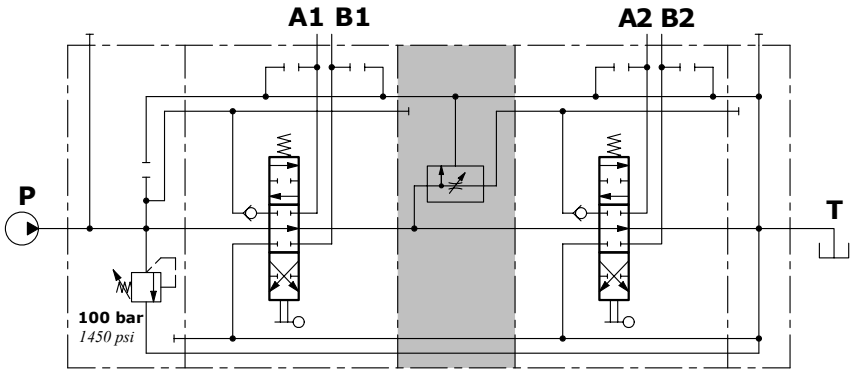
Intermediate section

DFG pressure compensated flow divider section

The flow on the downstream sections can be adjusted from 0 to 150 l/min. by means of graduated handwheel; exceeding setting flow goes to tank.



Hydraulic circuit



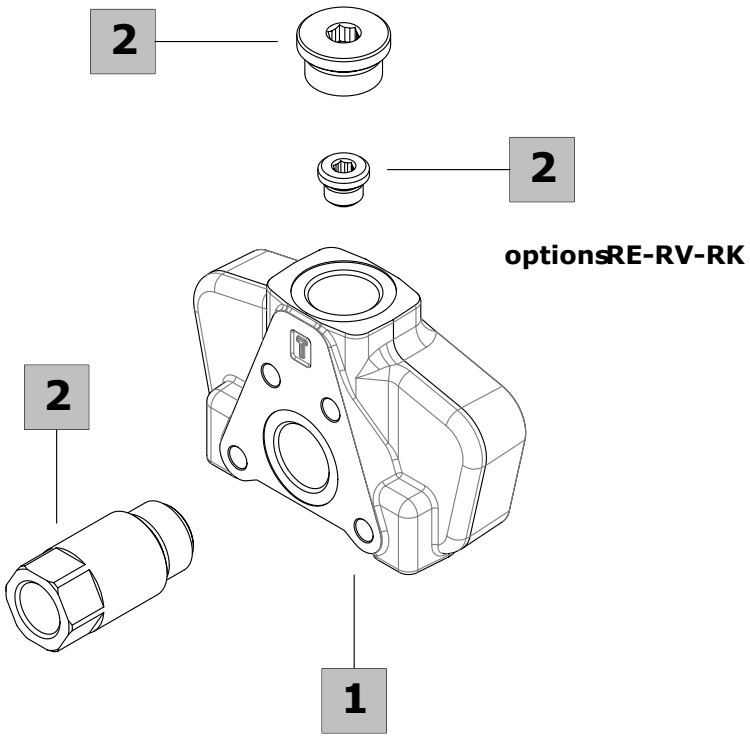
Description example:
150L GS16/2/AC(YG-100)/DFG/18L/RC

Parts ordering codes

Ordering example:

150L GS16 / RC

Available configurations
RC: side outlet
RD: upper outlet
RE: upper outlet with side carry-over
RK: upper outlet and closed centre
RV: With backpressure valve: **to be used together with the electro-hydraulic control**



1. Complete outlet cover *

TYPE	CODE	DESCRIPTION
RC	**15OU010001**	**With side outlet**
RD	**15OU010003**	**With upper outlet**
RE	**15OU010002**	**With upper outlet and side carry-over sleeve**
RK	**15OU010004**	**With upper outlet and closed center**
RV	**15OU010005**	**With backpressure valve**
RV(6)	**-**	**With backpressure valve 6 bar** *(87 psi)*

