

AH-ZDB type... Modular Relief Valve

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



Sizes 16, 22
Max. Working Pressure: 315 bar
Max. Flow: 250 L/min

Contents

Function and configuration	02
Symbols	02
Specification	03
Technical data	03
Characteristic curves	03
Unit dimensions	04-09

Features

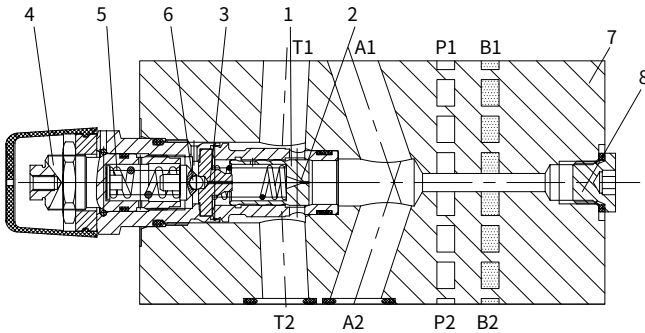
- Sandwich plate valve
- Porting pattern to DIN 24 340 form A and ISO4401
- For threaded connection, and sub-plate mounting
- 4 pressure ratings
- 5 circuit options
- With one or two pressure relief cartridges
- 1 adjustment elements:
 - Adjustable bolt with protective cap

Function and configuration

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

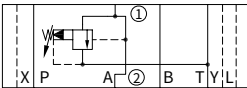
In zero position, the valves are closed. Pressure in port A acts on the spool (1). Pressure fluid flows through orifice (2) to the spring loaded side of the spool (1) and through orifice (3) to the pilot poppet (6). If the pressure in port A rises beyond the value setting at spring (5), the pilot poppet (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 via port T externally. Pressure tapping (8) can measure the pressure.

Type AH-ZDB16VA2-40S/...

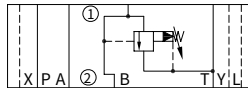


Symbols

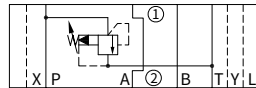
Type AH-ZDB..VA..



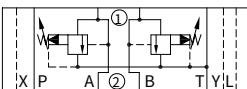
Type AH-ZDB..VB..



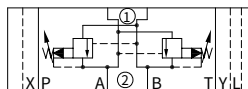
Type AH-ZDB..VP..



Type AH-Z2DB..VC..



Type AH-Z2DB..VD..



① = valve side ② = sub-plate side

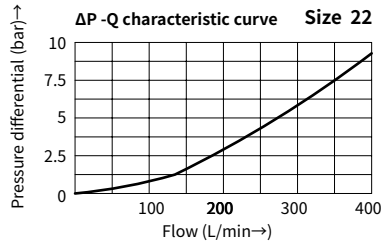
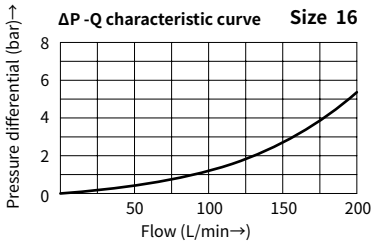
Specification

AH-Z		DB		- 40S /		*	
Sandwich plate = AH-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 16 = 16 Nominal size 22 = 22		40S = Series 40S to 49S (40S to 49S: 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		Regulation form: 2= Adjustable bolt with protective cap					

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	
Size		16	22
Max. flow-rate	L/min	200	400
Weight	Type ZDB	kg	Approx.9.4
	Type Z2DB	kg	Approx.11.8
			Approx.10.3

