

RE 25 754/02.03

Replaces: 01.02

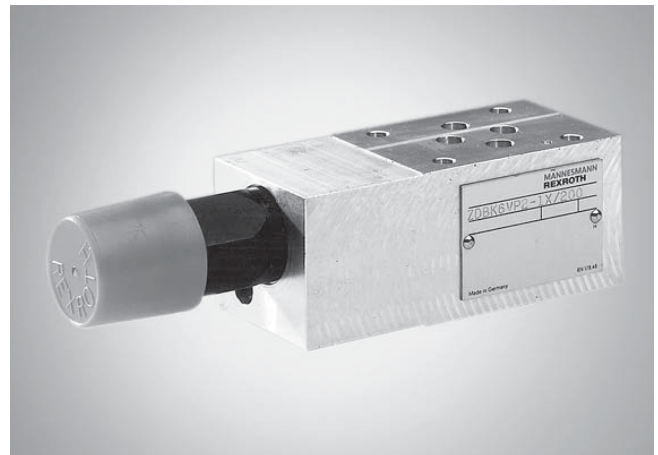
**Pressure relief valve,
pilot operated,
Types ZDBK 6 and Z2DBK 6**

Nominal size 6

Series 1X

Maximum operating pressure 210 bar

Maximum flow 40 L/min



H/A 4084/94

Type ZDBK 6 VP2-1X/...V

Features

- Sandwich plate valve
- Porting pattern ISO 4401 and CETOP-RP 121 H, **with** locating pin hole
- 3 pressure stages
- 5 effective directions, optional
- With 1 or 2 pressure valve cartridges
- Adjustment element: Sleeve with hexagon and protective cap

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

Symbol	Pressure relief	Set pressure in bar	Adjustment element	Material No.	Type description
	A → T	50 100 210		R900564557 R900501402 R900564558	ZDBK 6 VA2-1X/50V ZDBK 6 VA2-1X/100V ZDBK 6 VA2-1X/210V
	B → T	50 100 210		R900564559 R900564560 R900564561	ZDBK 6 VB2-1X/50V ZDBK 6 VB2-1X/100V ZDBK 6 VB2-1X/210V
	P → T	50 100 210		R900564562 R900564563 R900564564	ZDBK 6 VP2-1X/50V ZDBK 6 VP2-1X/100V ZDBK 6 VP2-1X/210V
	A → T and B → T	50 100 210		R900565005 R900565006 R900565007	Z2DBK 6 VC2-1X/50V Z2DBK 6 VC2-1X/100V Z2DBK 6 VC2-1X/210V
	A → B and B → A	50 100 210		R900565002 R900565003 R900564570	Z2DBK 6 VD2-1X/50V Z2DBK 6 VD2-1X/100V Z2DBK 6 VD2-1X/210V



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Function, section

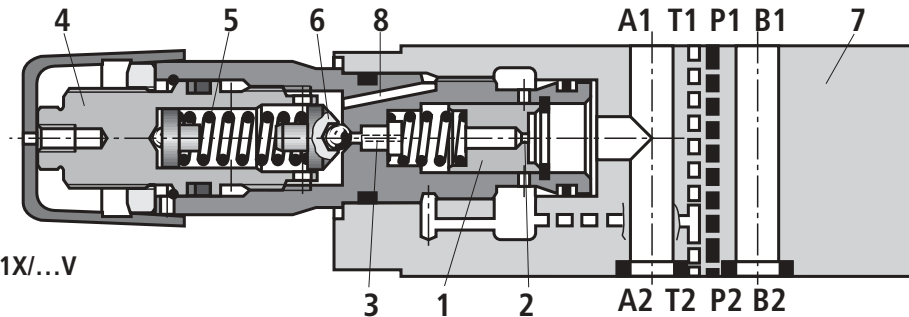
ZDBK and Z2DBK pressure relief valves are pilot operated pressure relief valves of sandwich plate design. They are used to limit a system pressure.

The valves basically consist of a housing (7) and one or two pressure valve cartridges. The system pressure is set via the adjustment element (4).

At rest the valves are closed. The pressure in port A acts on the spool (1). At the same time the pressure is applied via the orifice (2), onto

the spring loaded side of the spool (1) and via orifice (3) onto the pilot poppet (6). If the pressure in port 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 port 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 chambers is externally via port T.



