

ZDB6...type Modular Relief Valve

ZDB/ Z2DB 6..4XJ...type

Size 6

Max. Working Pressure: 315 bar

Max. Flow: 60 L/min



Contents

Function and configuration	02
Symbols	02
Specification	03
Technical data	03
Characteristic curves	03
Unit dimensions	04-05

Features

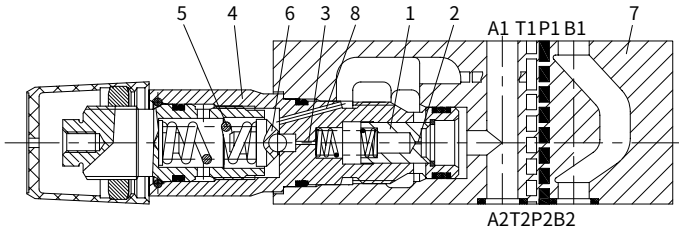
- Sandwich plate valve
- Porting pattern to DIN 24 340 form A and ISO 4401
- For threaded connection and sub-plate mounting
- 4 pressure ranges
- 5 circuit options
- 4 adjustment elements:
 - Rotary knob
 - Adjustable bolt with protective cap
 - Lockable rotary knob with scale
 - Rotary knob with scale

Function and configuration

ZDB and Z2DB type valve is pilot operated pressure relief valve and of sandwich plate design. It is used to limit the pressure in a hydraulic system. It consists of the valve housing (7), together with one or two pressure relief valve cartridges (4). The system pressure is set by the adjustment element(4).

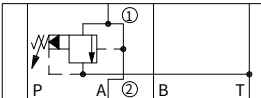
At static position, the valves are closed. Pressure in port A acts on the spool (1). Pressure fluid flows through orifice (2) to the spring loaded side of the spool (1) and through orifice (3) to the pilot poppet (6). If the pressure in port A rises beyond the value setting at spring (5), the pilot poppet (6) opens. Fluid can flow from the spring loaded side of spool (1), orifice (3), and channel (8) into port T. The pressure drop moves spool (1) to open the connection from A to T, while the setting pressure at spring (5) is maintained.

Pilot oil returns from the two spring chambers is taken externally via port T.

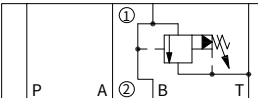


Symbols

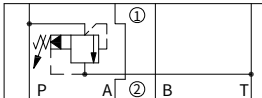
Type ZDB6VA...



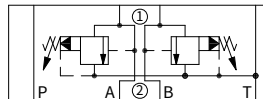
Type ZDB6VB...



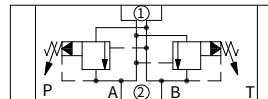
Type ZDB6VP...



Type ZDB6VC...



Type ZDB6VD...



- ① = valve side
- ② = sub-plate side

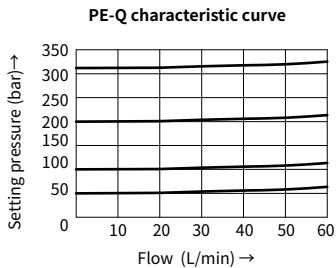
Specification

Z	DB	6	- 4XJ /	*
Sandwich plate = Z				Further details in clear text
Only applies to versions VC and VD: With 2 pressure relief valve cartridges =2				No code = NBR seals V = FKM seals
Pressure relief valve = DB				50 = Pressure adjustable up to 50bar 100 = Pressure adjustable up to 100bar 200 = Pressure adjustable up to 200bar 315 = Pressure adjustable up to 315bar
Nominal size 6 =6				4XJ = Series 40J to 49J (40J to 49J: unchanged installation and connection dimensions)
Relief function from → to:				
A → T				=VA
P → T				=VP
B → T				=VB
A → T and B → T				=VC
A → B and B → A				=VD
				1= Rotary knob 2= Adjustable bolt with protective cap 3= Lockable rotary knob with scale 7= Rotary knob with scale

