

# Modular Pressure Reducing Valve

Model: ZDR6D...4X



- ◆ Size 6
- ◆ Maximum working pressure 210 bar
- ◆ Maximum working flow 50 L/min

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## Features

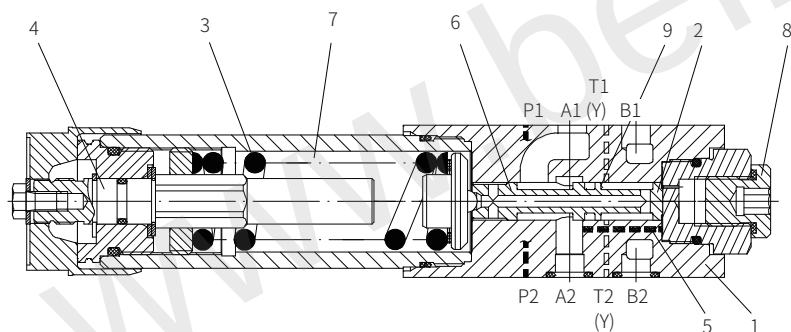
- Sandwich plate valve
- 2 kinds of pressure ranges
- 2 kinds of adjusting elements:
  - Rotary knob
  - Hexagon screw with sleeve and protective cap
- Pressure reducing in port A, B or P
- Check valve, optional

At rest, the valve is normally open, the fluid is flow freely from port A1 to port A2. The pressure in port A2 acts on the piston area opposite to the compression through the control channel (5). When the pressure at port A2 exceeds the set value of spring (3), the control spool (2) is moved to the control position, the pressure at port A2 remains stable. The signal and control oil are supplied internal from port A2 through the control channel (5).

The pressure gauge connection (8) is used for secondary pressure monitoring of the valve. In the version DA, the check valve can only be added to the oil port from A2 to A1 to ensure flow passage smoothly.

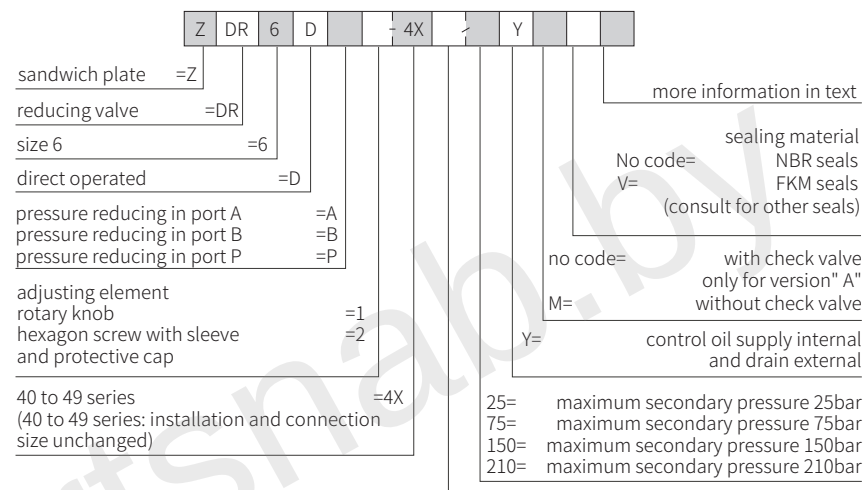
In model DP, the pressure is reduced in port P1, the signal and control oil are supplied internal from port P1.

In model DB, the pressure is reduced in port P1, but control oil is taken from port B. When the directional valve in position P to A, the pressure of port B must not exceed the set pressure. Otherwise, the pressure at port A will be decrease.