Type ZDBK 6 VA2-1X/...V

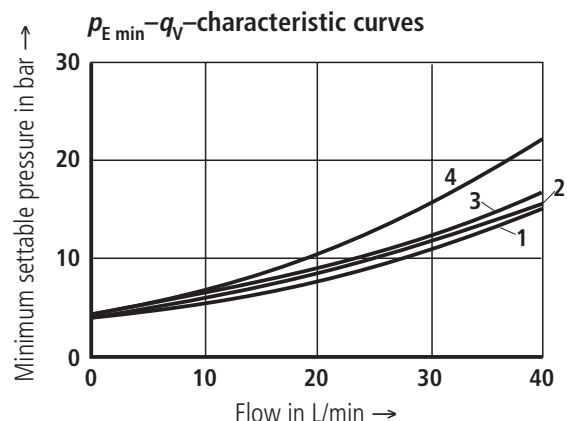
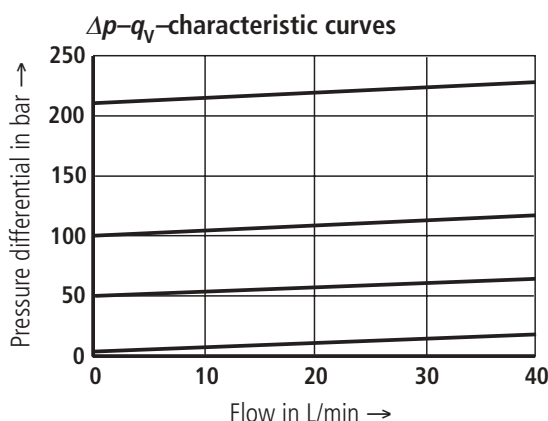
Technical data (for applications outside these parameters, please consult us!)

Maximum operating pressure		bar	210
Maximum settable pressure		bar	50; 100; 210
Maximum flow		L/min	40
Pressure fluid		Mineral oil (HL, HLP) to DIN 51 524; Fast bio-degradable pressure fluids to VDMA 24 568 (see also RE 90 221); HETG (rape seed oil); HEPG (polyglycol); ¹ 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⁾	
Weight	Type ZDBK 6...	kg	Approx. 0.6
	Type Z2DBK 6 VC...	kg	Approx. 0.8
	Type Z2DBK 6 VD...	kg	Approx. 1.4

¹⁾ 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 increases 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, $\vartheta_{oil} = 40\text{ °C} \pm 5\text{ °C}$)

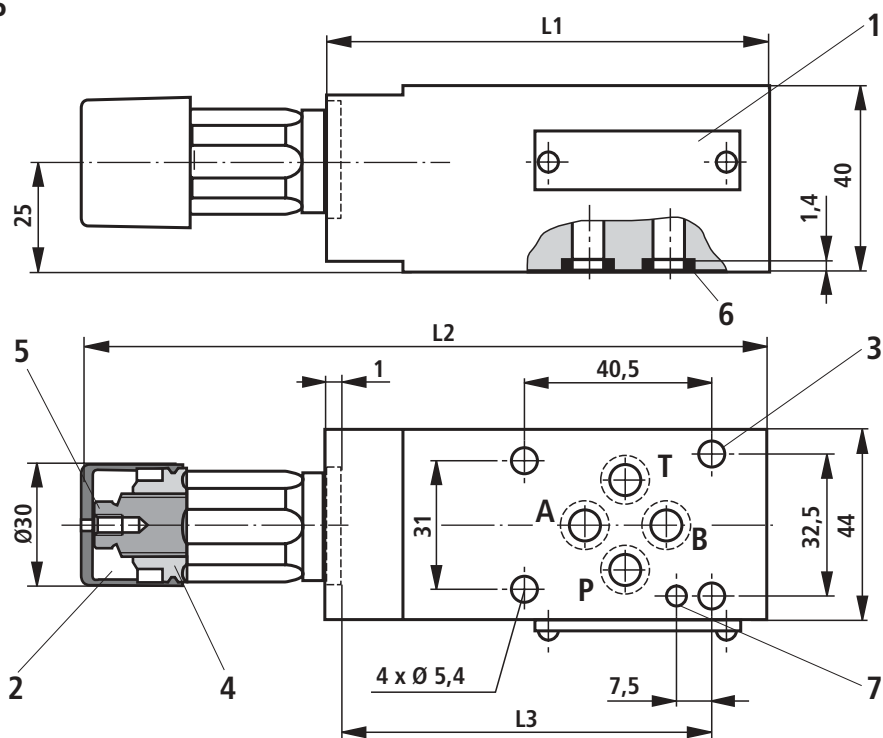


The characteristic curves are valid for output pressure = zero over the complete flow range!