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

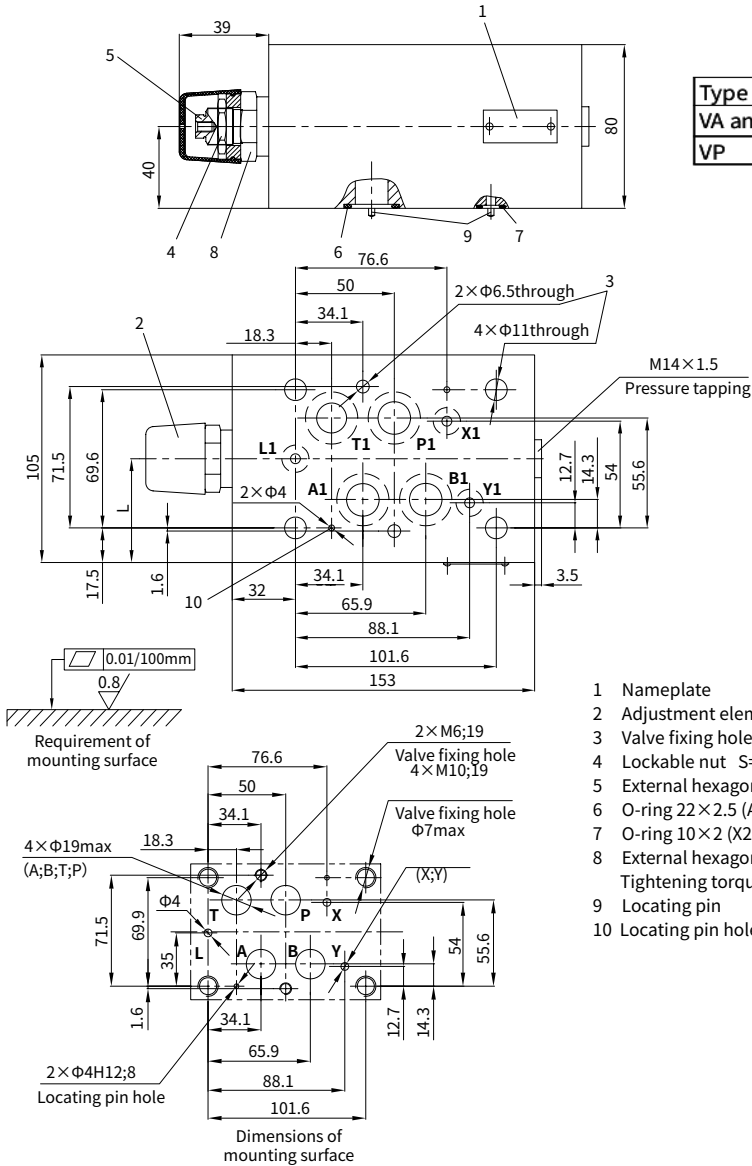


Unit dimensions

(Dimensions in mm)

Type AH-ZDB16VA...40S.. Type AH-ZDB16VB...40S/.. Type AH-ZDB16VP...40S/..

