

3.10

# Pressure reducing valve direct operated

Type DR6DP...L5X

Size 6  
up to 315 bar  
up to 60 L/min



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## Features

- Direct operated structure
- Porting pattern to DIN 24 340 form A, ISO4401
- 5 pressure ratings
- 2 adjustment elements:
  - Rotary knob
  - Adjustable bolt with protective cap
- With pressure gauge connection
- Check valve, optional

## Function and configuration

The valve type DR6DP is a 3-way direct operated pressure reducing valve with a pressure relief function on the secondary side, to insure the secondary pressure steady. It is used to reduce the system pressure.

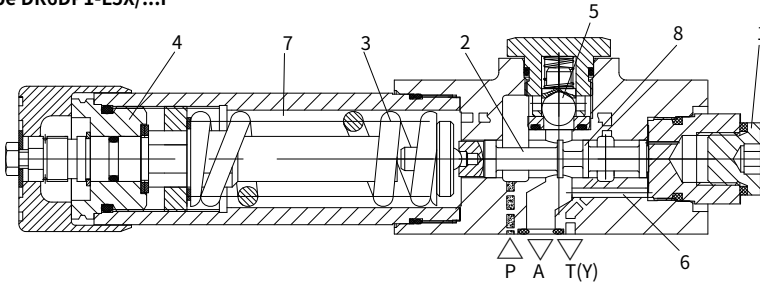
The secondary pressure is set by the pressure adjustment element (4).

At static position, the valve is normally open and the pressure fluid flows unhindered from port P to port A. The pressure in port A acts at the spool (2) area opposite to the compression spring (3) via the control line (6). When the pressure in port A get the value setting at compression spring (3), the control spool (2) moves into the control position and keeps the setting pressure in port A constant. The internal control oil is taken from port A via the control line (6). If the pressure in port A still increases due to external forces on the actuator, the control spool (2) moves still further towards the compression spring (3). This causes a flow path to be opened via control land (8) on the control spool (2). Sufficient fluid then flows back to tank to prevent any further pressure rise.

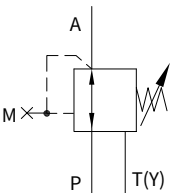
Fluid in spring chamber always drained to tank externally via port T(Y).

For free return flow from port A to port P an optional check valve (5) can be fitted. One pressure gauge connection (1) used for monitoring the secondary pressure at the valve.

### Type DR6DP1-L5X/...Y



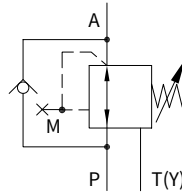
## Symbols



### Version "YM"

Pilot oil supply internal  
oil drain external

Without check valve



### Version "Y"

Pilot oil supply internal  
oil drain external

With check valve

## Ordering code

	DR6DP	-	L5X	/	Y	/		*	Further details in clear text
Direct operated pressure reducing valve nominal size 6									
Rotary knob	=1							No code =	NBR seals
Adjustable bolt with protective cap	=2							V =	FKM seals
Series L50 to L59 (L50 to L59: unchanged installation and connection dimensions)	= L5X								Pressure tapping thread
								No code =	Inch G1/4
								2 =	Metric M14×1.5
Max. secondary pressure 25 bar	=2.5							No code =	With check valve
Max. secondary pressure 75 bar	=7.5							M =	Without check valve
Max. secondary pressure 150 bar	=15								
Max. secondary pressure 210 bar	=21								
Max. secondary pressure 315 bar	=31.5 (Note1)							Y =	Pilot oil supply internal Oil drain external

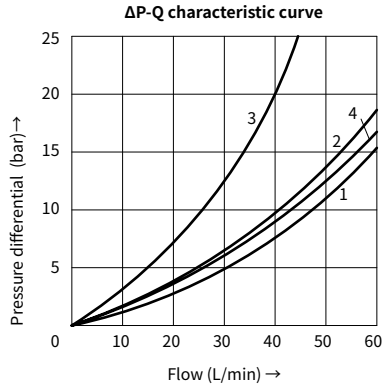
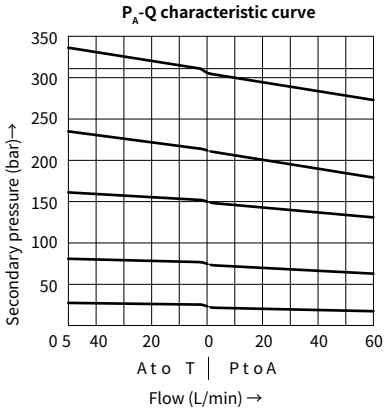
**Notes 1:** Only for adjustment form "2" and without check valve

