



A Polyhydron Group Company

# HAND LEVER OPERATED DIRECTION CONTROL VALVE DLS \*

Ref. No.D09072  
Release : 04 / 2016

ENGINEERING - 1 of 4

## Description

Designed for operating single acting up-stroking cylinders, which are expected to hold pressure during their working cycle.

The valve also ensure smooth decompression prior to return of the cylinder.

Large return oil passage in the valve helps to return of the cylinder rapidly.

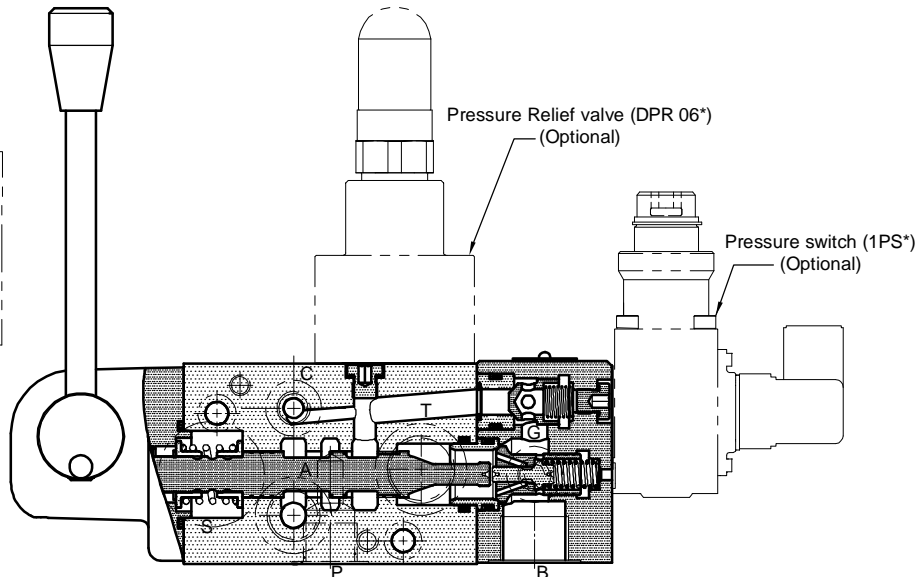
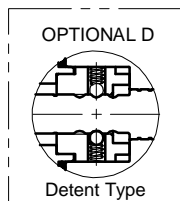
Operations of multiple independent single acting cylinders can be achieved by using the valves connected in series. ( Please refer circuit on last page.)

The valves can be supplied with features for mounting Pressure Regulator valve and Pressure Switch to eliminate interconnecting pipes.

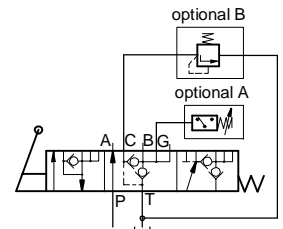


## Section

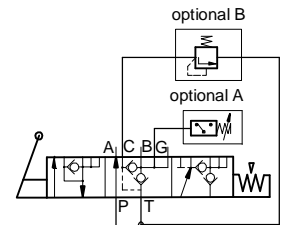
Valve : **DLS 10**



## Hydraulic symbol



Spring Centered



Ball Detent

## Technical specifications

Construction .....	Spool with Poppet.
Mounting / Standard .....	Threaded body (Company standard)
Mounting position .....	Optional, horizontal spool axis preferred.
Flow direction .....	As per Hydraulic Symbol.
Maximum operating pressure.....	At port P, A, B, C, G.....350 bar
	Port T.....Pressure drop in the tank line adversely affect the returning speed of the cylinder, Hence must be kept as low as possible
Hydraulic medium .....	Mineral oil.
Viscosity range .....	10 cSt to 380 cSt
Fluid temperature range .....	-20°C to +70°C
Fluid cleanliness requirement .....	ISO 4406 20/18/15 or better.
Nominal flow handling capacity .....	refer performance curve.
Mass (approx) .....	DLS 10.....8 kg
	DLS 20 .....25 kg

