



**LEVER OPERATED DIRECTIONAL CONTROL VALVE
4DL20**

ENGINEERING

1

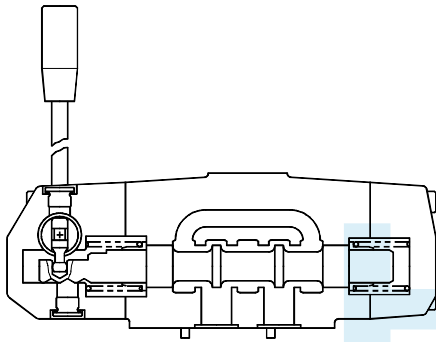
Ref. No. P06407
Release 07/2002

Description

Completely encapsulated mechanism for protection against dirt. Available as spring centred, spring offset or detented model. Internal or external drain available as an optional feature. Valve mounting interface conforms to International and National standards.

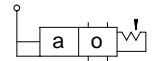


Section

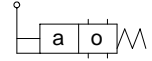


Hydraulic Symbol

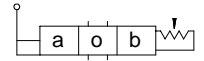
2 position detented



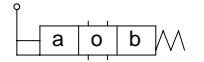
2 position spring offset



3 position detented



3 position spring centred

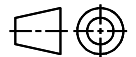
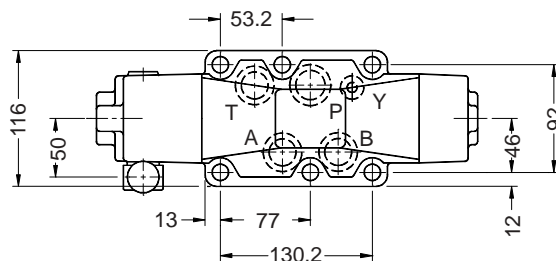
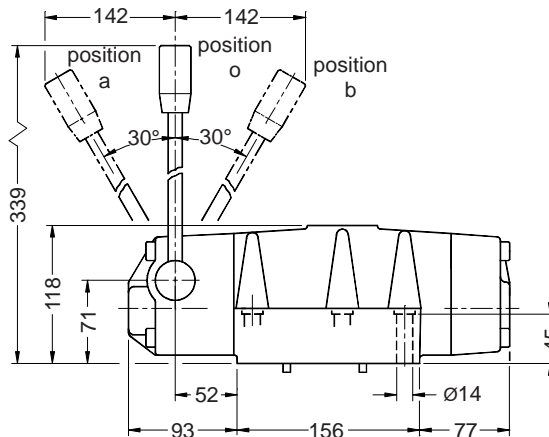


Unit Dimensions

Valve

HYDRO PNEUMATIC ACCESSORIES
W: <http://hpa.net.in> E: inq@hpa.net.in

Dimensions in mm.



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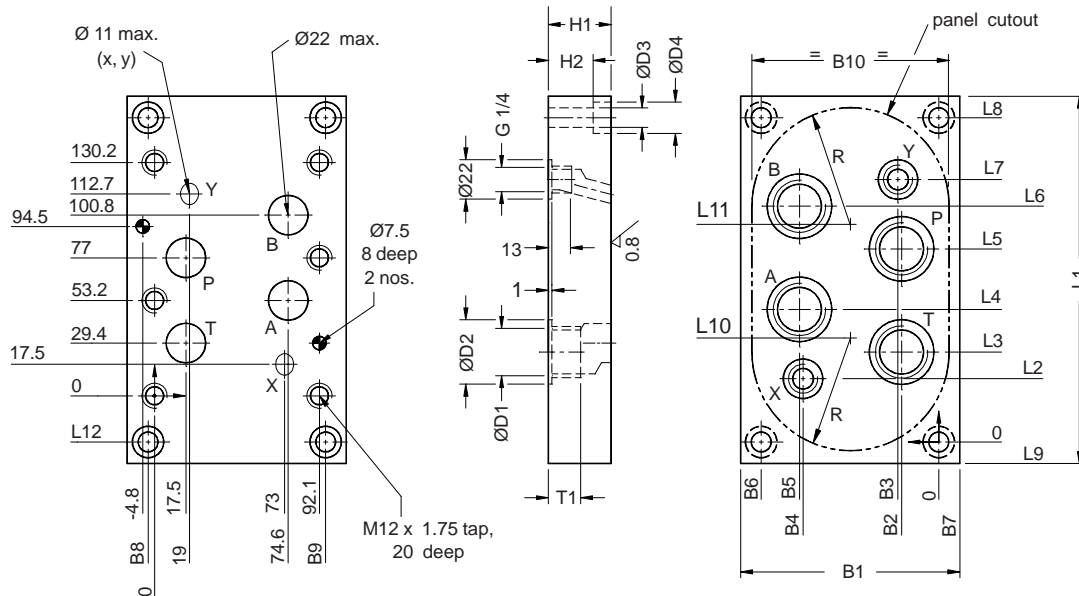
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Ref. No. P06407

