

Pressure reducing valve pilot operated

Type 3DR10P...6X

Size 10 up to 315 bar up to 120 L/min



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Features

- -Porting pattern conforms to DIN 24 340 form A and ISO 4401
- -4 pressure ratings
- -2 adjustment elements
- ·Rotary knob
- ·Adjustable bolt with protective cap
- -Pressure gauge fitting

Function and configurations

The pressure valve type 3DR10P is a pilot operated 3-way pressure reducing valve with pressure limitation in the secondary circuit. It is used for reducing pressure in a hydraulic system.

The pressure reducing valve consists mainly of main valve (1), control spool (2) and pilot control valve (3) with pressure adjustment element (10).

At static state, the valves are normally open, fluid flows free from port P to port A. The pressure in port A is applied via the channel (4) to the spool area opposite to the compression spring (9). Fluid also acts on the ball valve (7) of the pilot valve (3) via the throttle orifice (6) and channel (5). Based on the setting value of the spring (11), control piston keeps open, then fluid can flow free from port P to port A, until pressure at port A exceed the setting value of spring(11), and then ball valve (7) is opened. Control piston (2) moves to close position. When pressure at port A is balanced with setting value at spring (11), pressure reducing is achieved as expected.

If the pressure in port A continuously increases due to external forces, the control spool (2) is moved still further against the compression spring (9). Thus port A is connected to port T via the control lands (8) at the control spool (2). Enough fluid flows to tank to ensure that the pressure does not rise any further.

The pilot oil returns from spring chamber (12) to tank without back pressure via control line (13) to port Y.

A pressure gauge connection (14) makes it possible to monitor the reduced pressure in port A.

Symbol:

Α

В



Type 3DR10P5-L6X/...



Ordering code



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 ² /s		mm²/s	10 to 800	
Degree of contamination			Maximum permissible degree of fluid contamination:	
			Class 9. NAS 1638 or 20/18/15, ISO4406	
Nominal pressure bar		bar	315	
Max.operating pressure	port P	bar	315	
Max.operating pressure	port A	bar	315	
Max.operating pressure	port Y	bar	Separate and at zero pressure to tank	
Setting pressure	Min.	bar	Dependent on the flow (see curves)	
	Max.	bar	50;100;200;315	
Max. flow-rate		L/min	120	
Weight		kg	Approx.6.5	

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





Unit dimensions

(Dimensions in mm)



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

Type: G535/01(G3/4) G535/02(M27×2) G536/01(G1) G536/02(M33×2)

Valve fixing screws:

4 pcs GB/T -10.9, internal hexagon screw Tightening torque M_A =15.5 Nm