Type	L
VA and VB	52.5
VP	61.5

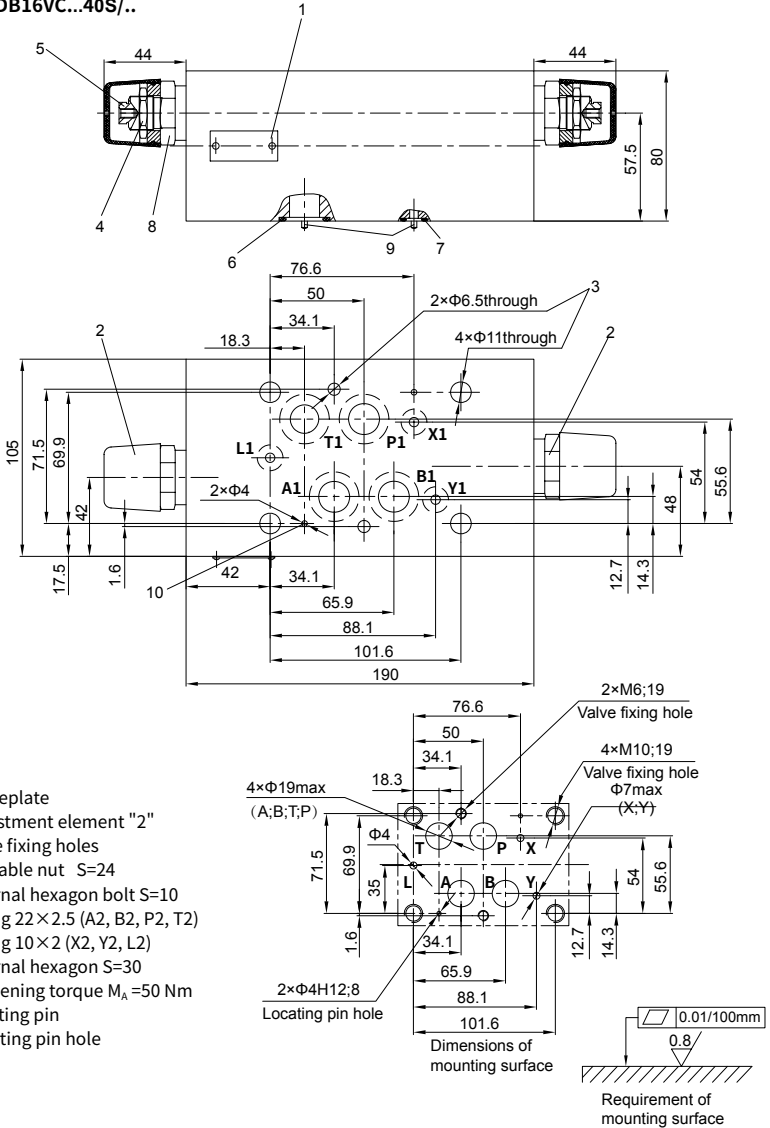


- 1 Nameplate
- 2 Adjustment element "2"
- 3 Valve fixing holes
- 4 Lockable nut S=24
- 5 External hexagon screw S=10
- 6 O-ring 22×2.5 (A2, B2, P2, T2)
- 7 O-ring 10×2 (X2, Y2, L2)
- 8 External hexagon S=30
Tightening torque $M_t=50$ Nm
- 9 Locating pin
- 10 Locating pin hole

Unit dimensions

(Dimensions in mm)

Type AH-Z2DB16VC...40S/..

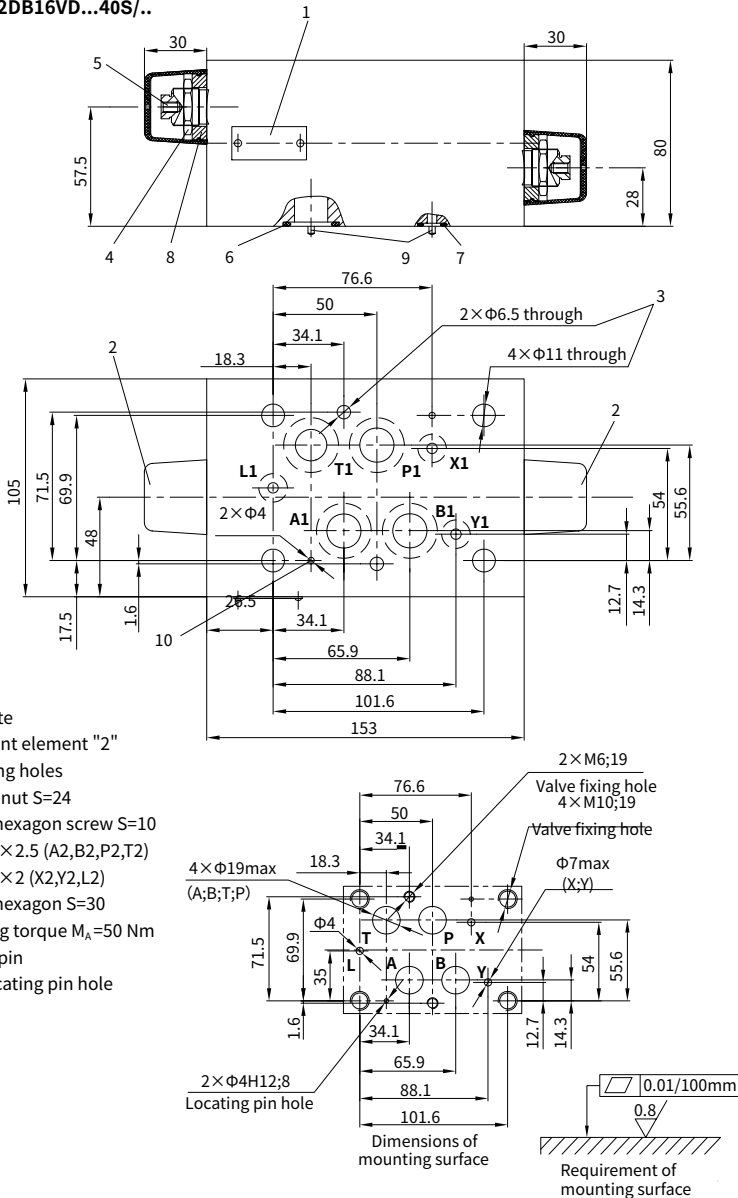


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- 8 External hexagon S=30
Tightening torque $M_A = 50 \text{ Nm}$
- 9 Locating pin
- 10 Locating pin hole

