A Polyhydron Group Company

LEVER OPERATED DIRECTIONAL CONTROL VALVE
DL10

ENGINEERING | **1**

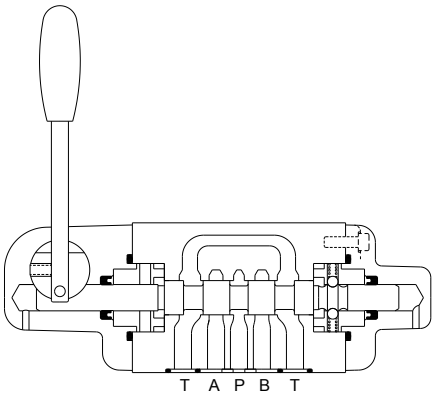
Ref. No. D04909

Release 10/2013

Description

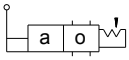
Completely encapsulated mechanism for protection against dirt. Five chamber design for better reduction in dynamic forces and longer valve life. Mounting styles -- Subplate body. Available as spring centred, spring off-set or detented model. Operating head can be rotated by 90° x 4 around spool axis for flexibility in mounting. Valve mounting interface conforms to International and National Standards. Port configuration conforms to Factory Standards.

Section

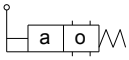


Hydraulic Symbol

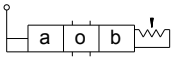
2 position detented



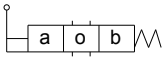
2 position spring offset



3 position detented



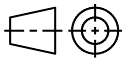
3 position spring centred

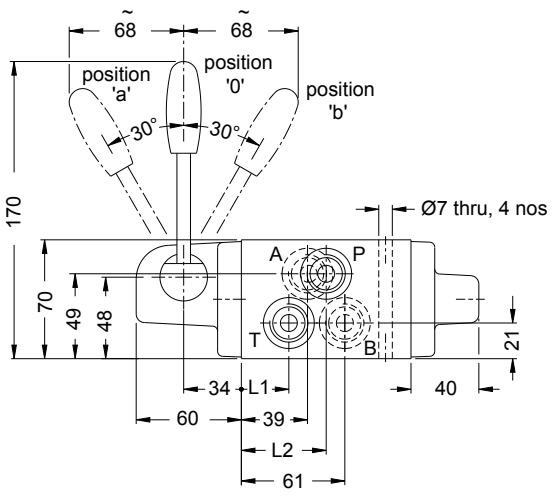


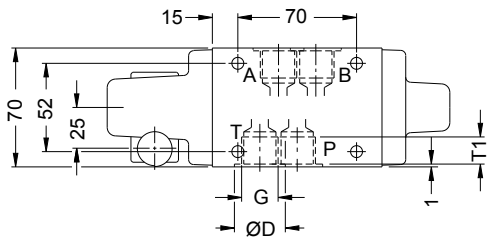
Unit dimension

Threaded mounting body :

Dimensions in mm.







Size	G	ØD	T1	L1	L2
T02	G1/4	22	12	28	50
T03	G1/2	30	16	31	54

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LEVER OPERATED DIRECTIONAL CONTROL VALVE
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ENGINEERING | **2**