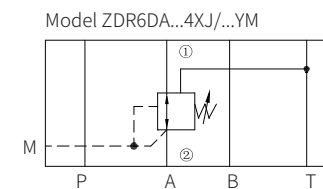
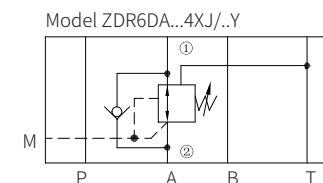
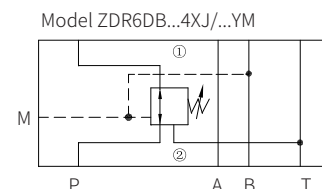
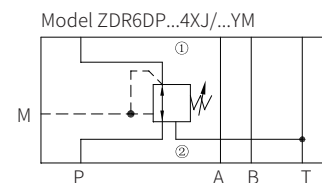
Model ZDR6DA1...4XJ/...YM

## Models and specifications



## Functional symbols

(①= Valve side, ②= Subplate side)



## Technical parameters

|                                   |                                                                                                                                                                                                                                                |                       |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Installation position             | optional                                                                                                                                                                                                                                       |                       |
| Environment temperature range     | -30 to +80(NBR seal)                                                                                                                                                                                                                           |                       |
|                                   | -20 to +80 (FKM seal)                                                                                                                                                                                                                          |                       |
| Weight                            | kg                                                                                                                                                                                                                                             | 1.2KG                 |
| Hydraulic                         |                                                                                                                                                                                                                                                |                       |
| Maximum working pressure          | bar                                                                                                                                                                                                                                            | 315                   |
| Maximum secondary pressure        | bar                                                                                                                                                                                                                                            | 25; 75; 150; 210      |
| Back pressure port T(Y)           | bar                                                                                                                                                                                                                                            | 160                   |
| maximum flow                      | L/min                                                                                                                                                                                                                                          | 50                    |
| Pressure medium                   | Mineral oil (HL, HLP) <sup>1)</sup> in accordance with DIN 51524; Fast living organisms degraded oil according to VDMA 24568; HETG (Rapeseed oil) <sup>1)</sup> ; HEPG(Polyethyleneglycol) <sup>2)</sup> ; HEES (Synthetic Fats) <sup>2)</sup> |                       |
| Pressure medium temperature range | °C                                                                                                                                                                                                                                             | -30 to +80(NBR seal)  |
|                                   |                                                                                                                                                                                                                                                | -20 to +80 (FKM seal) |
| Viscosity range                   | mm <sup>2</sup> /s                                                                                                                                                                                                                             | 10 to 800             |
| Cleanliness of oil <sup>3)</sup>  | The maximum allowable pollution level of oil is ISO4406 Class 20/18/15                                                                                                                                                                         |                       |

1) For NBR seal and FKM seal.

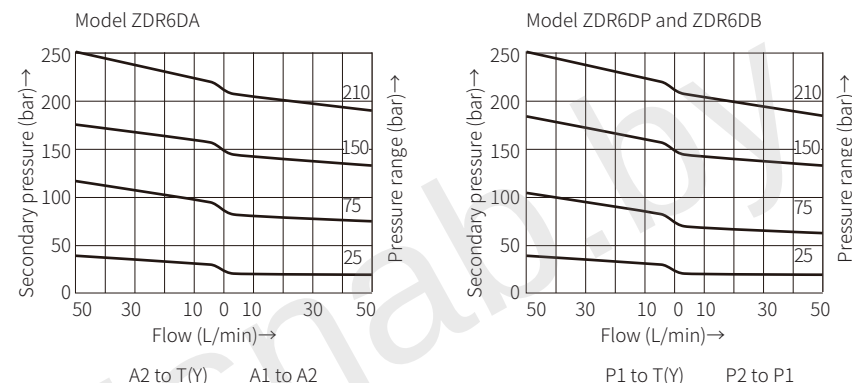
2) Only for FKM seal.

3) The oil must meet the cleanliness degree requested by the components in the hydraulic system.