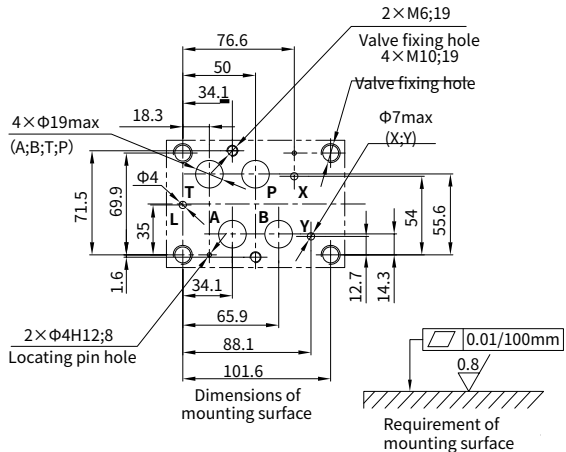
Unit dimensions

(Dimensions in mm)

Type AH-Z2DB16VD...40S/..



- 1 Nameplate
- 2 Adjustment element "2"
- 3 Valve fixing holes
- 4 Lockable nut S=24
- 5 External hexagon screw S=10
- 6 O-ring 22×2.5 (A2,B2,P2,T2)
- 7 O-ring 10×2 (X2,Y2,L2)
- 8 External hexagon S=30
Tightening torque $M_A=50$ Nm
- 9 Locating pin
- 10 Space locating pin hole



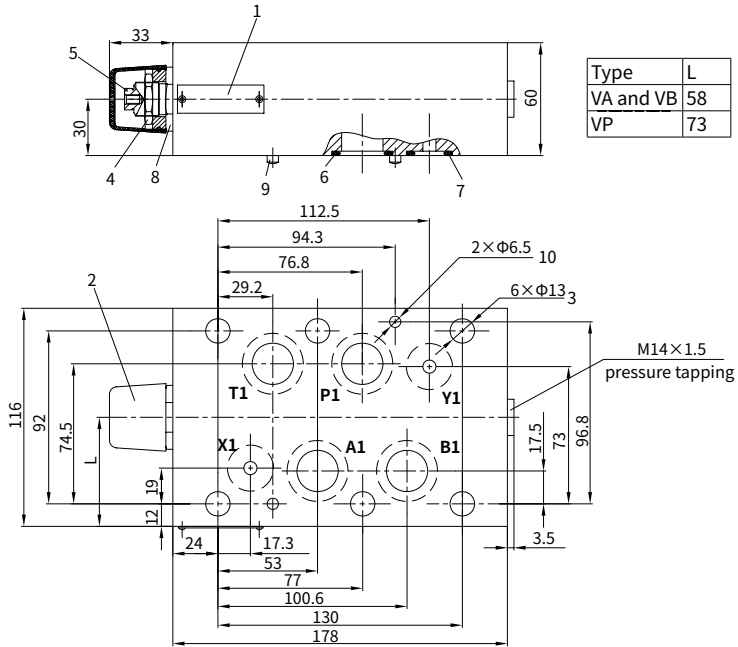
Unit dimensions

(Dimensions in mm)

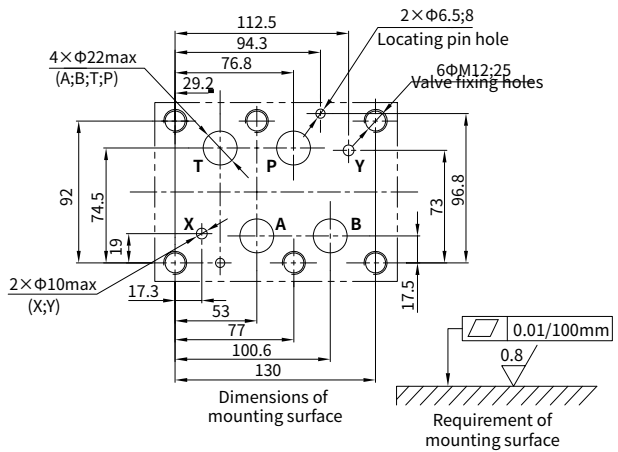
Type AH-ZDB22VA...40S/..

Type AH-ZDB22VB...40S/..

Type AH-ZDB22VP...40S/..



