RE 25 764/12.02

Replaces: 12.95

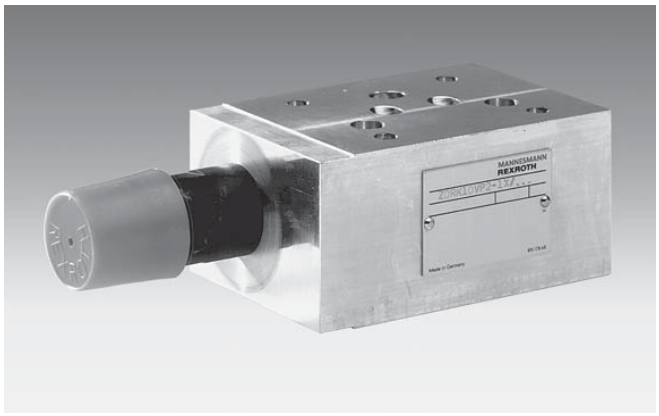
Pressure relief valve, pilot operated Types ZDBK 10 and Z2DBK 10

Nominal size 10

Series 1X

Maximum operating pressure 210 bar

Maximum flow 80 L/min



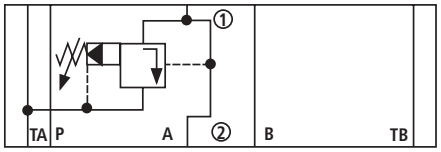
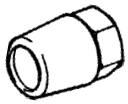
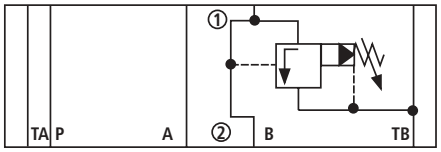
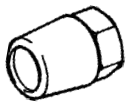
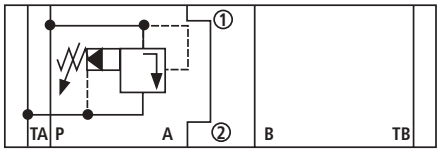
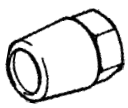
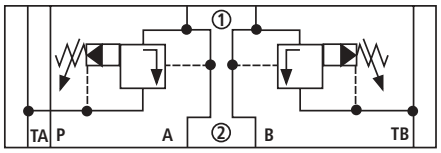
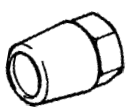
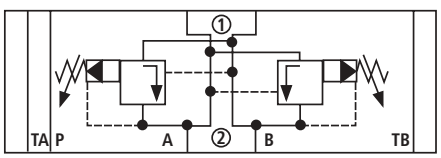
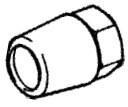
H/A 4080/94•

Type ZDBK 10 VP2–1X/…V

Features

- Sandwich plate valve
- Porting pattern to DIN 24 340 Form A, ISO 4401 and CETOP–RP 121 H
- 3 pressure stages
- 5 circuits, optional
- With 1 or 2 pressure valve cartridges
- Adjustment element: Sleeve with hexagon and protective cap

Ordering details, symbols (① = component side, ② = subplate side)

Symbol	Pressure relief	Settable pressure in bar	Adjustment element	Material No.	Type description
	A → T	50		R900564523	ZDBK 10 VA2-1X/50V
		100		R900564524	ZDBK 10 VA2-1X/100V
		210		R900564525	ZDBK 10 VA2-1X/210V
	B → T	50		R900564526	ZDBK 10 VB2-1X/50V
		100		R900564527	ZDBK 10 VB2-1X/100V
		210		R900564528	ZDBK 10 VB2-1X/210V
	P → T	50		R900564529	ZDBK 10 VP2-1X/50V
		100		R900501052	ZDBK 10 VP2-1X/100V
		210		R900564530	ZDBK 10 VP2-1X/210V
	A → T and B → T	50		R900564531	Z2DBK 10 VC2-1X/50V
		100		R900564532	Z2DBK 10 VC2-1X/100V
		210		R900564533	Z2DBK 10 VC2-1X/210V
	A → B and B → A	50		R900564534	Z2DBK 10 VD2-1X/50V
		100		R900564535	Z2DBK 10 VD2-1X/100V
		210		R900564536	Z2DBK 10 VD2-1X/210V