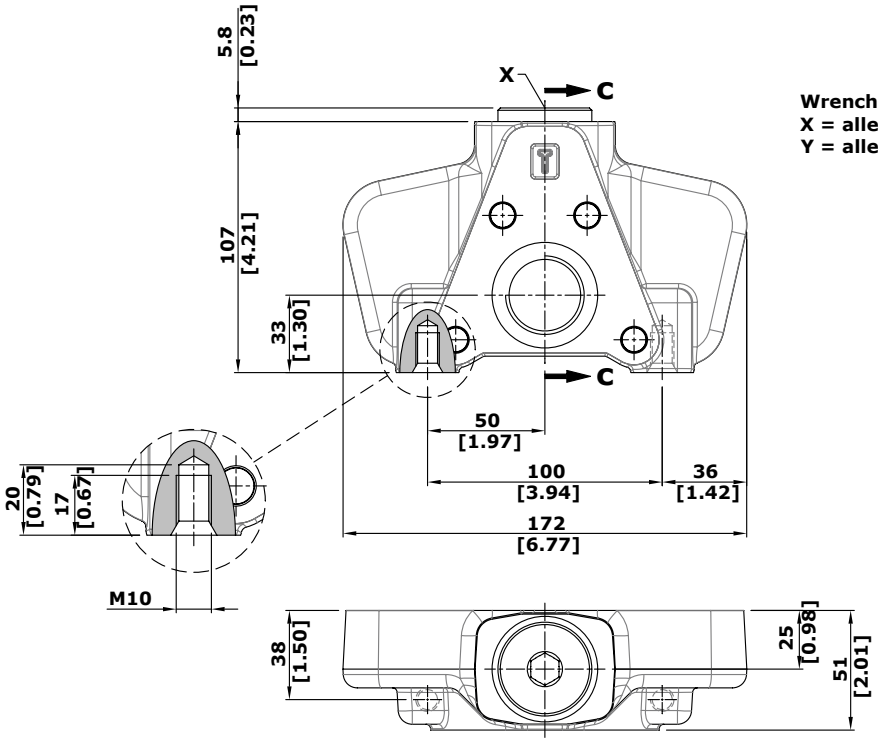
2. Circuit options *

TYPE	CODE	DESCRIPTION
-	30 05 6457	G3/8 tapered plug for carry-over (RE), carry-over with **backpressure valve (RV) and closed** centre (RK) options
VRE	**30 05 4905**	**Backpressure valve 10 bar** *(145 psi)* **for RV configuration (see page 38)**
-	**30 05 4993**	**G1 plug**

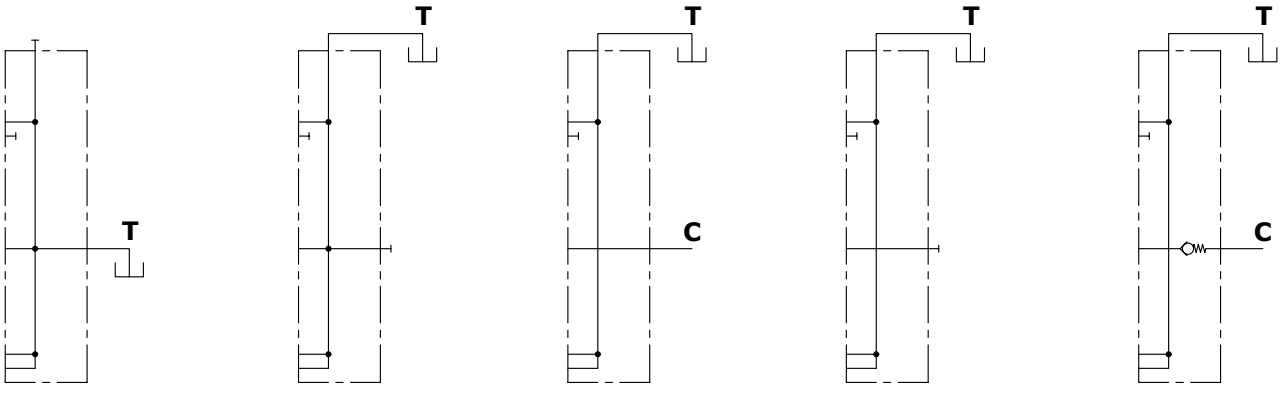
NOTE (*) – Codes are referred to **BSP** thread.

Outlet section

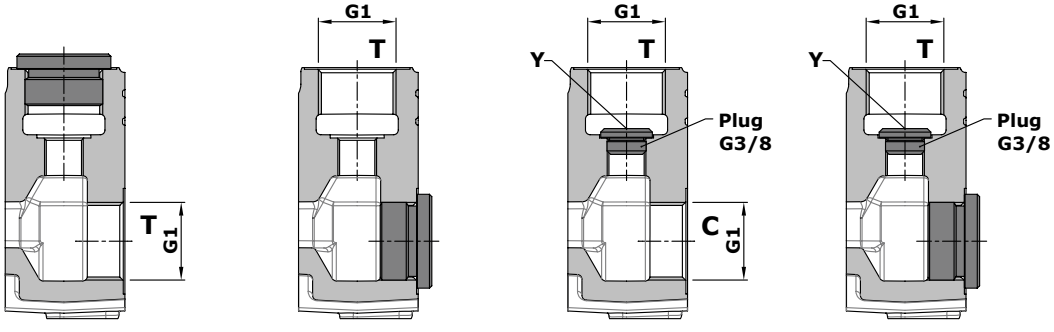
Dimensional data and hydraulic circuit



Wrenches and tightening torques
X = allen wrench 12 - 42 Nm *(31 lbft)*
Y = allen wrench 8 - 42 Nm *(31 lbft)*