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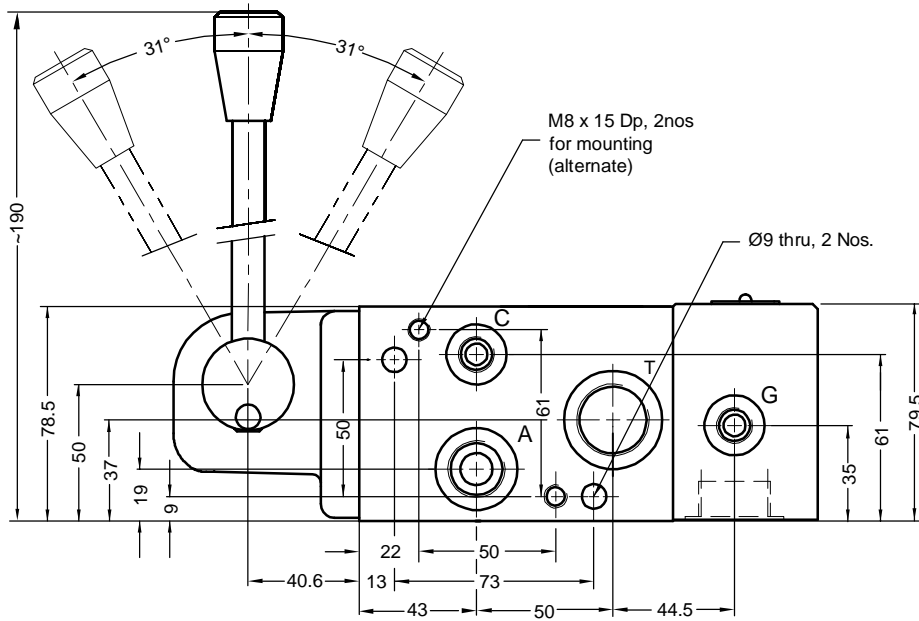
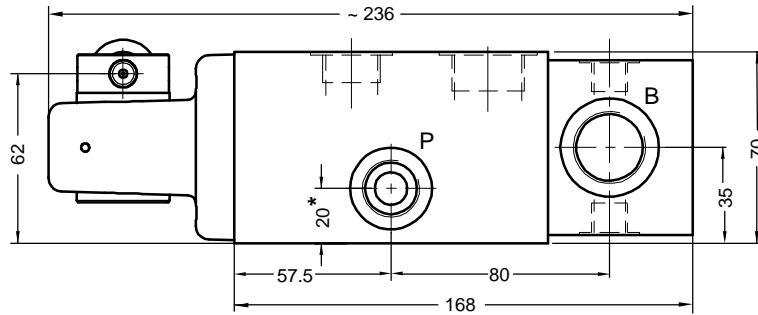
### Unit dimensions

Valve model : **DLS 10**

Dimensions in mm.

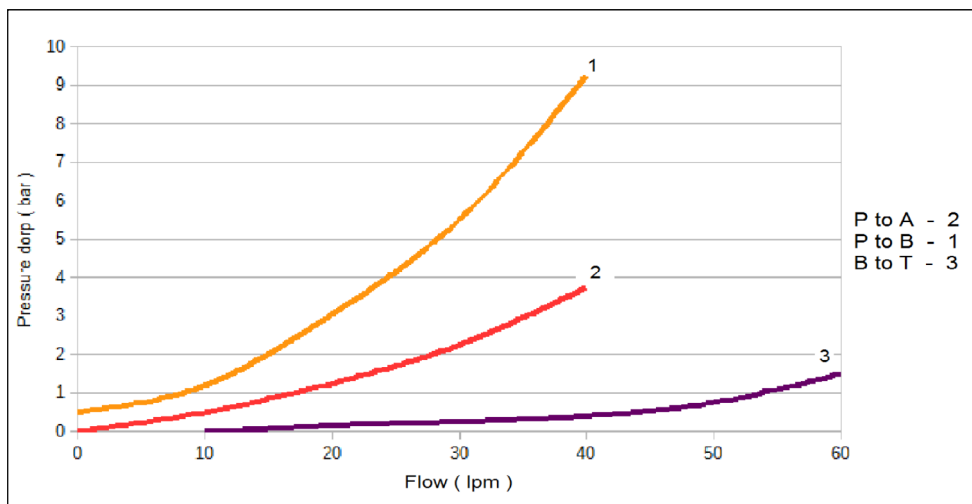


Port size details	
Port	Size
A , P	G1/2
B , T	G3/4
C , G	G1/4



Note : Valve with Mirror image face option, will have ports A, C, T and G on opposite face and dimension 20 (marked \*) of port P will be 50. ( Ask for details, if needed )

