



DS7

SECTIONAL PROPORTIONAL
LOAD-SENSING VALVE



DLS7

Features

Simple, compact and heavy duty designed sectional valves from 1 to 10 sections, for systems with fixed displacement pumps (open centre version) or variable displacement pumps with Load-Sensing compensator (closed centre version).

H Load-independent flow control.

H Fitted with a main pressure relief valve and a load check valve on every working section.

H Diameter 16 mm - 0.63 in interchangeable spools.

H Pressure gauge connections on every working section.

H A wide variety of ports service valves.

H Available manual, pneumatic, hydraulic, electro-hydraulic and remote with flexible cables spool control kits.

Working conditions

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

Nominal flow rating	<i>Stand by 14 bar / 200 psi</i>	60 l/min	
Operating pressure (maximum)		315 bar	4600 psi
Back pressure (maximum)	<i>on outlet port T</i>	25 bar	360 psi
Fluid		Mineral base oil	
Internal leakage A(B)→T	<i>Δp=100 bar - 1450 psi fluid and valve at 40°C</i>	3 cm ³ /min	0.18 in ³ /min
Fluid temperature	<i>with NBR (BUNA-N) seals</i>	from -20° to 80°C	
	<i>with FPM (VITON) seals</i>	from -20° to 100°C	
Viscosity	<i>operating range</i>	from 15 to 75 mm ² /s	from 15 to 75 cSt
	<i>min.</i>	12 mm ² /s	12 cSt
	<i>max.</i>	400 mm ² /s	400 cSt
Max level of contamination		19/16 - ISO 4406	
Ambient temperature		from -40° to 60°C	
Tie rod tightening torque		30 Nm	22.2 lbft

NOTE - For different conditions please contact Customer Service.

Additional information

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

WARNING!

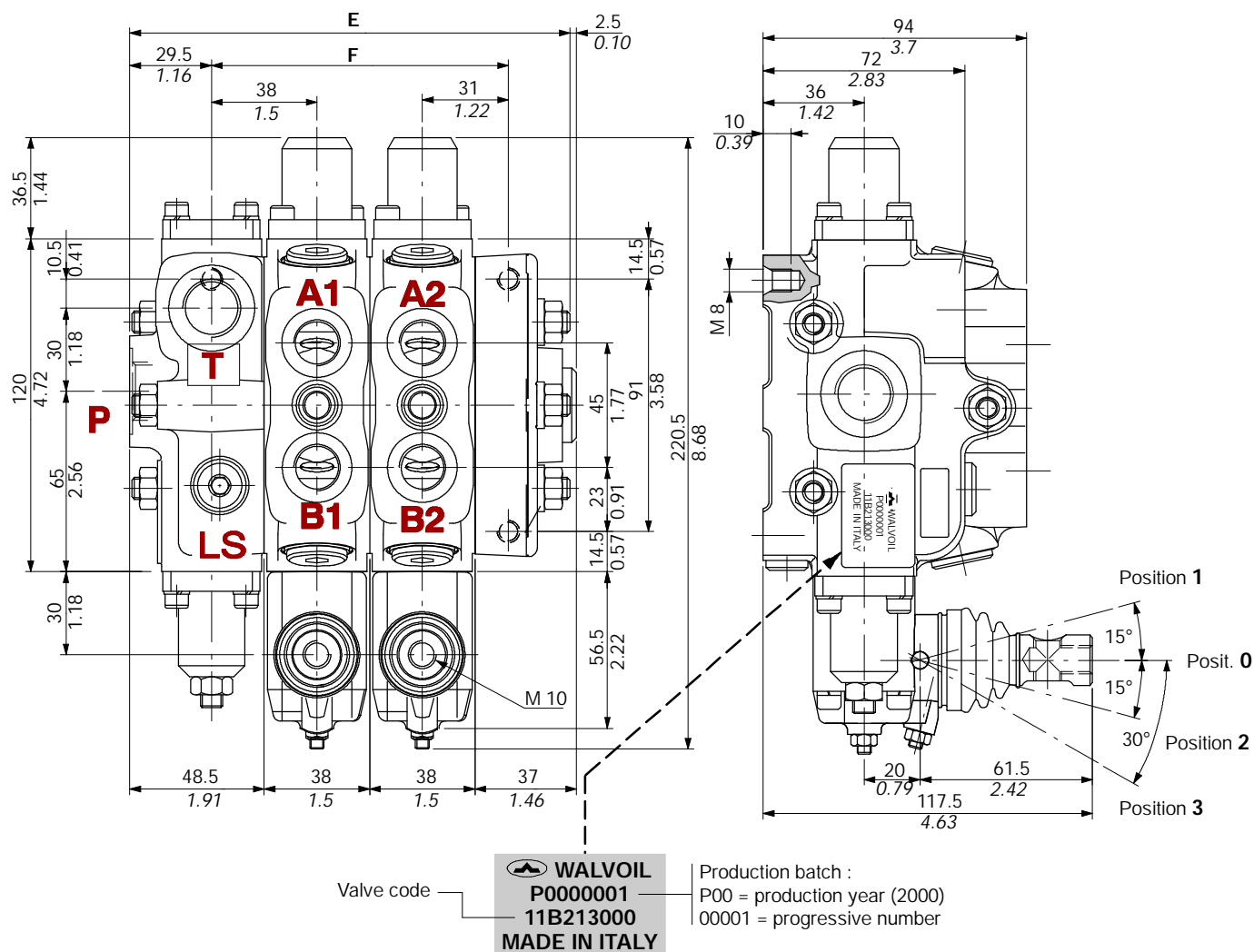
All specifications of this catalogue refer to the standard product at this date.
Walvoil, oriented to a continuous improvement, reserves the right to discontinue, modify or revise the specifications, without notice.

