



# DR10DP...type Direct Operated Reducing Valve



## DR10DP...4XJ...type

Size 10  
Max. Working Pressure: 210 bar  
Max. Flow: 80 L/min

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### Features

- Direct operated structure
- Porting pattern conforms to DIN 24 340 form D and ISO5781
- 4 pressure ratings
- 2 adjustment elements:
  - Rotary knob
  - Adjustable bolt with protective cap
- With pressure gauge connection
- Check valve, optional

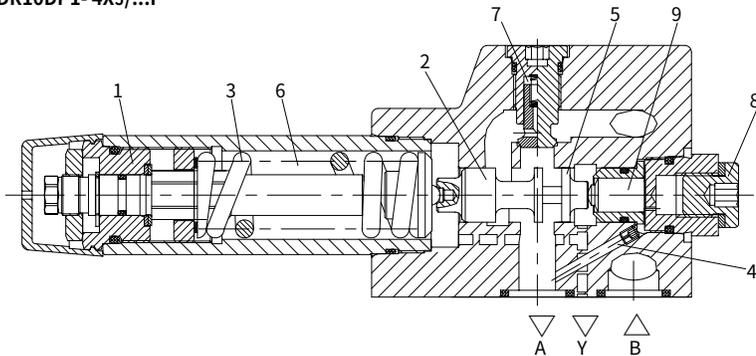
## Function and configurations

DR10DP type valve is a 3-way direct operated pressure reducing valve with a pressure relief function on the secondary side. It is used to reduce the system pressure. The secondary pressure is set by the pressure adjustment element (1).

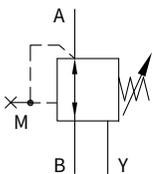
In zero position, the valve is normally open and the pressure fluid flows unhindered from port B to port A. The pressure in port A acts at the small spool(9) area opposite to the compression spring (3) via the control line (4). When the pressure in port A get the value setting at the compression spring (3), the small spool(9) pushes the control spool (2) 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 (4). If the pressure in port A still increases due to external forces on the actuator, a flow path is to be opened via control land(5) on the control spool (2) . Port Y is open and sufficient fluid then flows back to tank to prevent any further pressure rise.

Fluid in spring chamber (6) always drained to tank externally via port Y. For free return flow from port A to port B an optional check valve(7) can be fitted. One pressure gauge connection (8) used for monitoring the secondary pressure at the valve.

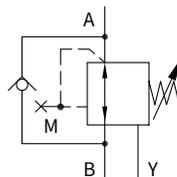
### Type DR10DP1- 4XJ/...Y



## 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

## Specifications

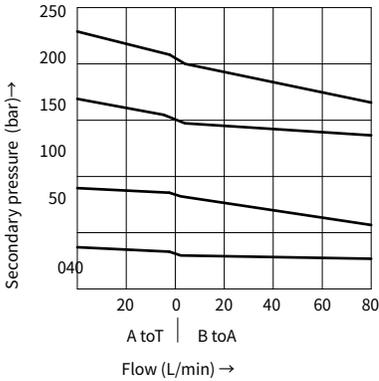
DR10DP		-	4XJ	/	Y	/		*	Further details in clear text
Direct operated pressure reducing valve nominal size 10									
Rotary knob	=1							No code =	NBR seals
Adjustable bolt with protective cap	=2							V =	FKM seals
Lockable rotary knob with scale	=3								Pressure tapping thread
Rotary knob with scale	=7							No code =	Inch G1/4
								2 =	Metric M14×1.5
Series 40J to 49J	=4XJ							No code =	With check valve
(40J to 49J series: unchanged installation and connection dimensions)								M =	Without check valve
Max. secondary pressure 25bar	=25							Y =	Pilot oil supply internal
Max. secondary pressure 75bar	=75								Oil drain external
Max. secondary pressure 150bar	=150								
Max. secondary pressure 210bar	=210								

## Technical data

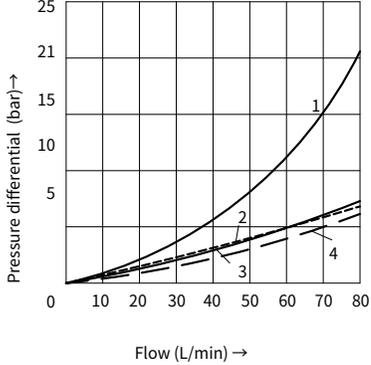
Fluid		Mineral oil suitable for NBR and FKM seal	
		Phosphate ester for FKM seal	
Fluid temperature range		°C	-30 to +80 ( NBR seal )
			-20 to +80 ( FKM seal )
Viscosity range		mm <sup>2</sup> /s	10 to 800
Degree of contamination		Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15 , ISO4406	
Max.operating pressure	Port P		315
Max.secondary pressure	Port A	bar	25; 75; 150; 210
Max.backing pressure	Port Y		16
Max. flow-rate		L/min	80
Weight		kg	Approx.3.3

**Characteristic curves** ( Measured at  $t=40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , using HLP46)

**$P_A$ -Q characteristic curve**



**$\Delta P$ -Q characteristic curve**



03

# Unit dimensions

(Dimensions in mm)