Function, section

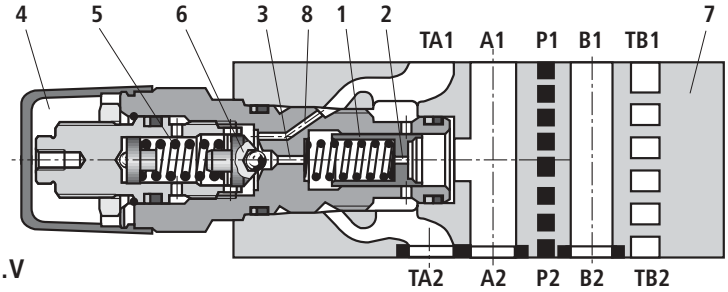
ZDBK and Z2DBK pressure relief valves are pilot operated pressure relief valves of sandwich plate design.

They are used to limit the pressure in a hydraulic system.

The valves mainly comprises of a housing (7) and one or two pressure relief cartridges. The pressure in the hydraulic system is set via the adjustment element (4).

At rest the valves are closed. The pressure in channel A is applied to the spool (1). At the same time the pressure is applied via the orifice (2) on the spring loaded side of the spool (1) and via the orifice (3) on the pilot poppet (6). If the pressure in channel A rises above the value set at the spring (5), then the pilot poppet (6) opens. Pressure fluid flows from the spring loaded side of the spool (1), orifice (3) and bore (8) into channel T. The resulting pressure drop moves the spool (1) and thus opens the connection A to T, while maintaining the pressure set at the spring (5).

The pilot oil return from both spring chanmbers is externally via channel T.



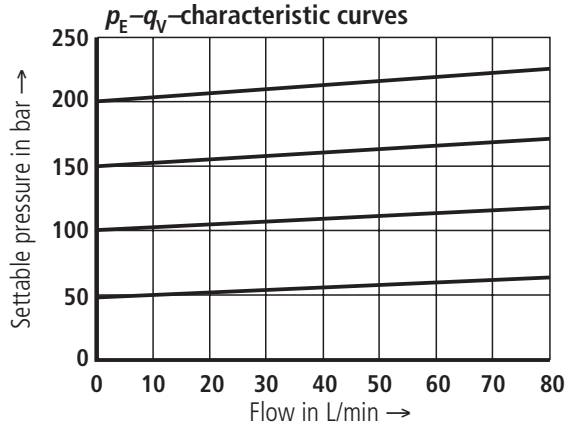
Type ZDBK 10 VA2-1X/…V

Technical data (for applications outside these parameters, please consult us!)

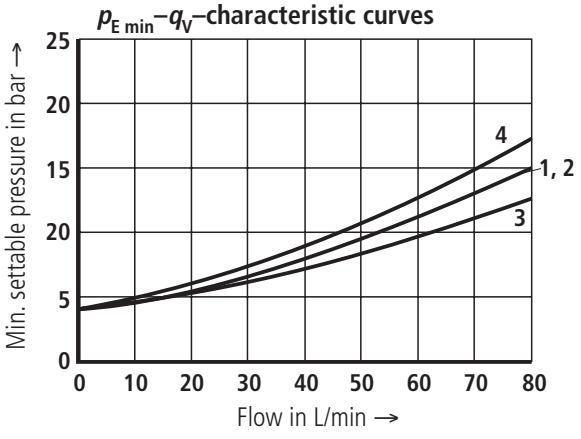
Pressure fluid			Mineral oil (HL, HLP) to DIN 51 524; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil); HEPG (polyglycols); ' HEES (synthetic ester); Other pressure fluids on request
Pressure fluid temperature range		°C	–20 to +80
Viscosity range		mm^2/s	10 to 800
Cleanliness class to ISO code			Maximum permissible degree of contamination of the pressure fluid is to ISO 4406 (C) class 20/18/15 [1)]
Maximum operating pressure		bar	210
Maximum settable pressure		bar	50; 100; 210
Maximum flow		L/min	80
Ambient temperature range		°C	–20 to +80
Weight	Type ZDBK 10…	kg	Approx. 1.3
	Type Z2DBK 10 VC…	kg	Approx. 1.5
	Type Z2DBK 10 VD…	kg	Approx. 2.7

[3)] The cleanliness class stated for the components must be adhered too in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increaes the component service life.
For the selection of filters see catalogue sheets RE 50 070, RE 50 076 and RE 50 081.