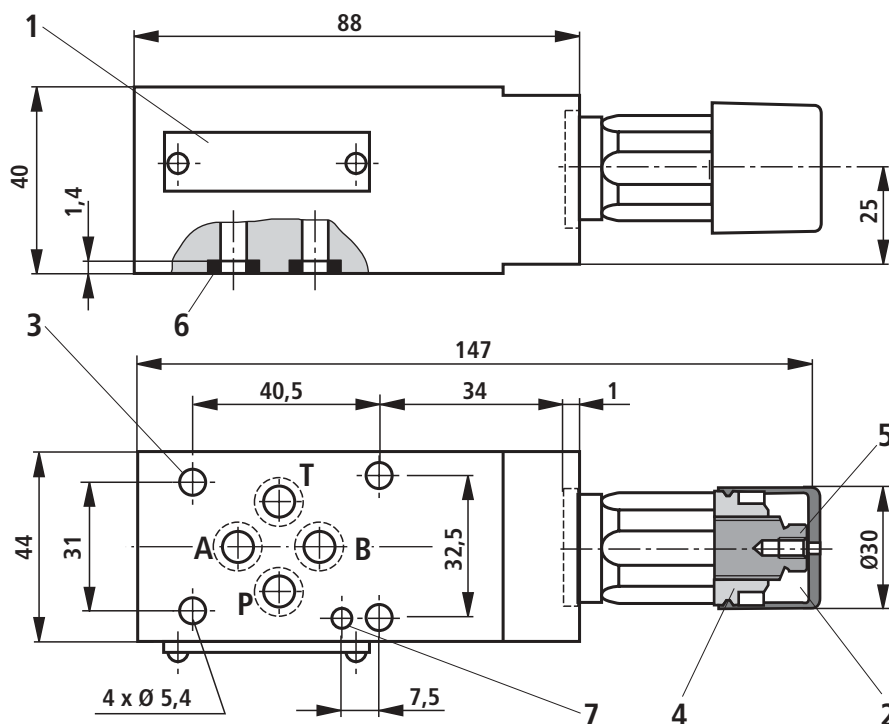
1 VA, VB, VC 3 VP
2 VD (A to B) 4 VD (B to A)

Type ZDBK 6 VA and ZDBK 6 VP

	L1	L2	L3
ZDBK 6 VA	88	148	74,5
ZDBK 6 VP	100	160	86,5



Type ZDBK 6 VB

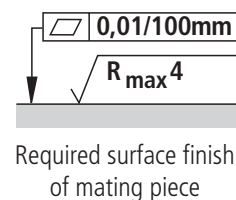


- 1 Name plate
- 2 Adjustment element (sleeve with hexagon and protective cap)
- 3 Valve fixing holes
- 4 Lock nut A/F 24
- 5 Hexagon A/F 10
- 6 Identical seal rings for ports A2, B2, P2, T2

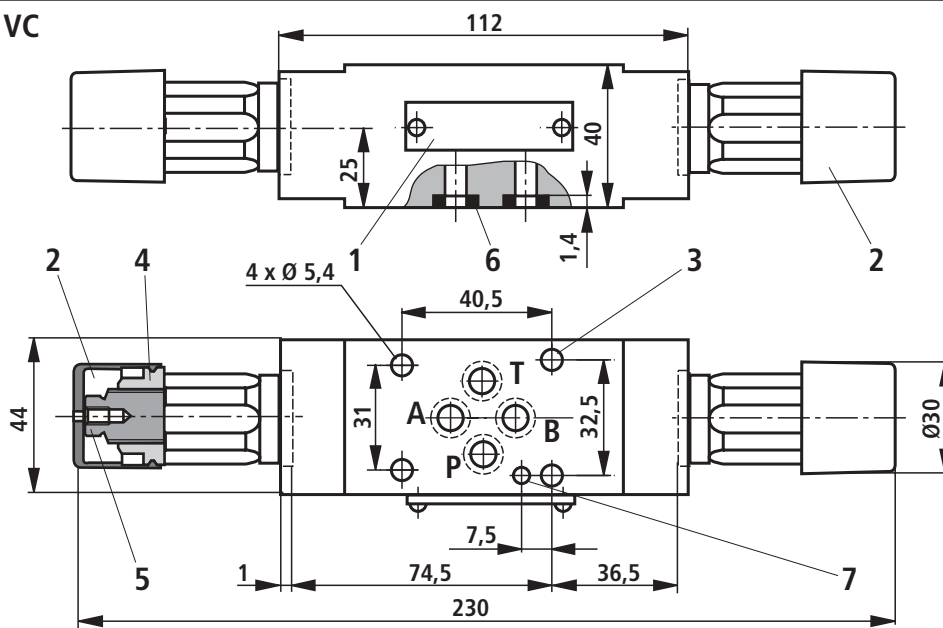
- 7 Hole for locating pin 3 x 8 DIN EN ISO 8752
Material No. **R900005694** (separate order)