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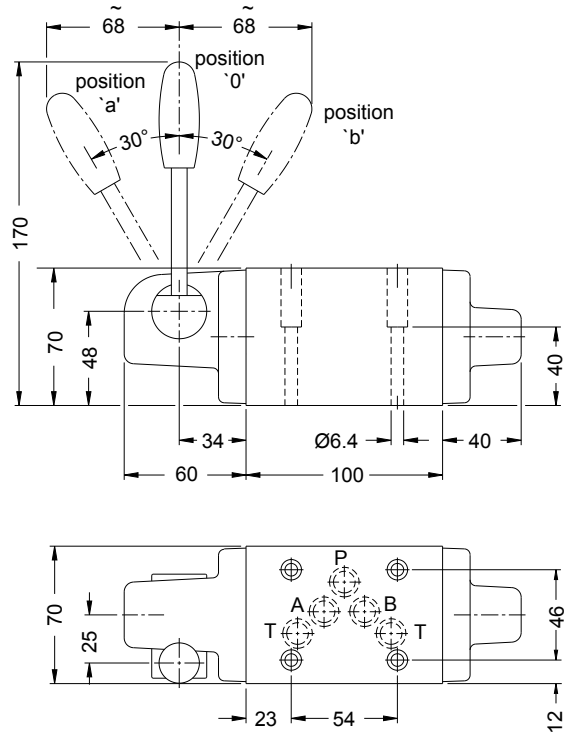
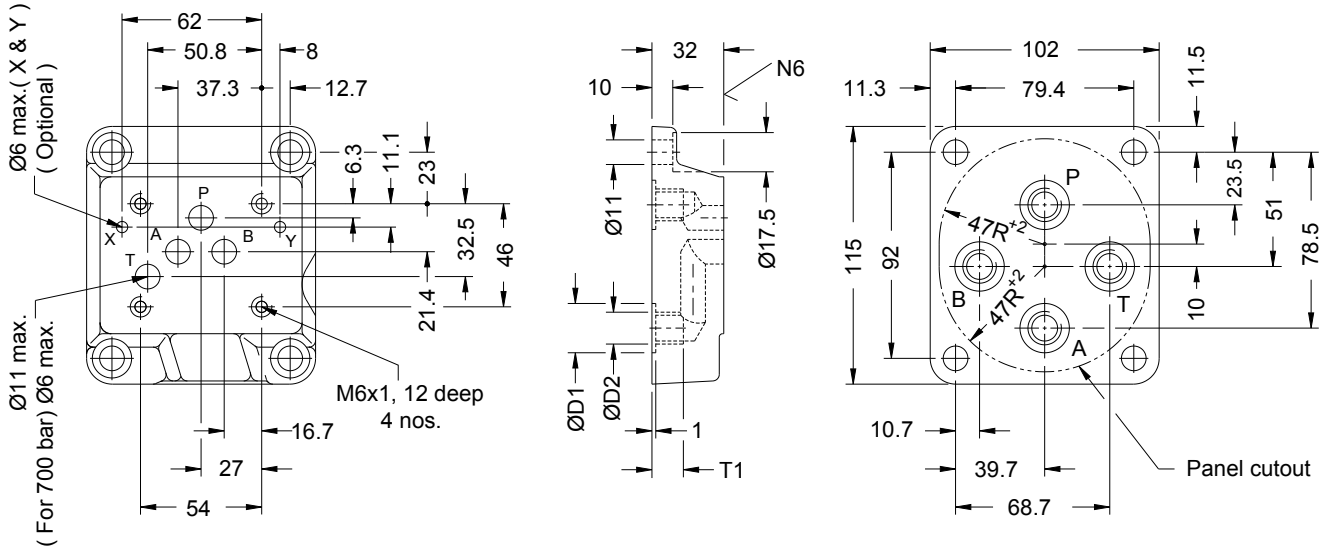
Subplate mounting body :



O'Ring size at port P, A, B & T : 12 i.d. x 2 c.s.d.

Subplate



Subplate type	ØD1	ØD2	T1	Approx. mass	Valve fixing screws	Tightening torque
G101	22	G1/4	13	1.1 kg.	M6 x 50 L, 4 nos.	15 Nm
G102	25	G3/8	13			
G103	30	G1/2	15			

Note :
Surface roughness : Ra value is equal to or better than 0.8 µm
Surface flatness : 0.01 - 100 mm.

Technical specification

Construction	Spool type.
Mounting	Subplate body. Interface as per ISO 4401- AC - 05 - 4 - A and IS 10187 - 10 mm. diameter nominal port.
Mounting position	Optional.
Flow direction	As per spool type.
Operating pressure	For port P, A and B ..... 350 bar. (Standard valve)
	For port P, A and B ..... 700 bar max. (High pressure valve)
	For port T ..... 100 bar. (Both type)
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +70 ºC.
Fluid cleanliness requirement	ISO 4406 20/18/15 or better.
Maximum flow handling capacity	Refer performance curves. (Standard valve)
	Multiply the curve values by 10 (High pressure valve)
Mass	5.6 kg. APPROX. (Subplate body)

Performance Curve

Oil used : ISO VG 68, Viscosity : 68 cSt @ 40 °C, Temp. @ test : 50 °C.