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

6th edition November 2000:

This edition supercedes all prior documents.

Dimensional data (with inlet compensator)



TYPE	E		F		Weight	
	mm	in	mm	in	kg	lb
DLS7/1	121	4.76	69	2.72	6.4	14.1
DLS7/2	159	6.26	107	4.21	8.9	19.6
DLS7/3	197	7.76	145	5.71	11.5	24.4
DLS7/4	235	9.25	183	7.2	14	30.9
DLS7/5	273	10.74	221	8.7	16.6	36.6

TYPE	E		F		Weight	
	mm	in	mm	in	kg	lb
DLS7/6	311	12.24	259	10.2	19.1	42.1
DLS7/7	349	13.74	297	11.7	21.7	47.8
DLS7/8	387	15.24	335	13.2	24.3	53.5
DLS7/9	425	16.73	373	14.7	26.9	59.2
DLS7/10	463	18.23	411	16.2	29.5	64.9

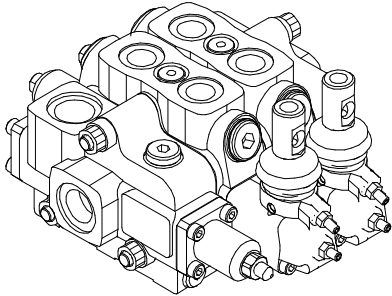
Standard threads

PORTS	BSP (ISO 228/1)	UN-UNF (ISO 11926-1)
Inlet P - Outlet T	G 1/2	3/4-16 UNF-2B (SAE 8)
A and B ports	G 3/8	9/16-18 UNF-2B (SAE 6)
Load sensing LS	G 1/4	9/16-18 UNF-2B (SAE 6)
PILOT PORTS		
Pneumatic	NPTF 1/8-27	NPTF 1/8-27
Hydraulic	G 1/4	9/16-18 UNF-2B (SAE 6)