### Performance Curves for DLS 10 ( Pressure drop related to flow, with 46 cSt at 40°C )

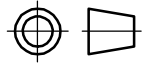




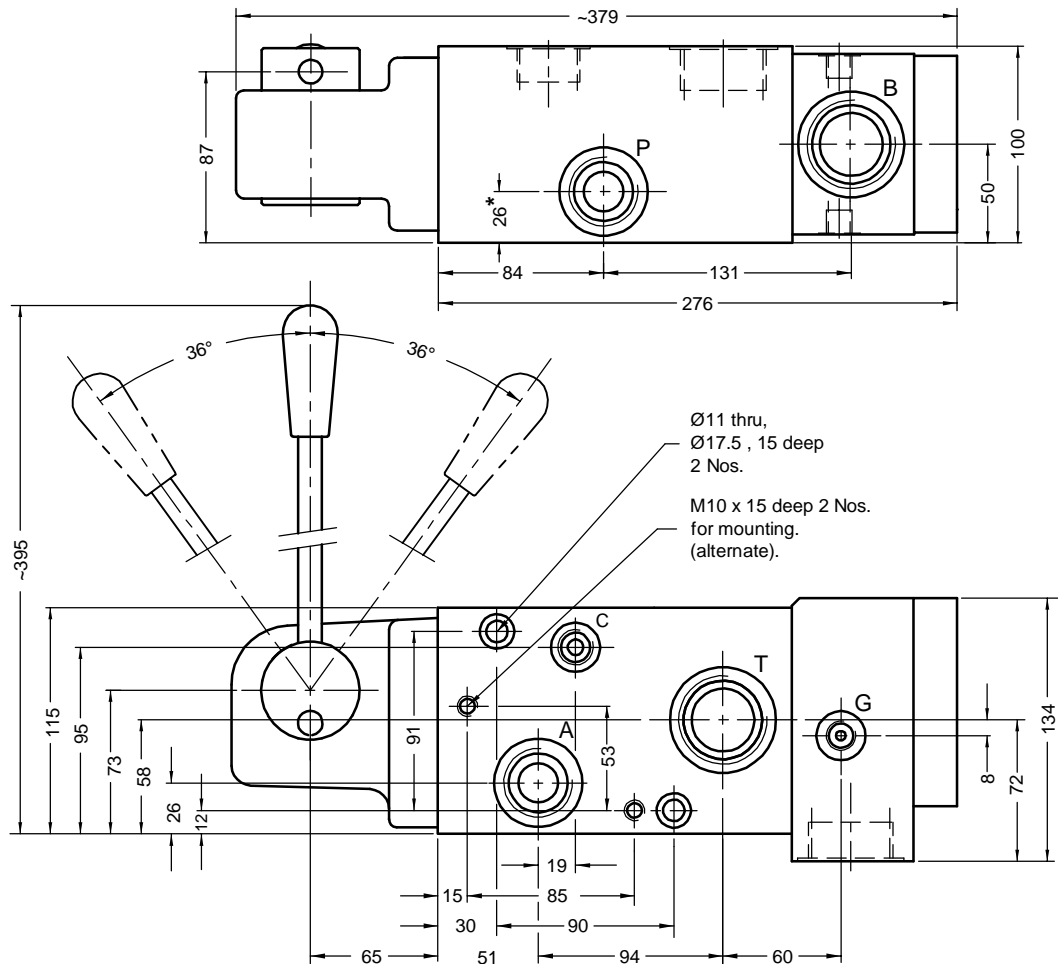
**Unit dimensions**

Valve model : **DLS 20**

Dimensions in mm.

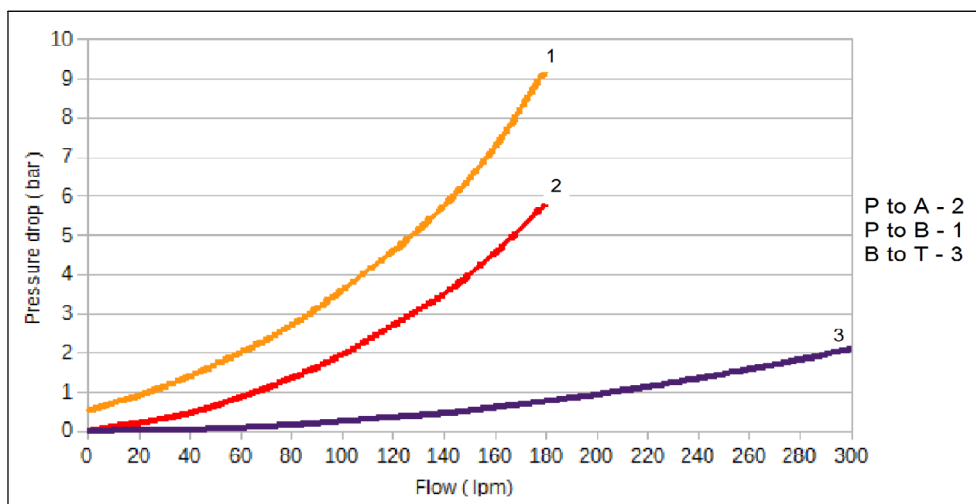


Port size details	
Port	Size
A , P	G1
B , T	G1-1/2
C	G 3/8
G	G1/4



Note : Valve with Mirror image face option, will have ports A, C, T and G on opposite face and dimension 26 (marked \*) of port P will be 74. ( Ask for details, if needed )

**Performance Curves for DLS 20**  
( Pressure drop related to flow,, with 46 cSt at 40°C )





### Ordering code

**DLS - 10 S M A B - 11**

4 way directional control valve  
Hand lever operated with pressure  
holding facility at port B.

Size	<b>10</b>
	<b>20</b>

Spring Return	<b>S</b>
Detent	<b>D</b>

Face option for ports A, C, T, and G only	
Ports on opposite face ( mirror image body )	<b>M</b>
Omit for valve porting shown in unit dimension drawing.	

Model	Design code
DLS 10	<b>11</b>
DLS 20	<b>14</b>

Design code subjected to change.  
Installation dimensions remain  
same for design code 11 thru 19.

<b>B</b>	Provision for mounting Pr. relief valve (DPR*06)
Omit if not required.	

<b>A</b>	Provision for mounting Pr. switch 1PS* (350 bar max)
Omit if not required.	

Note : Pressure switch (1PS\*) and Pr. relief valve (DPR\*06 ) to be ordered separately.

Hydraulic circuit showing typical application of valve DLS10 / DLS 20