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C)

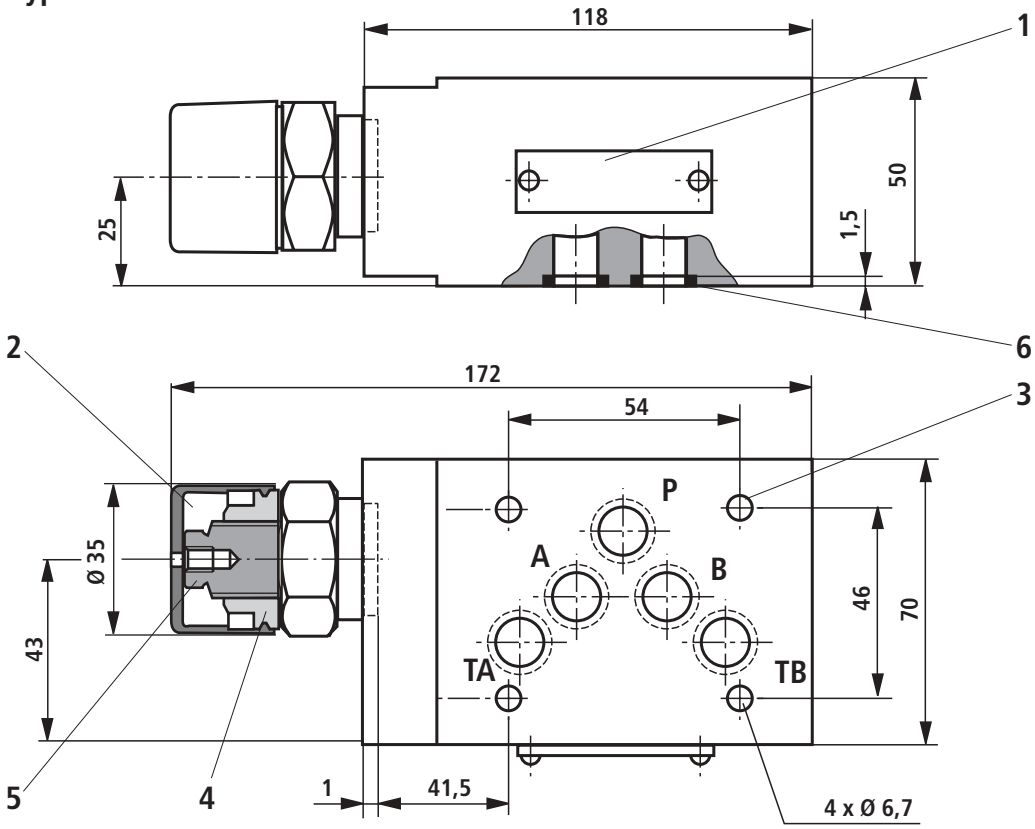


The characteristic curves are valid for an output pressure = zero in the complete flow range!