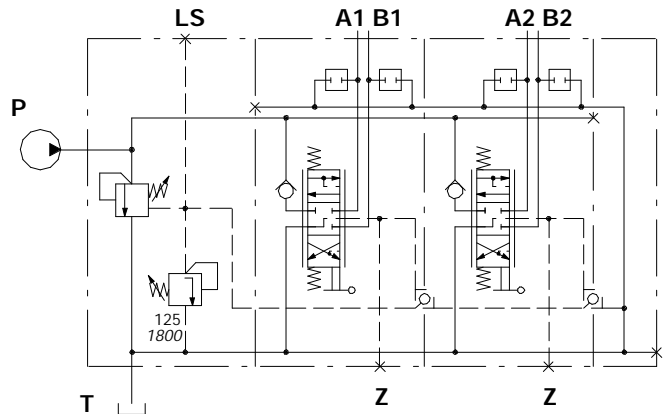
DLS7

Hydraulic circuit

Fixed displacement pump (open centre)

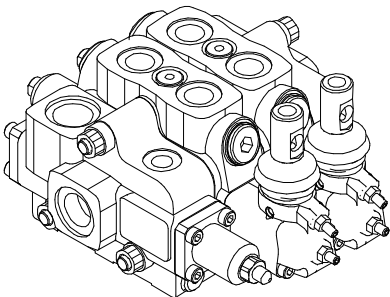


Ex.: DLS7/2/AM(G3-125)/6S8MCLFG/6S8MCLFG/RF

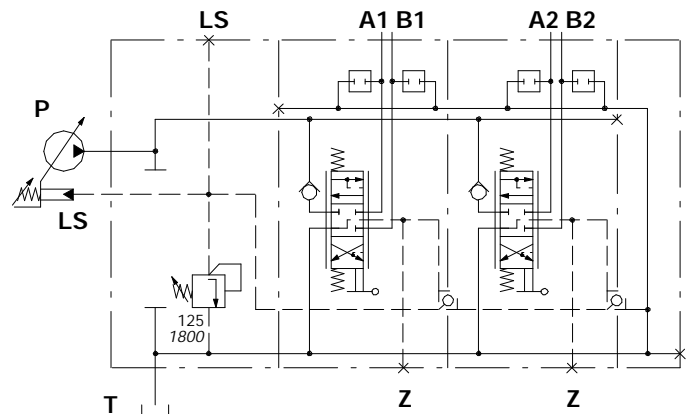


Variable displacement pump with load-sensing compensator (closed centre)

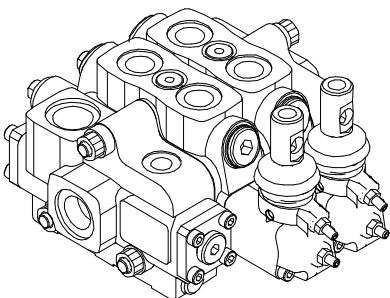
With main relief valve



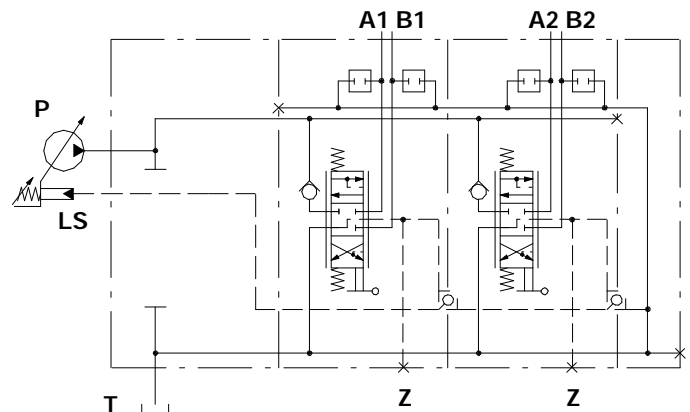
Ex.: DLS7/2/AN(G3-125)/6S8MCLFG/6S8MCLFG/RF



