ZDR6...type Modulaer Reducing Valve

ZDR6D...4XJ...type

Size 6
Max. Working Pressure: 210 bar
Max. Flow: 50 L/min

Contents

Features

- Sandwich plate design
- Mounting face meeting requirements for DIN24340 A and ISO4401
- 4 pressure ranges
- 2 adjustment forms
  Rotary Knob
  Adjusting screw with protective cover
- Connector with pressure gauge
- Selectable one-way valve

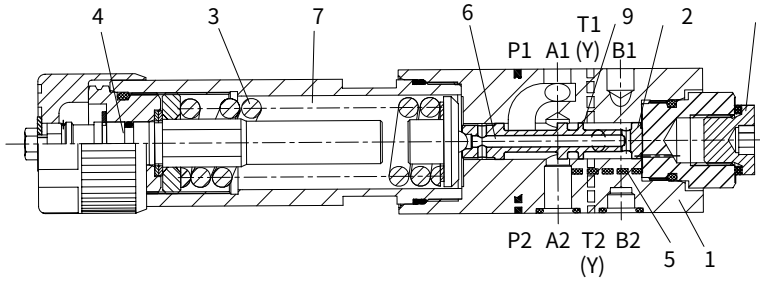
Function and configuration

ZDR6 type valve is a direct operated pressure reducing valve in sandwich plate design with pressure limitation of the secondary circuit. It is used to reduce the system pressure. The valve consists of the valve housing (1), the control spool (2), two compression springs (3), the adjustment element (4), and the optional check valve.
The secondary pressure is set by the adjustment element(4).

Model DA:
At static state, the valve is normally open, and fluid can flow freely from port P2 to port P1 (version "DP") or from port A1 to port A2(version "DA"). Pressure in port P1 acts at the spool area via control line (5) and is balanced with the setting value of the compression spring (3). When the pressure in port P1 exceeds the setting value of the spring (3), the control spool (2) moves further towards the compression spring (3), the opening aperture at port P is getting smaller until fluid at port P1 flows back to the tank through the orifice (6) of the control spool (2) to prevent any further rise in pressure. The leakage oil in spring chamber(7) is always drained to tank through port T (Y). A check valve can be fitted optionally in version "DA" for free flow from ports A2 to ports A1 . A pressure gauge connection (8) permits the secondary pressure to be monitored. In model DA, one-way valve can only be mounted with the oil port from A2 to A1 to make the flow passage smooth.

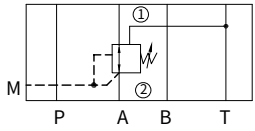
Model DP and DB:
In model DP, oil port P1 is pressure reduced; signal and control oil is provided from the inside of oil port P1.
In model DB, oil port P1 is pressure reduced; but control oil is from oil port B.

Type:ZDR6DA1-4XJ/...YM...

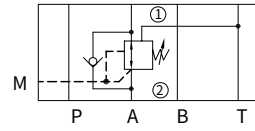


Symbols

Type:ZDR6DA...4XJ/..YM



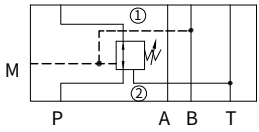
Type:ZDR6DA...4XJ/..Y



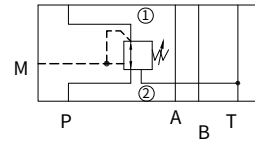
① =valve side;

② =bottom plate side

Type:ZDR6DB...4XJ/..YM



Type:ZDR6DP...4XJ/..YM



Specification

Z	DR	6	D		– 4XJ ⁄	Y			★

Superposition structure =Z
Pressure reduce valve = DR
Size 6 = 6
Direct-acting type = D
Oil port A2 pressure relieved = A
Oil port B2 pressure relieved = B
Oil port P1 pressure relieved = P
Knob =1
Adjusting bolt with protective cover =2
Knob with lock =3
Knob without lock =7
Series 40J to49J =4XJ
(40J to 49J: unchanged installation and connection dimensions)

Further details in clear text
No code = NBR seals
V = FKM seals
No mark = With one-way valve (just for model DA)
M = Without one-way valve
Y= Control oil supplied from inside and drained to the outside
25= Max. secondary pressure 25bar
75= Max. secondary pressure 75bar
150= Max. secondarypressure 150bar
210= Max. secondary pressure 210bar

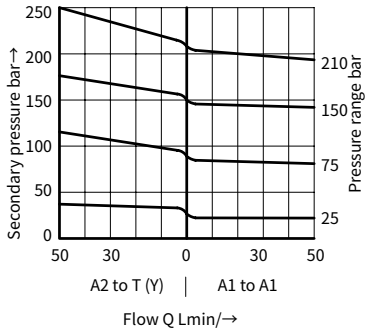
Technical data

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	10 to 800
Degree of contamination		Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15, ISO4406
Max secondary pressure (inlet)	bar	315
Max secondary pressure (outlet)	bar	25;75;150;210
Backpressure oil port T(Y)	bar	160
Max flow	L/min	50
Weight	kg	About1.2

