

AH-ZDB6...type Modular Relief Valve

AH-ZDB/ Z2DB 6..40S...type



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

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Features

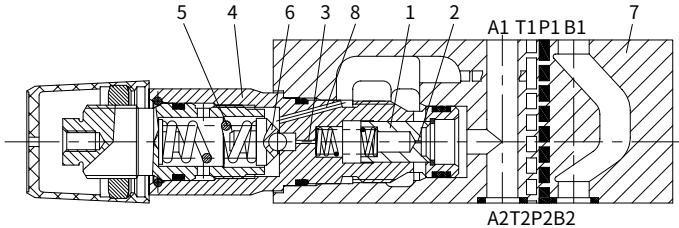
- Sandwich plate valve
- Porting pattern to DIN 24 340 form A and ISO 4401
- For threaded connection and sub-plate mounting
- 4 pressure ranges
- 5 circuit options
- 4 adjustment elements:
 - Rotary knob
 - Adjustable bolt with protective cap
 - Lockable rotary knob with scale
 - Rotary knob with scale

Function and configuration

AH-ZDB and AH-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).

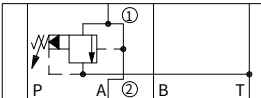
At static position, the valves are closed. Pressure in port A acts on the spool (1). Pressure fluid flows through orifice (2) to the spring loaded side of the spool (1) and through orifice (3) to the pilot poppet (6). If the pressure in port A rises beyond the value setting at spring (5), the pilot poppet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

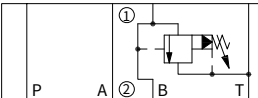


Symbols

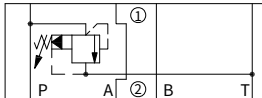
Type AH-ZDB6VA...



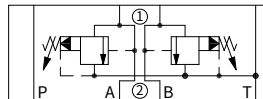
Type AH-ZDB6VB...



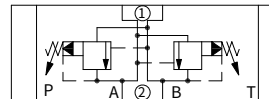
Type AH-ZDB6VP...



Type AH-ZDB6VC...

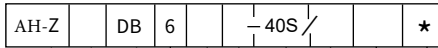


Type AH-ZDB6VD...



- ① = valve side
- ② = sub-plate side

Specification



Sandwich plate = AH-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

40S = Series 40S to 49S
(40S to 49S: unchanged installation and connection dimensions)

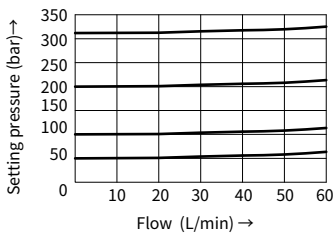
- 1= Rotary knob
- 2= Adjustable bolt with protective cap
- 3= Lockable rotary knob with scale
- 7= Rotary knob with scale

Technical data

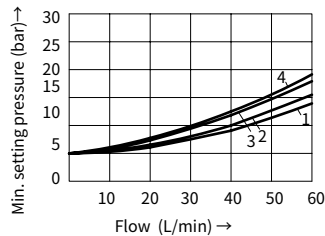
Fluid		Mineral oil suitable for NBR and FKM seal Phosphate ester for FKM seal
Fluid temperature range	°C	-30 to +80 (NBR seal) -20 to +80 (FKM seal)
Viscosity range	mm ² /s	10 to 800
Degree of contamination		Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15 , ISO4406
Max.operating pressure	bar	to 315
Max.adjustable pressure	bar	50;100;200;315
Max. flow-rate	L/min	60
Weight	Type AH-ZDB6	kg
	Type AH-Z2DB6	kg
		Approx.1.2
		Approx.1.9

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

PE-Q characteristic curve



PEmin-Q characteristic curve



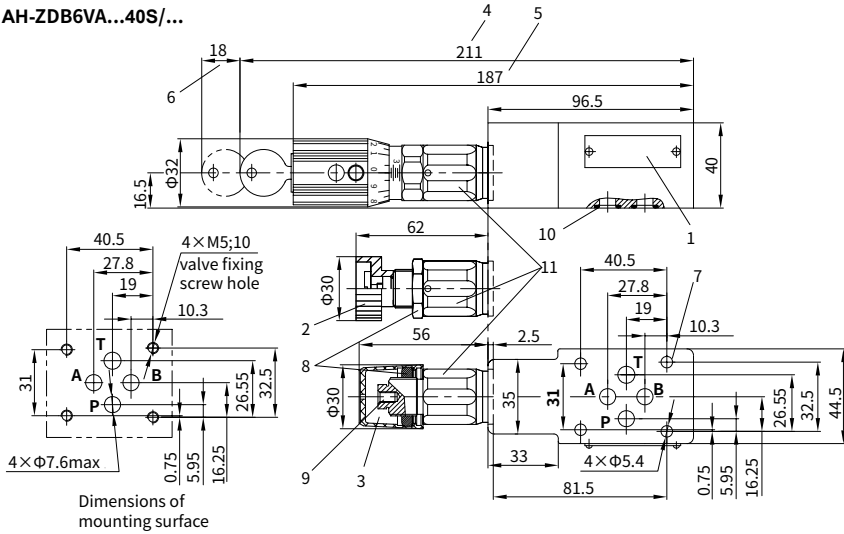
The curves are measured at zero back pressure.