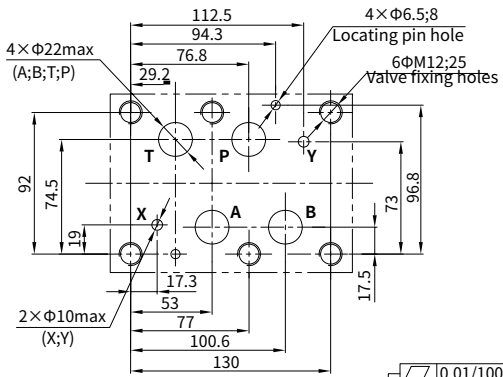
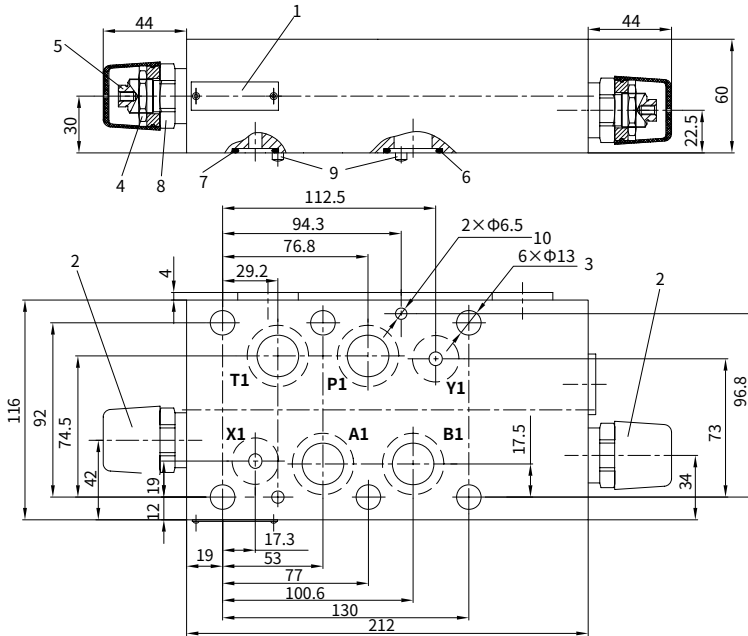
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- 5 External hexagon screw S=10
- 6 O-ring 27×3 (A2,B2,P2,T2)
- 7 O-ring 19×3 (X2,Y2,L2)
- 8 External hexagon S=30
Tightening torque $M_A = 50\text{Nm}$
- 9 Locating pin
- 10 Locating pin hole



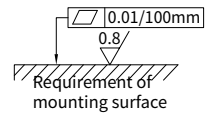
Unit dimensions

(Dimensions in mm)

Type AH-Z2DB22VC...40S/..



Dimensions of mounting surface

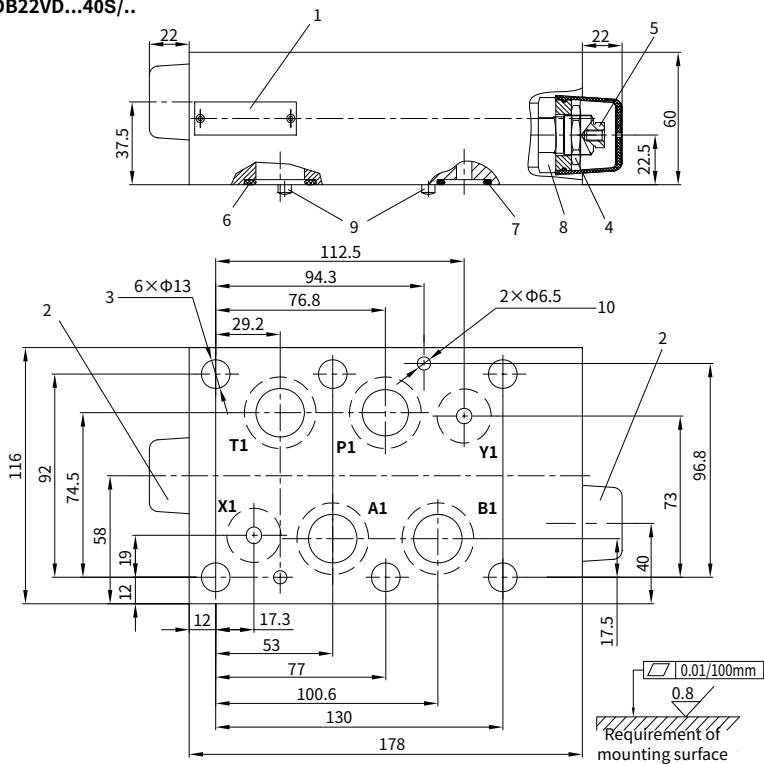


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Unit dimensions

(Dimensions in mm)

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