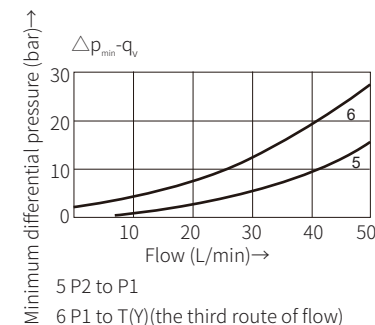
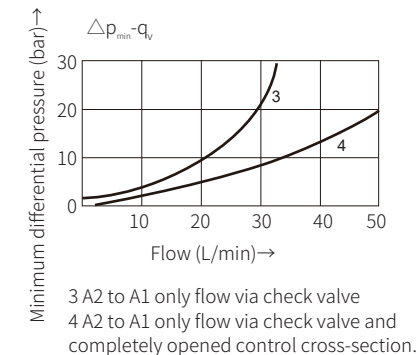
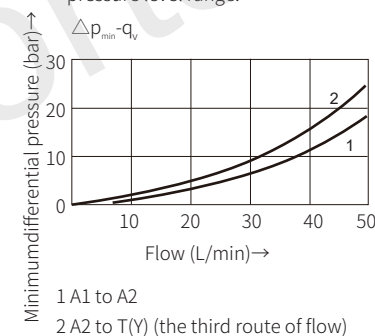
Effective oil filtration can prevent failure and increase the service life of the components.

## Characteristic curve

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

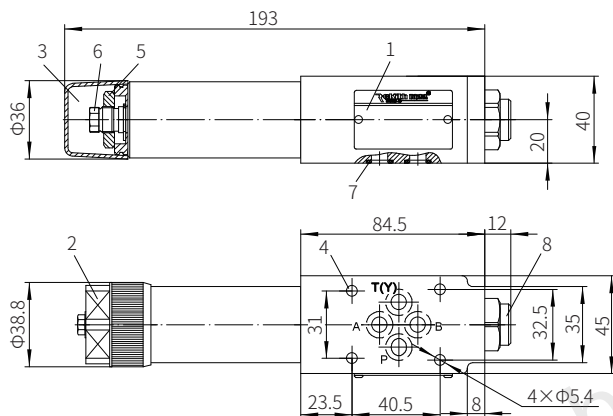


Note: When the set pressure is low, the characteristic curve remains within the corresponding pressure level range.

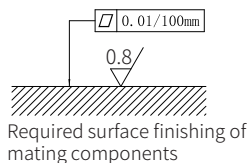
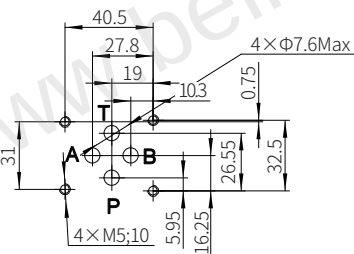
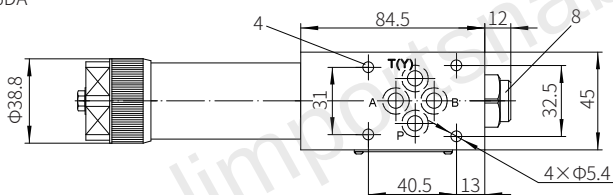


The characteristic curves apply to the pressure at the valve output pressure = 0 bar across the entire flow range.

Model ZDR6DP and ZDR6DB



Model ZDR6DA



- 1 Name plate
- 2 Adjustment unit "1"
- 3 Adjustment unit "2"
- 4 Valve fixing hole
- 5 Locknut S=24
- 6 Internal hexagon adjusting screw S=10
- 7 O ring 9.25X1.78(for port P, A, B, T)
- 8 Pressure gauge connection:  
G1/4 or M14x1.5, 12 deep

Valve fixing screw  
M5-10.9 grade GB/T70.1-2000  
Tightening torque  $M_A=7.8\text{Nm}$

It must be ordered separately if connection subplate is needed

Subplate model:

G341/01 (G1/4"); G341/02 (M14x1.5)  
G342/01 (G3/8"); G342/02 (M18x1.5)  
G502/01 (G1/2"); G502/02 (M22x1.5)