Without main relief valve



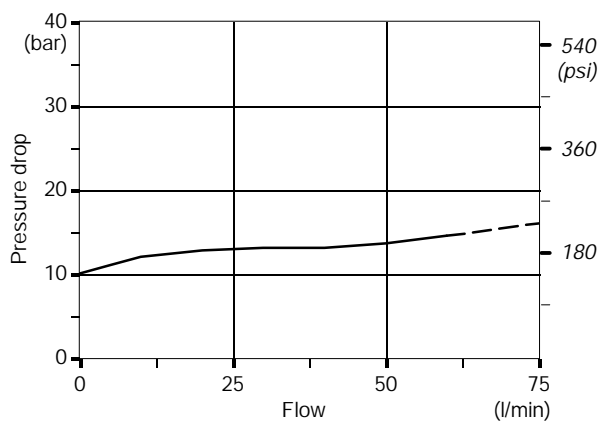
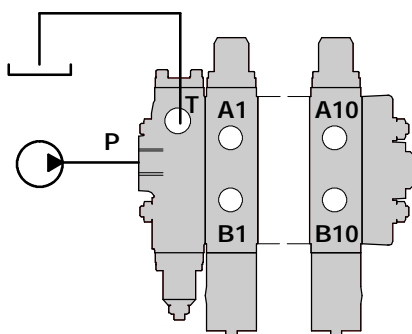
Ex.: DLS7/2/AP(SV)/6S8MCLFG/6S8MCLFG/RF



Performance data (pressure drop vs. flow)

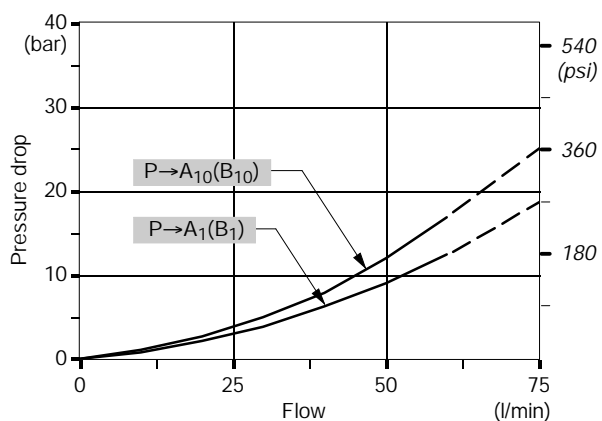
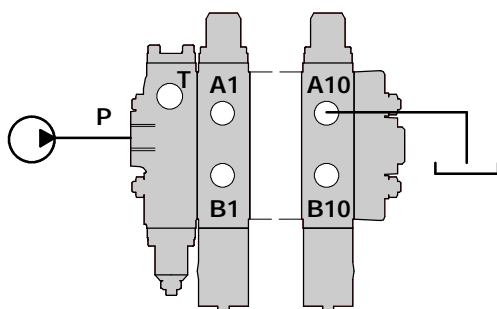
Open centre

From inlet to outlet.



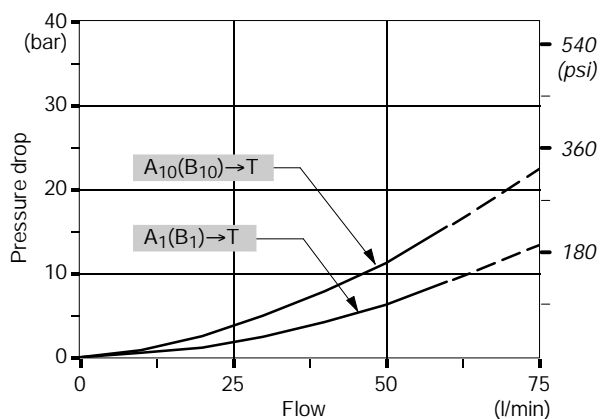
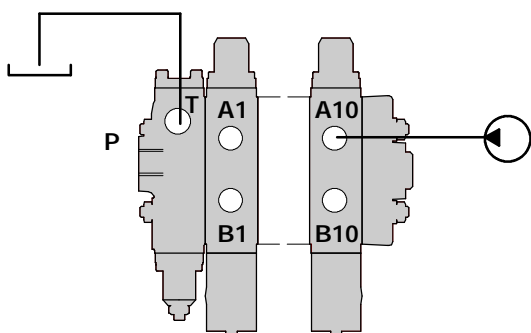
Inlet to work port