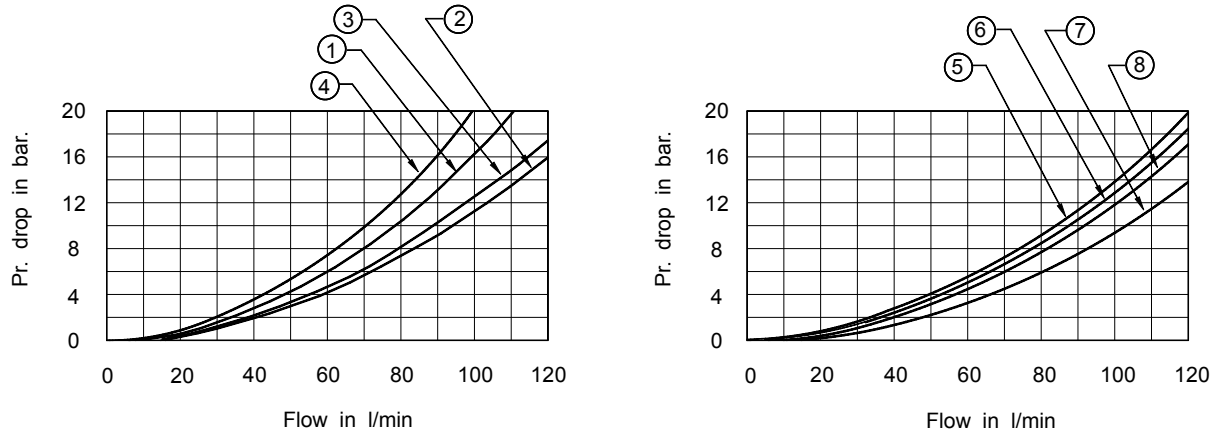


Table showing the relation between the spool type,
direction of flow & curve in the above graph to be referred to.

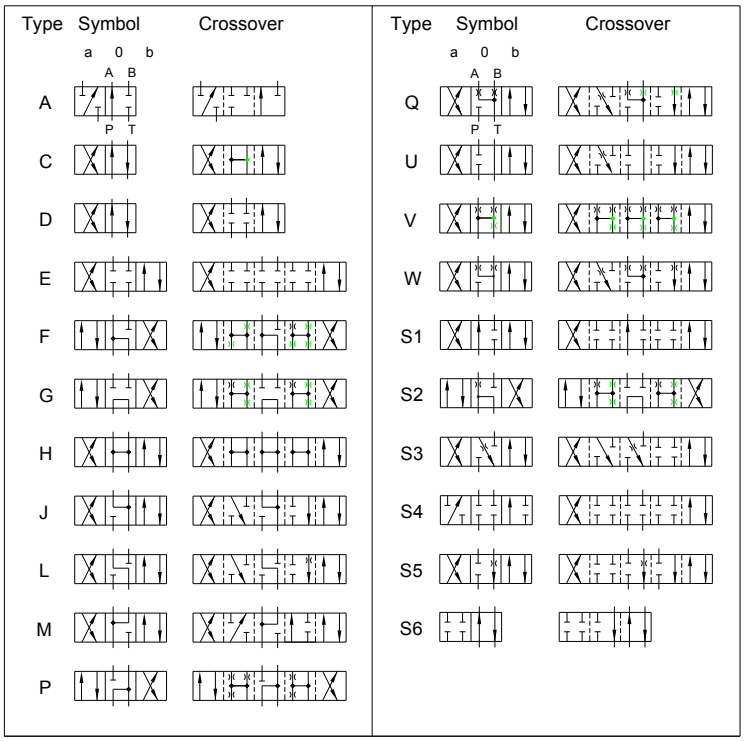
Spool type	Direction of flow / Curve no.				
	P to T	P to A	P to B	A to T	B to T
A	--	1	1	--	--
C	--	1	1	2	3
E	--	1	1	2	3
F	4	1	1	7	3
G	4	1	1	2	3
H	5	6	6	7	8
J	--	1	1	7	8
L	--	1	1	7	3
M	--	6	6	2	3
P	4	1	1	2	8
Q	--	1	1	2	3
W	--	1	1	2	3

Ordering code

4	DL	10	S	E	D	700	V	—	10

- **4** — 3 Service port; 4 Service port
- **DL** — Directional control valve lever operated
- **10** — Size 10
- **S** — Subplate: Threaded G1/4 T02, G1/2 T03
- **E** — Spool type Refer chart
- **D** — D: Detension; S: Spring centred for 3 position valves; Spring offset for 2 position valves
- **700** — Omit: Standard valve; 700: High pressure (700 bar max.)
- **V** — V: Viton Seal; Omit for Nitrile Seal
- **10** — Design code subject to change. Installation dimensions remain same. for design code 10 thru 19.

Spool chart.



Note : Subplate to be ordered separately.