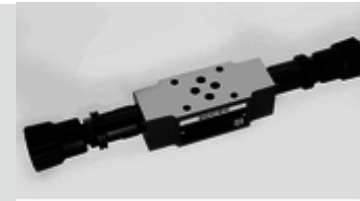
ZDB6...type Modular Relief Valve



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

Size 6
Max. Working Pressure: 315 bar
Max. Flow: 60 L/min

Contents

Features

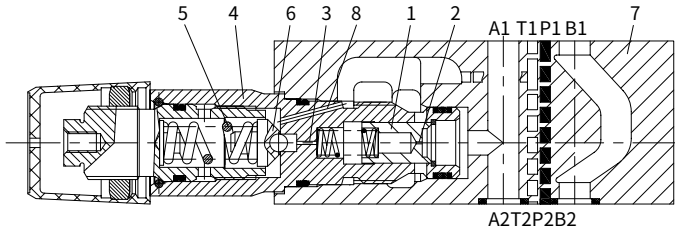
- Sandwich plate valve
- Porting pattern to DIN 24 340 form A and ISO 4401
- For threaded connection and sub-plate mounting
- 4 pressure ranges
- 5 circuit options
- 4 adjustment elements:
  - Rotary knob
  - Adjustable bolt with protective cap
  - Lockable rotary knob with scale
  - Rotary knob with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

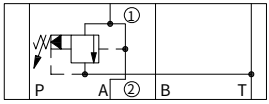
At static position, the valves are closed. Pressure in port A acts on the spool (1). Pressure fluid flows through orifice (2) to the spring loaded side of the spool (1) and through orifice (3) to the pilot poppet (6). If the pressure in port A rises beyond the value setting at spring (5), the pilot poppet (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.

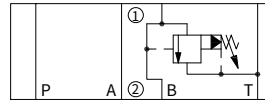


Symbols

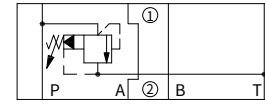
Type ZDB6VA...



Type ZDB6VB...



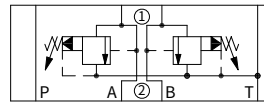
Type ZDB6VP...



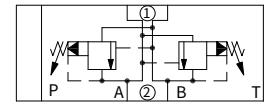
① =valve side

② = sub-plate side

Type ZDB6VC...



Type ZDB6VD...



Specification

Z | | DB | 6 | | – 4XJ / | | *

Sandwich plate = Z

Only applies to versions VC and VD:
With 2 pressure
relief valve cartridges =2

Pressure relief valve = DB

Nominal size 6 =6

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

Further details in clear text

No code = NBR seals
V = FKM seals

50 = Pressure adjustable up to 50bar
100 = Pressure adjustable up to 100bar
200 = Pressure adjustable up to 200bar
315 = Pressure adjustable up to 315bar

4XJ = Series 40J to 49J
(40J to 49J: unchanged installation and connection dimensions)

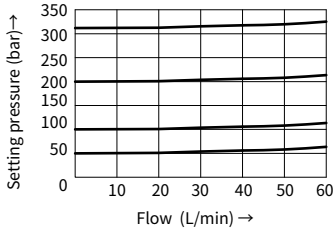
1= Rotary knob
2= Adjustable bolt with protective cap
3= Lockable rotary knob with scale
7= Rotary knob with scale

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	Approx.1.2
	Type Z2DB6	kg	Approx.1.9

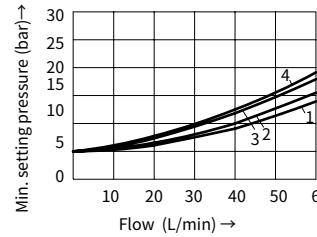
Characteristic curves (Measured at t=40°C ±5°C , using HLP46)

PE-Q characteristic curve



The curves are measured at zero back pressure.