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

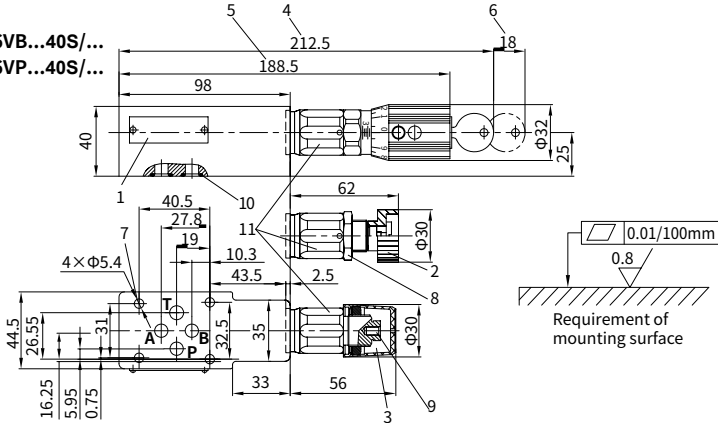
Unit dimensions

(Dimensions in mm)

Type AH-ZDB6VA...40S/...



Type AH-ZDB6VB...40S/... Type AH-ZDB6VP...40S/...



- 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

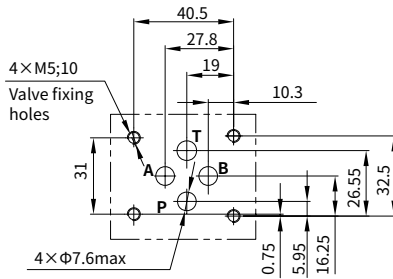
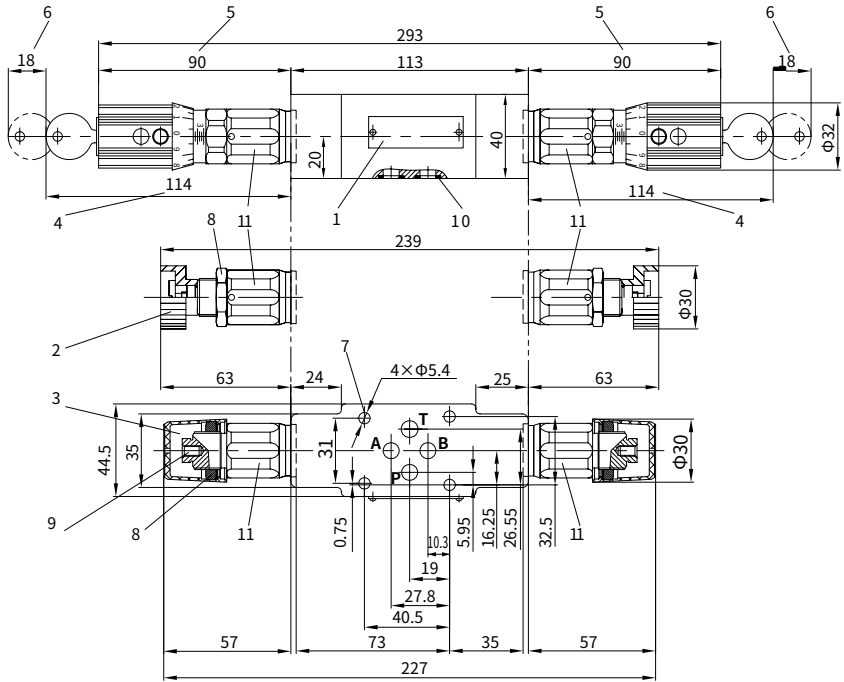
- 7 Valve fixing holes
 - 8 Nut for locking S=24
 - 9 External hexagon screw S=10
 - 10 O-ring 9.25 \times 1.78(A2,B2,P2,T2)
 - 11 External hexagon S=24
- Tightening torque $M_A = 50$ Nm

Unit dimensions

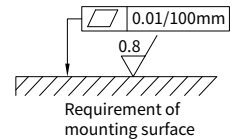
(Dimensions

Type AH-Z2DB6VC...40S/...

Type AH-Z2DB6VD...40S/...



Dimensions of mounting surface



- | | |
|------------------------------------|---|
| 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 $M_A=50$ Nm |
| 6 Space required to remove the key | |