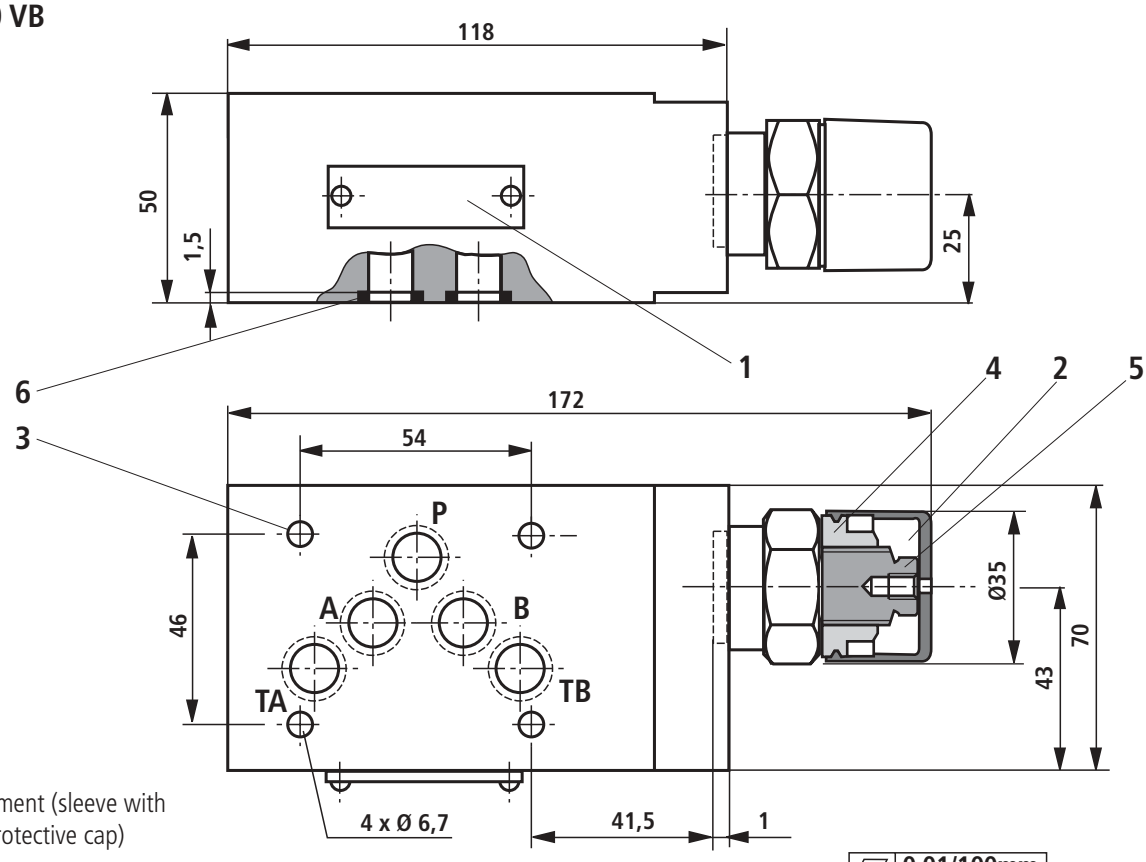


1 VP
2 VA, VB, VC
3 VD (A to B)
4 VD (B to A)

Types ZDBK 10 VA and ZDBK 10 VP



Type ZDBK 10 VB



1 Name plate

2 Adjustment element (sleeve with hexagon and protective cap)

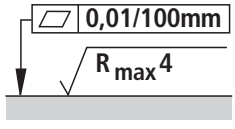
3 Valve fixing holes

4 Locknut 24A/F

5 Hexagon 10A/F

6 Identical seal rings for ports A2, B2, P2, TA2, TB2

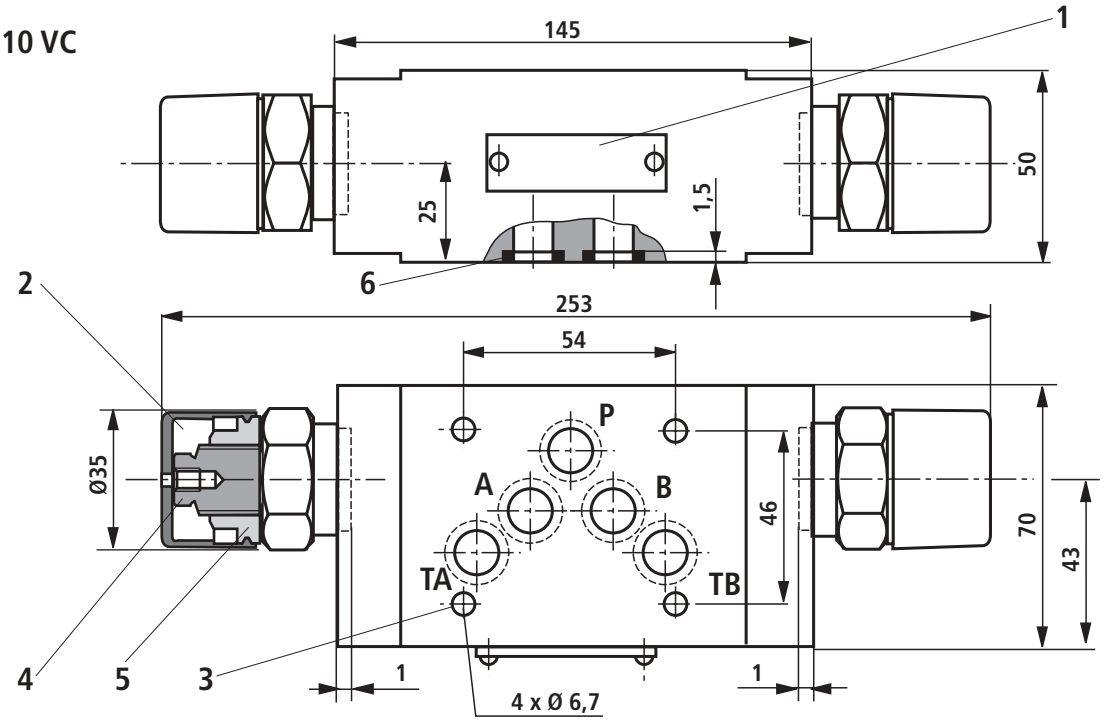
Valve fixing screws
M6 DIN 912-10.9,
tightening torque M_A = 15.5 Nm,
must be ordered separately.