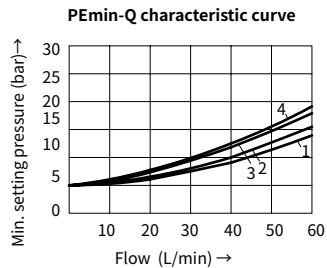
Technical data

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. operating pressure	bar	to 315
Max. adjustable pressure	bar	50;100;200;315
Max. flow-rate	L/min	60
Weight	Type ZDB6 kg Type Z2DB6 kg	Approx.1.2 Approx.1.9

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



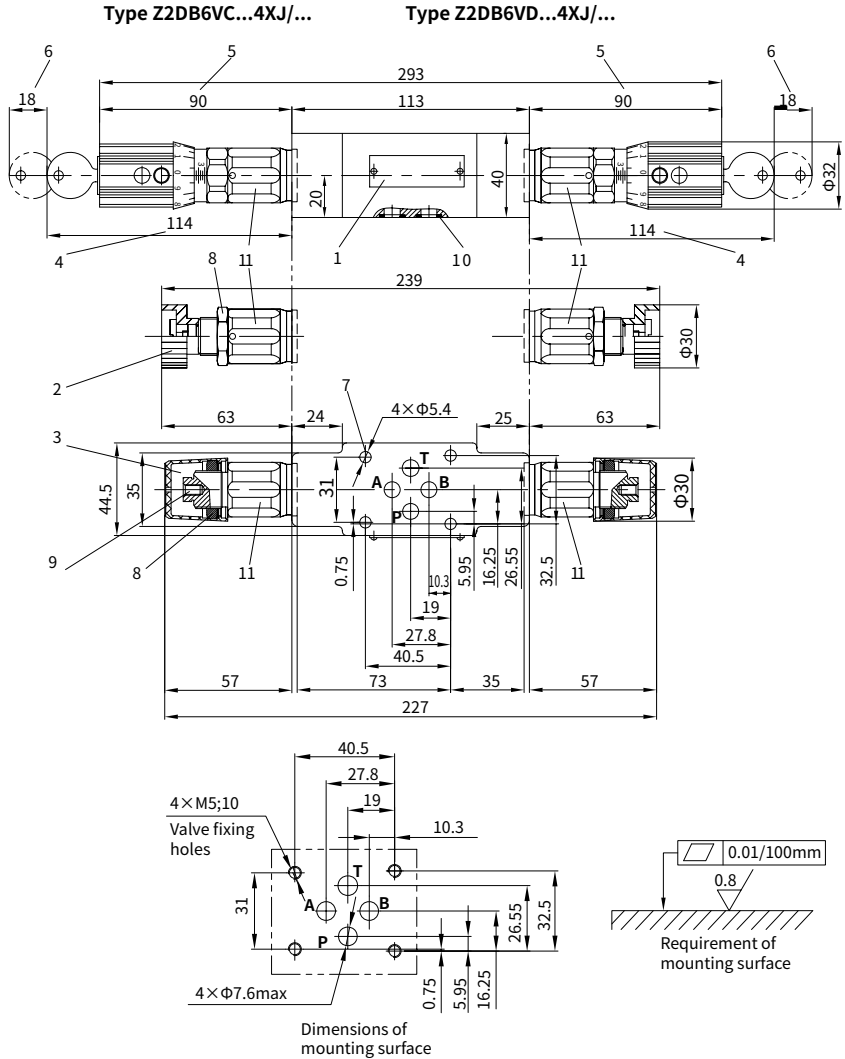
The curves are measured at zero back pressure.



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|---------------|----------------------|
| 1. VD(A to B) | 3. VB and VC |
| 2. VA | 4. VP and VD(B to A) |

Unit dimensions

(Dimensions



03

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|------------------------------------|--|
| 1 Nameplate | 7 Valve fixing holes |
| 2 Adjustment element "1" | 8 Lockable nut S=24 |
| 3 Adjustment element "2" | 9 External hexagon screw S=10 |
| 4 Adjustment element "3" | 10 O-ring 9.25×1.78((A2,B2,P2,T2) |
| 5 Adjustment element "7" | 11 External hexagon S=24, Tightening torque $M_A=50\text{ Nm}$ |
| 6 Space required to remove the key | |