Characteristic curves (Measured at t=40°C ±5°C , using HLP46)

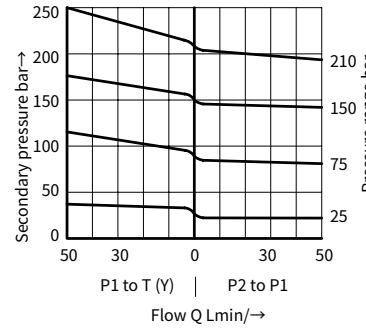
Type ZDR6DA

p_A-q_v Characteristic curves

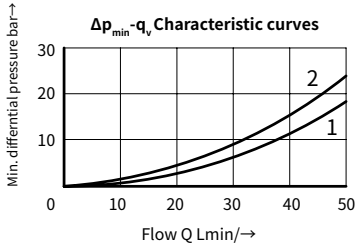


Type ZDR6DP and ZDR6DB

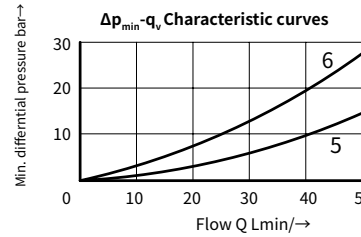
p_A-q_v Characteristic curves



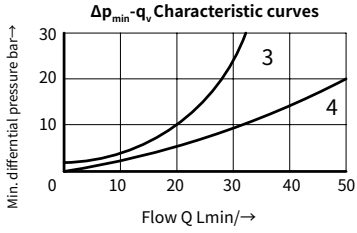
Δp_{min}-q_v Characteristic curves



Δp_{min}-q_v Characteristic curves



Δp_{min}-q_v Characteristic curves

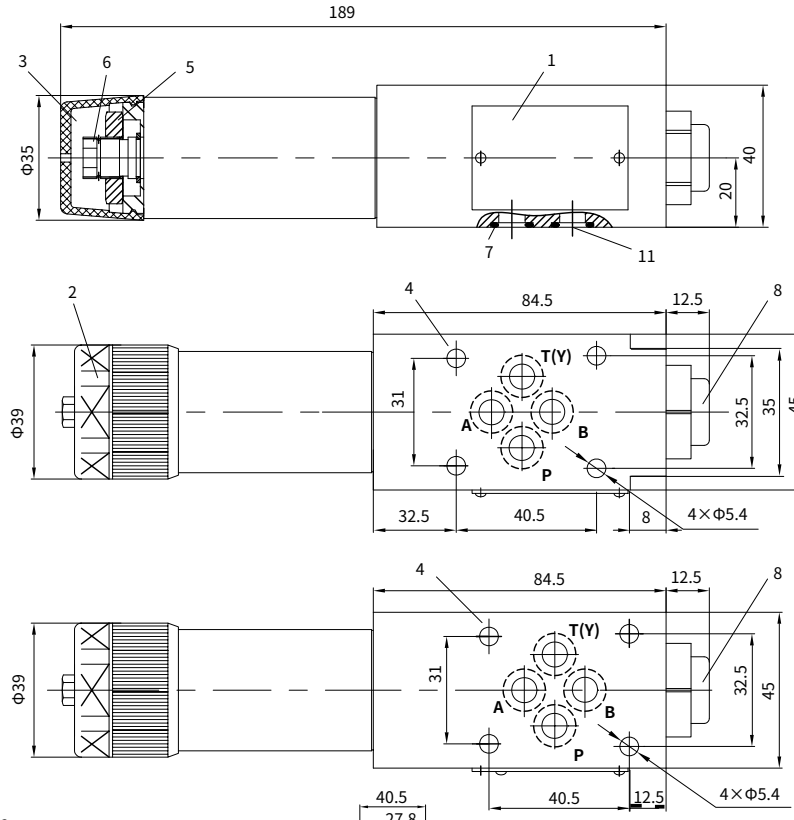


This work curve is effective to the relief function in case of outlet pressure = 0 within the overall range.

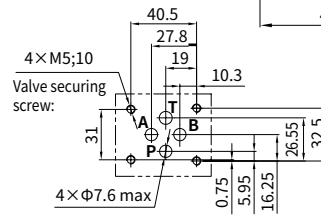
1 A1 to A2
2 A2 to T(Y) (the third flow route)
3 Flow from A2 to A1 just goes through one-way valve.
4 Flow from A2 to A1 just goes through one-way valve and fully-open main valve.
5 P2 to P1
6 P1 to T(Y) (the third flow route)

Unit dimensions

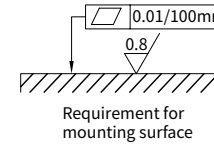
(Dimensions in mm)



1 Plate
2 Adjusting element "1"
3 Adjusting element "2"
4 Valve securing screw hole
5 Lock nut S=24
6 Socket adjusting screw S=10
7 O-ring 9.25×1.78(A, B, P, T)
8 Pressure gauge interface G1/4 or M14×1.5; in depth12, Hex wrench S=6



Size of the installed base



Requirement for mounting surface