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

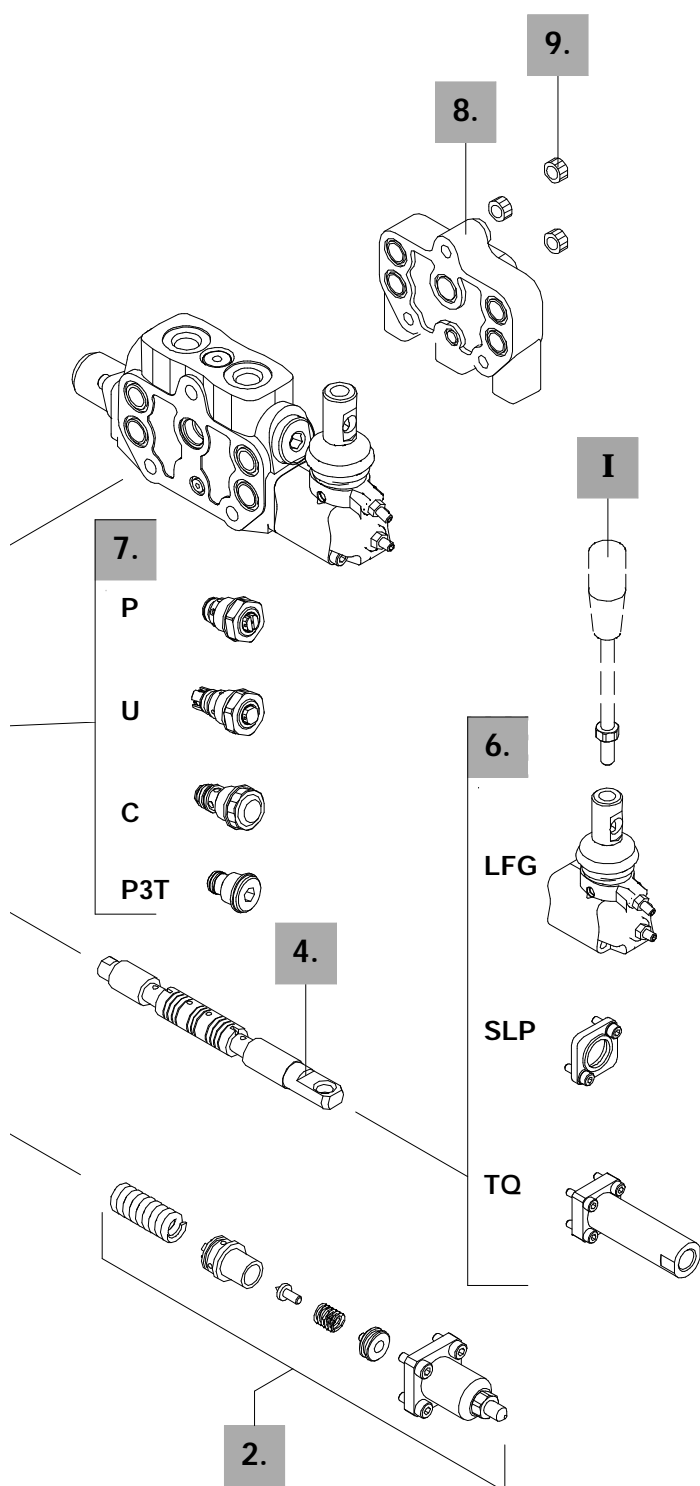


Work port to outlet

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



NOTE - Measured with spool type 6S.