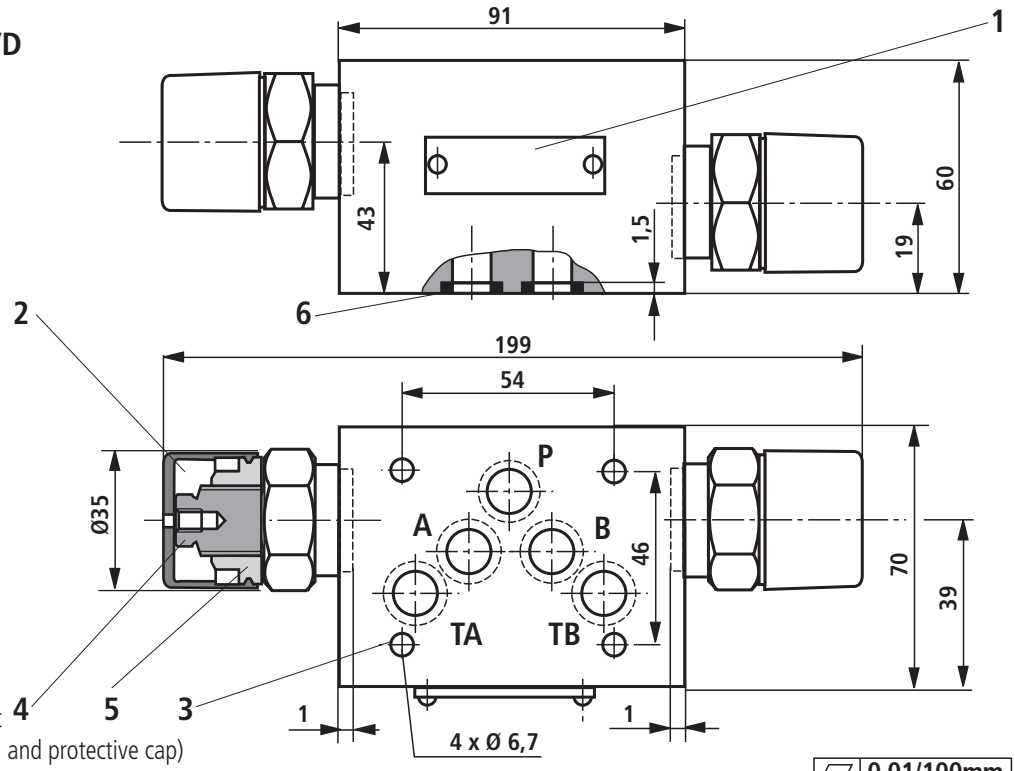
Required surface finish of the mating piece

Unit dimensions: versions VC and VD (dimensions in mm)

Type Z2DBK 10 VC



Type Z2DBK 10 VD



1 Name plate

2 Adjustment element (sleeve with hexagon and protective cap)

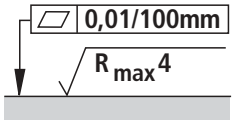
3 Valve fixing holes

4 Locknut 24A/F

5 Hexagon 10A/F

6 Identical seal rings for ports A2, B2, P2, TA2, TB2

Valve fixing screws
M6 DIN 912-10.9,
tightening torque M_A = 15.5 Nm,
must be ordered separately.



Required surface finish of the mating piece

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