## Technical data

Fluid		Mineral oil suitable for NBR and FKM seal
		Phosphate ester for FKM seal
Fluid temperature range	°C	-30 to +80 ( NBR seal ) -20 to +80 ( FKM seal)
Viscosity range	mm <sup>2</sup> /s	10 to 800
Degree of contamination		Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15 , ISO4406
Max.operating pressure	Port P	315
Max.secondary pressure	Port A	bar
Max.backing pressure	PortT(Y)	16
Max. flow-rate	L/min	60
Weight	kg	Approx.1.6

## Characteristic curves

( Measured at  $\vartheta_{oil} = 40^{\circ}\text{C} \pm 5^{\circ}\text{C}$  , using HLP46)



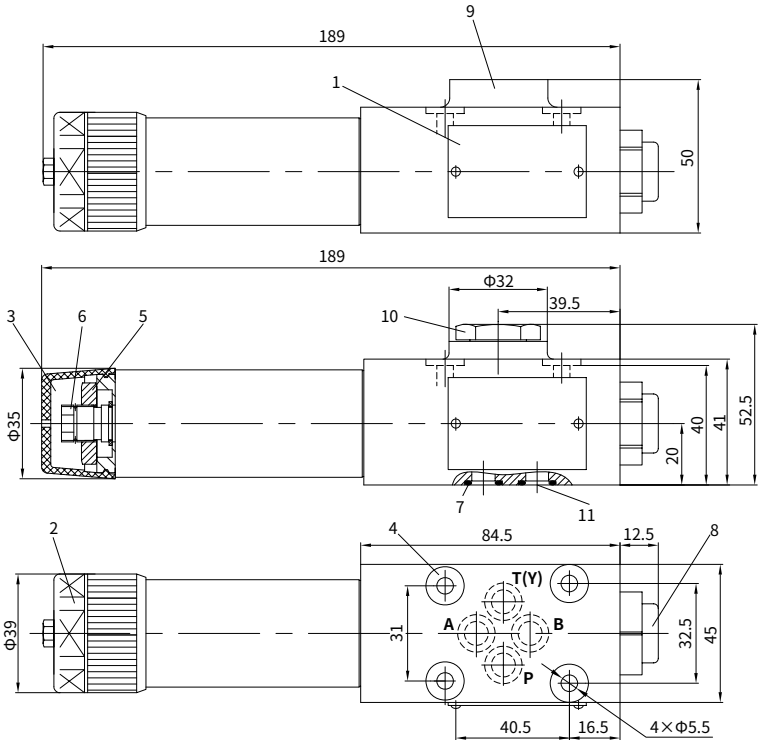
### Notes:

The curve characteristics remain in a certain pressure range, with a low setting pressure. The characteristic curves for the pressure relief function are valid when the back pressure is zero !

- 1 P to A (min. pressure differential)
- 2 A to T (Y) (min. pressure differential)
- 3 Pressure differential only over the check valve
- 4 Pressure differential over the check valve and fully opened cross section

# Unit dimensions

(Dimensions in mm)



- 1 Nameplate
- 2 Adjustment element "1"
- 3 Adjustment element "2"
- 4 Valve fixing holes
- 5 Lockable nut S=24
- 6 Internal hexagon screw S=10
- 7 O-ring 9.25×1.78 (A, B, P, T)
- 8 Pressure gauge connection:  
G1/4 or M14×1.5; 12 deep  
Hex wrench S=6
- 9 Without check valve
- 10 With check valve
- 11 Port B blocked, has no function

**It must be ordered separately,  
if connection plate is needed**

**Type:** G341/01(G1/4), G341/02(M14×1.5) G342/01(G3/8), G342/02(M18×1.5)  
G502/01(G1/2), G502/02(M22×1.5)

**Valve fixing screws:**

M5×50 internal hexagon screw GB/T 70.1-10.9, Tightening torque  $M_t=8.9\text{Nm}$