6. "B" side options

TYPE	CODE	DESCRIPTION
LFG	5LEV107800	Lever with stroke limiters
SLP	5COP107000	Without lever, with dust proof plate
TQ	5TEL107100	CD cable connection

7. Port relief options

TYPE	CODE	DESCRIPTION
<u>Anti-shock valve</u>		
P(G2-63)	5KIT206112	From 40 to 80 bar / from 580 to 1150 psi standard setting 63 bar / 900 psi
P(G3-100)	5KIT206113	From 63 to 200 bar / from 900 to 2900 psi standard setting 100 bar / 1450 psi
P(G4-200)	5KIT206114	From 160 to 315 bar / from 2300 to 4600 psi standard setting 200 bar / 2900 psi
<u>Anti-shock and anti-cavitation valve</u>		
U(G2-63)	5KIT306112	From 63 to 125 bar / from 900 to 1800 psi standard setting 63 bar / 900 psi
U(G3-100)	5KIT306113	From 100 to 250 bar / from 1450 to 3600 psi standard setting 100 bar / 1450 psi
U(G4-200)	5KIT306114	From 200 to 315 bar / from 2900 to 4600 psi standard setting 200 bar / 2900 psi

Standard setting is referred to 10 l/min flow.

C	5KIT406100	Anti-cavitation
P3T	XTAP524280	A and B ports valve blanking plugs

8. Return cover *

CODE	DESCRIPTION
61B431000	RF standard

9. Assembling kit

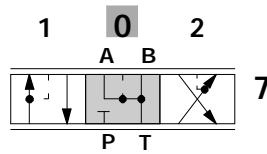
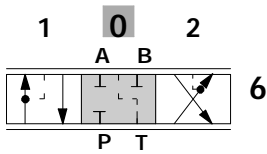
CODE	DESCRIPTION
5TIR108126	tie rod with nut for 1 sections
5TIR108166	tie rod with nut for 2 sections
5TIR108204	tie rod with nut for 3 sections
5TIR108242	tie rod with nut for 4 sections
5TIR108280	tie rod with nut for 5 sections
5TIR108318	tie rod with nut for 6 sections
5TIR108356	tie rod with nut for 7 sections
5TIR108394	tie rod with nut for 8 sections
5TIR108432	tie rod with nut for 9 sections
5TIR108470	tie rod with nut for 10 sections

I Optional handlever

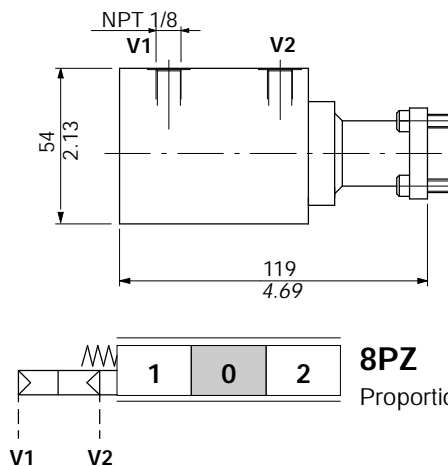
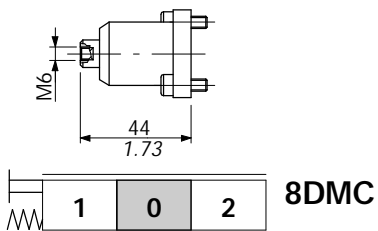
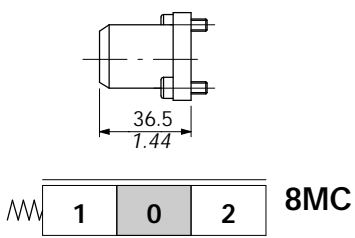
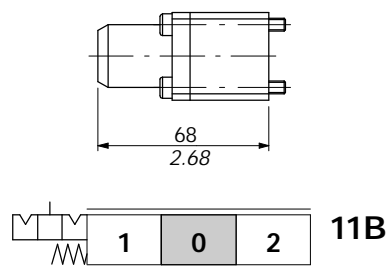
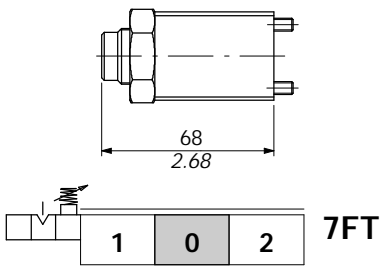
TYPE	CODE	DESCRIPTION
AL01/M10x150	170012015	Standard L= 150mm/5.91in

NOTE (*) - Items are referred to **BSP** thread.