Type RC **Type RD** **Type RE** **Type RK** **Type RV**

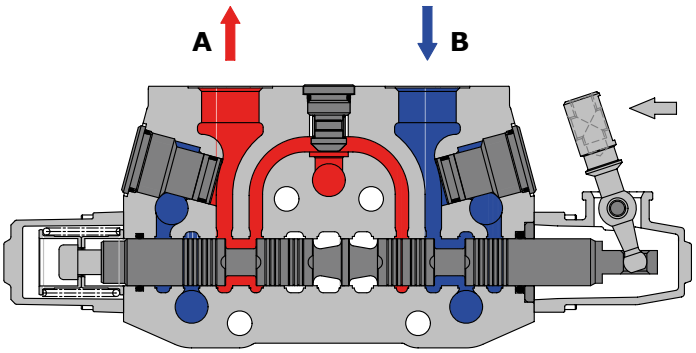


Section C-C **Section C-C** **Section C-C** **Section C-C**

Sectional drawing

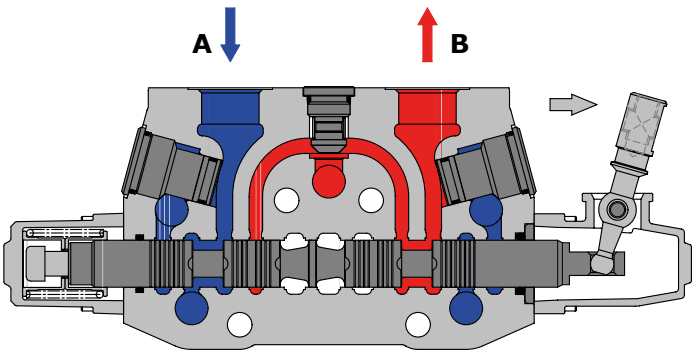
When hand lever pushed (spool out position) P to A port. B to T port.

Position 1



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

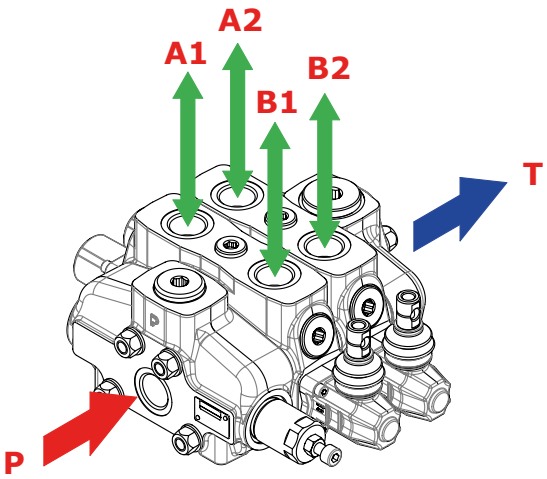
Position 2

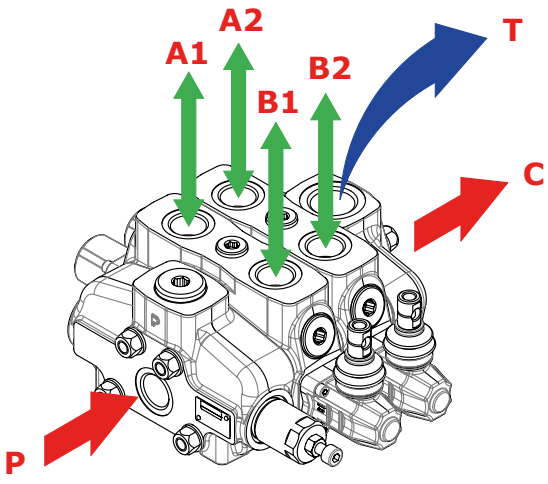


Installation and maintenance

The 150L GS valves are 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; order to prevent working section 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.**





Carry-over configuration

Fitting tightening torque - Nm *(lbft)*				
THREAD TYPE	**P port**	**A,B ports**	**T and C ports**	**Hydraulic pilot**
BSP (ISO 228/1)	**G 3/4**	**G 3/4**	**G 1**	**G 1/4**
With O-Ring seal	**90** *(66.4)*	**90** *(66.4)*	**100** *(73.7)*	**25** *(18.4)*
With copper washer	**90** *(66.3)*	**90** *(66.3)*	**90** *(66.3)*	**30** *(22.1)*
With steel and rubber washer	**70** *(51.6)*	**70** *(51.6)*	**100** *(73.7)*	**16** *(11.8)*
UN-UNF(ISO 11926-1)	**1 5/16-12 (SAE 16)**	**1 1/16-12 (SAE 12)**	**1 5/16-12 (SAE 16)**	**9/16-18 (SAE 6)**
With O-Ring seal	**150** *(110.6)*	**95** *(70.1)*	**150** *(110.6)*	**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.