Valve fixing screws

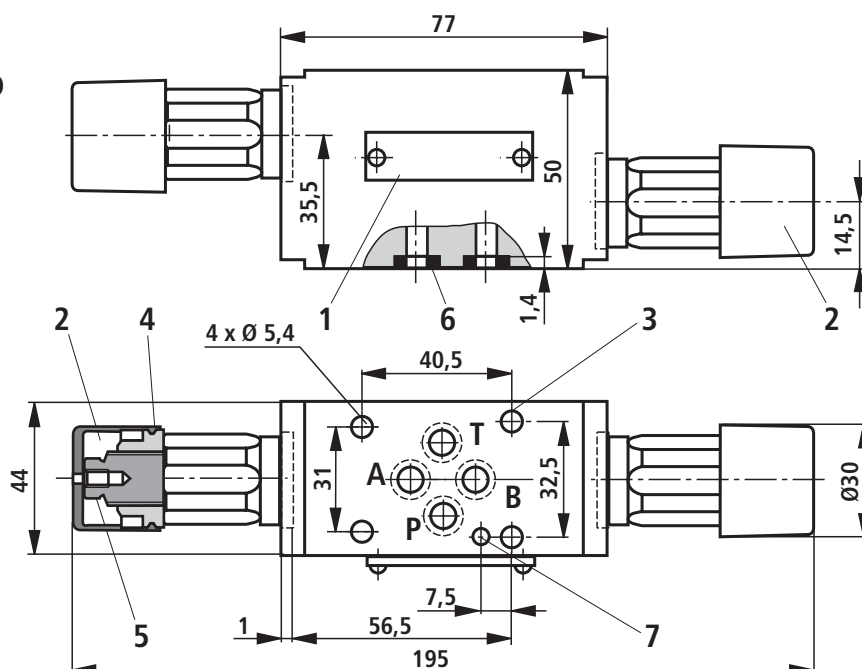
M5 DIN 912-10.9,
tightening torque $M_A = 8,9 \text{ Nm}$,
must be ordered separately.



Type Z2DBK 6 VC



Type Z2DBK 6 VD



1 Name plate

2 Adjustment element (sleeve with hexagon and protective cap)

3 Valve fixing holes

4 Lock nut A/F 24

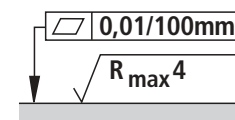
5 Hexagon A/F 10

6 Identical seal rings for ports A2, B2, P2, T2

7 Hole for locating pin 3 x 8 DIN EN ISO 8752
Material No. **R900005694** (separate order)

Valve fixing screws

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tightening torque $M_A = 8,9 \text{ Nm}$,
must be ordered separately.



Required surface finish
of mating piece

Bosch Rexroth AG Industrial Hydraulics

D-97813 Lohr am Main
Zum Eisengießer 1 • D-97816 Lohr am Main
Telefon 0 93 52 / 18-0
Telefax 0 93 52 / 18-23 58 • Telex 6 89 418-0
eMail documentation@boschrexroth.de
Internet www.boschrexroth.de

Bosch Rexroth Limited

Cromwell Road, St Neots,
Cambs, PE19 2ES
Tel: 0 14 80/22 32 56
Fax: 0 14 80/21 90 52
eMail: info@boschrexroth.co.uk

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