Spools options



"A" side spool positioners



Adjustment range:
from 2 to 6 bar (29 to 87 psi)
Max pilot pressure:
10 bar (145 psi)

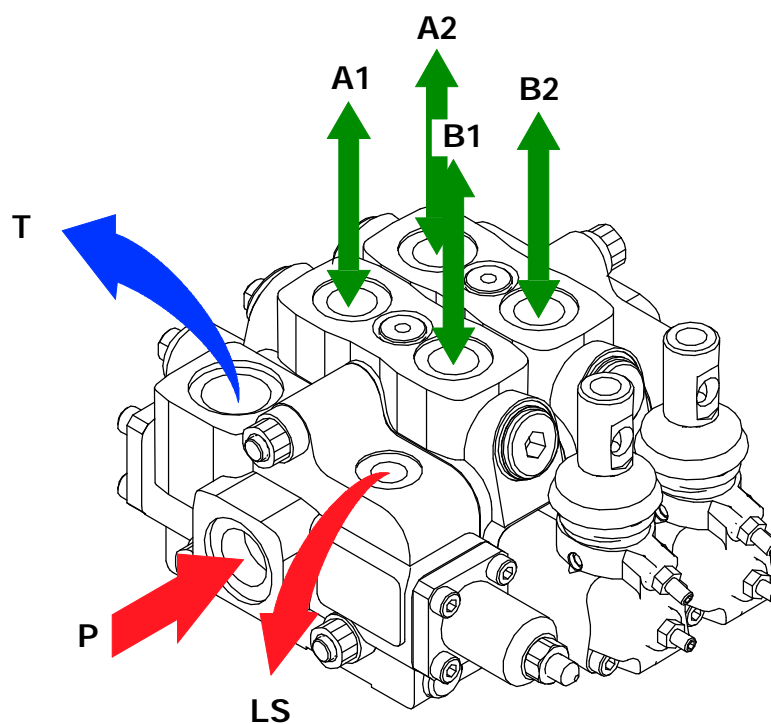
8PZ
Proportional pneumatic kit

Installation and maintenance

The DLS7 valve is assembled and tested as per the technical specification of this catalogue.

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

- the valve can be assembled in any position, in order to prevent 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.



AN inlet cover configuration

Fitting tightening torque - Nm / lbft

THREAD TYPE	P and T ports	A and B ports	LS signal
BSP (ISO 228/1)	G 1/2	G 3/8	G 1/4
With O-Ring seal	50 / 36.9	35 / 25.8	20 / 14.7
With copper washer	60 / 44.3	40 / 29.5	25 / 18.4
With steel and rubber washer	60 / 44.3	30 / 22.1	16 / 11.8
UN-UNF (ISO 11926-1)	3/4-16 UNF-2B (SAE 8)	9/16-18 UNF-2B (SAE 6)	9/16-18 UNF-2B (SAE 6)
With O-Ring seal	50 / 36.9	30 / 22.1	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.

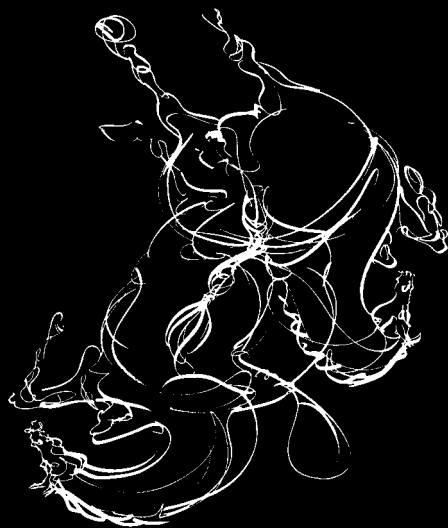
DLS7

Notes

The DLS7 valve can be supplied with one coat of opaque black paint (**CVN** configuration).

Example of specification: :DLS7/2/AM(G3-125)/6S8MCLFG/6S8MCLFG-<**CVN**>

NOTE - *For different color consult Customer Service.*



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