PEmin-Q characteristic curve

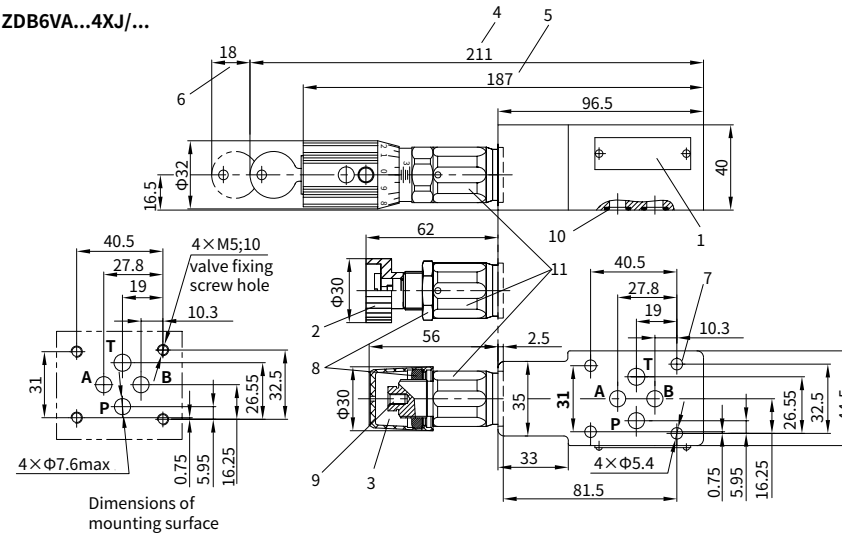


1. VD(A to B)
2. VA
3. VB and VC
4. VP and VD(B to A)

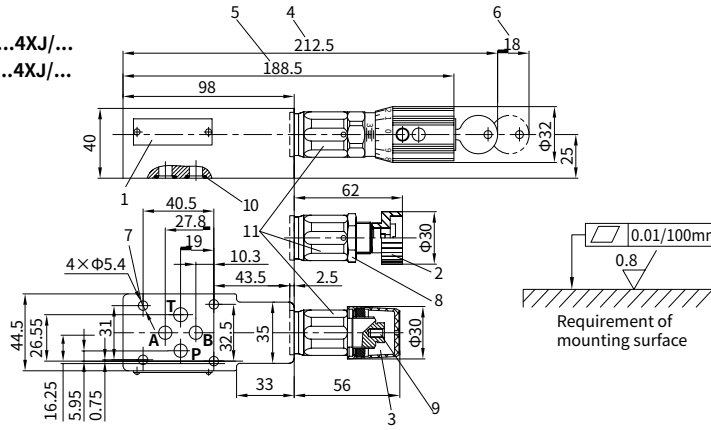
Unit dimensions

(Dimensions in mm)

Type ZDB6VA...4XJ/...



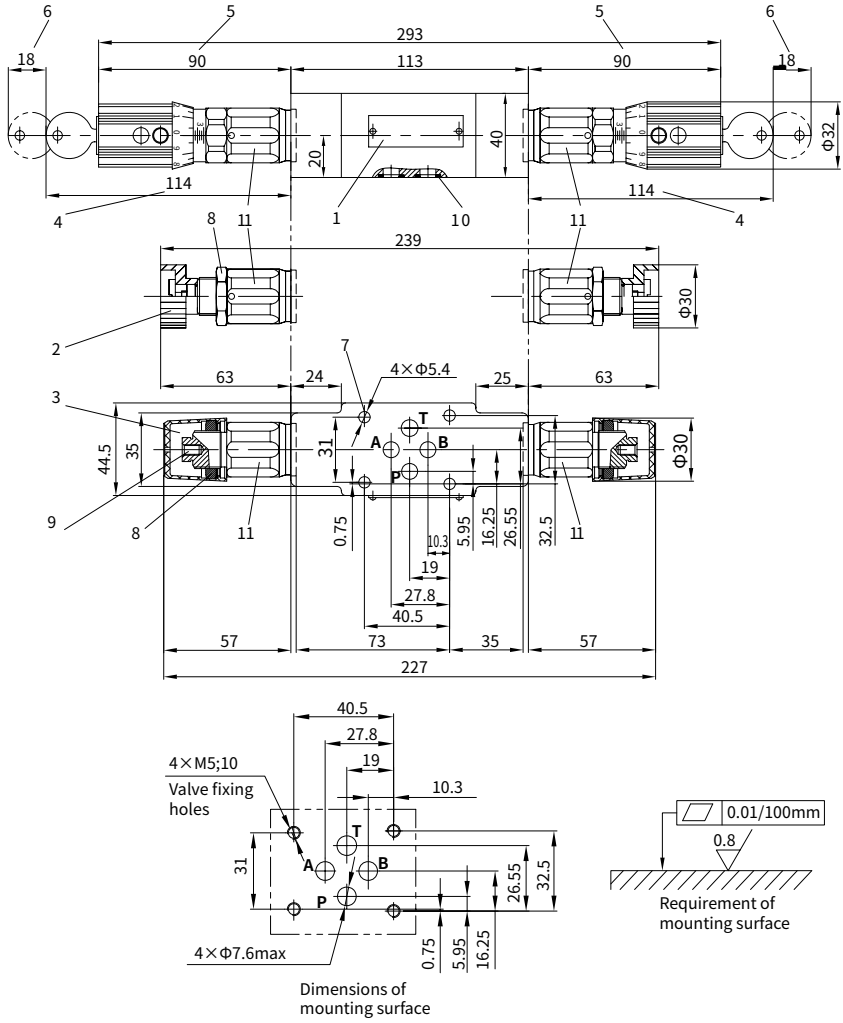
Type ZDB6VB...4XJ/...
Type ZDB6VP...4XJ/...



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

Unit dimensions (Dimensions

Type Z2DB6VC...4XJ/... **Type Z2DB6VD...4XJ/...**



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