Subplate



Subplate type	ØD1	ØD2	T1	ØD3	ØD4	H1	H2	B1	B2	B3	B4	B5	B6	B7	B8	B9
1SD07G06	G 3/4	36	18	11	17.5	35	25	116	17.5	19	73	74.5	92.1	-12	0	92.1
1SD07G08	G 1	44	18	11	17.5	35	25	116	17.5	19	73	74.5	92.1	-12	0	92.1
1SD07G10	G1 1/4	54	21	14	---	78	43	170	32	36	106	110	142	-14	-25	117

Subplate type	B10	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	R	Mass. kg.
1SD07G06	110	205	35.3	50.2	74	107.8	131.6	146.5	181	-12	50.2	131.6	-25.8	55	6
1SD07G08	110	205	35.3	50.2	74	107.8	131.6	146.5	181	-12	50.2	131.6	-25.8	55	6
1SD07G10	160	250	16.8	60.2	84	137.8	161.6	205	222	-14	103	119	-46	113	19

Note : Valve fixing screws M12 X 1.75, 65 long. 6 Nos. (Property class 12.9) Tightening torque 105 Nm.

Technical Specifications

Construction	Spool type
Mounting	Subplate mounting as per ISO 4401-AE-08-4-A and IS - 10187 - 20 mm diameter nominal port.
Mounting position	Optional
Flow direction	As per spool type.
Operating pressure	For port P A and B 350 bar For port T (with internal drain) 100 bar (with external drain) 250 bar For port Y 100 bar
Hydraulic medium	Mineral oil
Viscosity range	10 cSt to 380 cSt
Fluid temperature range	-20 °C to +70 °C
Fluid cleanliness requirement	As per ISO 16/13 or better.
Maximum flow handling capacity	Refer performance curves.
Mass	17.5 kg APPROX



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Performance Curve

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

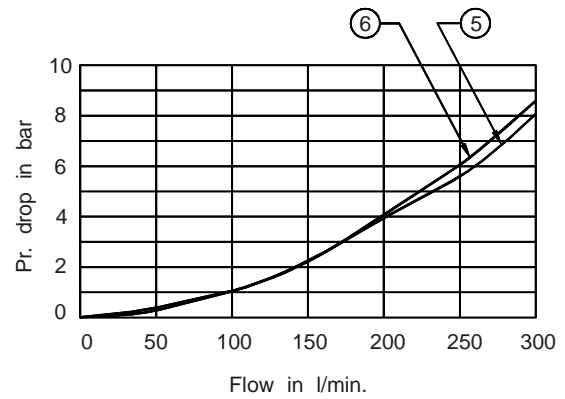
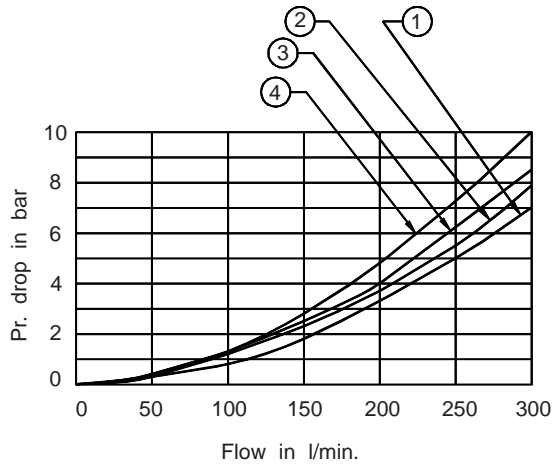


Table showing the relation between the spool type, direction of flow and the curve in the above graph to be referred to.

Direction of flow	P to T	P to A	P to B	A to T	B to T
Spool type	Curve No.				
E	--	2	2	2	2
F	--	1	1	1	2
G	3	6	6	5	4
H	--	--	--	1	1
J	--	2	2	1	1
L	--	2	2	1	2
P	--	1	1	2	1



LEVER OPERATED DIRECTIONAL CONTROL VALVE
4DL20

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Ref. No. P06407

Ordering Code

4 DL 20 E D Y 11

4 service ports

Directional control valve
lever operated

Size 20

Spool type (ref. chart)

Design code
subject to change.
Installation dimensions
remain same for design
code 10 thru 19.

Y	External drain
Omit	Internal drain

D	Detension
S	Spring centred for 3 position valves.
	Spring offset for 2 position valves.



Spool Chart

Type	Symbol	Crossover	Type	Symbol	Crossover
	a 0			a 0 b	
	A B			A B	
C			T		
D			M		
E			P		
F			Q		
G			U		
H			V		
J					
L					

Note : Subplate to be ordered separately.

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Subject to revision.