

Pressure Relief Valve DBD 10



Pressure Relief Valve

direct operated

Nom. size : 10
Nom. flow capacity : 80 l/min
Nom. operating pressure : 400 bar

Description

Direct spring pressure relief valve, type DBD, are suitable for inline mounting and serve for limitation of operating pressure in hydraulic systems.

The operating pressure is optionally adjustable by hexagon socket grub screw (with protection cap) or by knob.

The relief valves are available in different pressure ranges. The valve is equipped with a valve seat sealed by a spring loaded poppet.

If the set spring force is overcome by the line pressure the poppet lifts up from the seat and gives free flow from pressure to drain chamber.

The valves are available as cartridge or inline pressure relief valves.

General characteristics

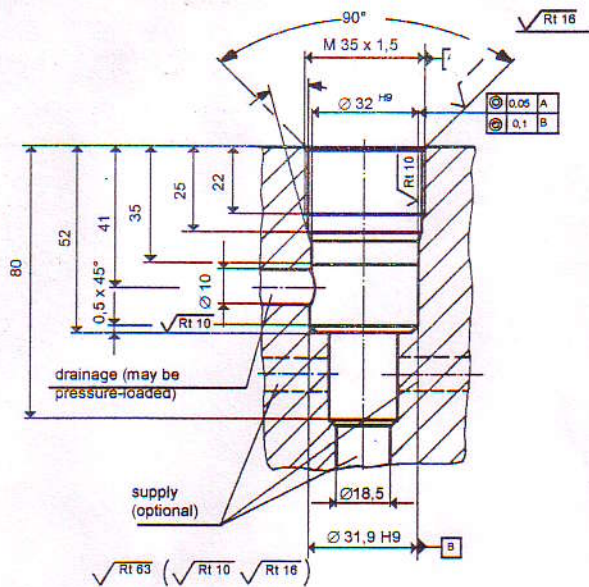
Construction : poppet type
 Mounting : cartridge type
 inline type
 Connection size : G 1/2
 Dimensions : page 2
 Weight : page 2
 Fitting position : optional
 Perm. Ambient Temper. : $\vartheta_{u \max} = + 60 \text{ }^\circ\text{C}$

Hydraulic characteristics

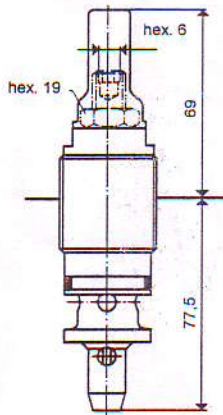
Set pressure range : $p_{v \min} = 5 \text{ bar}$
 $p_{v \max} = 400 \text{ bar}$
 Input pressure : $p_{e \min} = 15 \text{ bar}$
 $p_{e \max} = 410 \text{ bar}$
 Outlet pressure : $p_{R \max} = 210 \text{ bar}$
 Fluid temperature : $\vartheta_{m \min} = - 20 \text{ }^\circ\text{C}$
 $\vartheta_{m \max} = + 80 \text{ }^\circ\text{C}$
 Viscosity : $v_{\min} = 10 \text{ mm}^2/\text{s}$
 $v_{\max} = 600 \text{ mm}^2/\text{s}$
 p_v -Q-curve : page 3
 Shock absorption : poppet with
 damping piston
 Hydraulic fluids : hydraulic oils to
 DIN 51524 / 25
 other fluids on request
 Filtration : $\leq 20 \text{ } \mu\text{m}$

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Dimensions

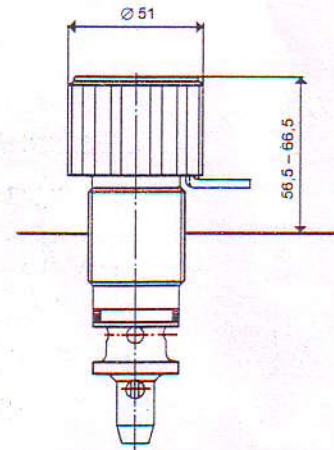


cartridge type
nom. size 10
weight 0,5 kg



locked setting

DBD 10 E 1 A.



knob version,
adjusting stroke 9 mm

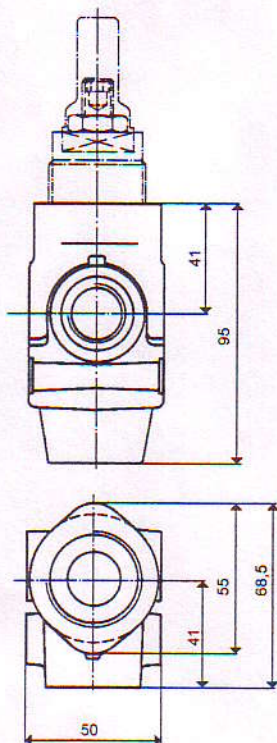
DBD 10 E 1 B.

ordering example page 3

Installation details

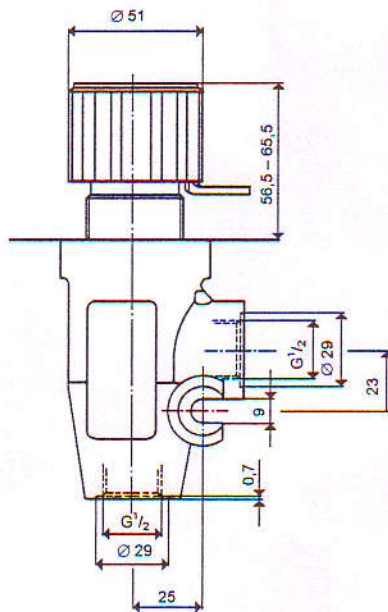
- M 35 x 1,5 = Isometric fine thread with pitch 1,5 mm acc. to standard DIN 13
- ∅ 32 H9 = 35,000 up to 25,052
- ∅ 31,9 H9 = 31,900 up to 31,962

inline type
nom. Size 10
weight 1,4 kg



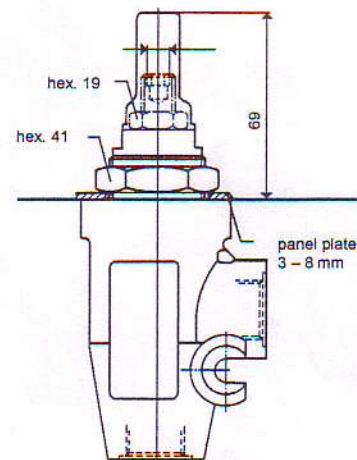
locked setting

DBD 10 R 1 A.



knob version,
adjusting stroke 9 mm

DBD 10 R 1 B.



locked setting,
panel mounting

DBD 10 R 1 D.

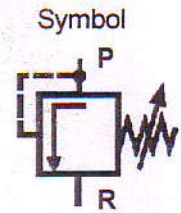
Ordering example page 3

Pressure Relief Valve DBD 10

Ordering example

DBD 10-E 1 A.

	Pressure range bar		Flow l/min	
	from	to	at	at
	p_{v1}	p_{v2}	Q_{max1} at p_{v1}	Q_{max2} at p_{v2}
400	60	400	55	80
300	10	300	15	75
200	10	200	15	70
150	10	150	10	55
085	10	85	10	45
040	10	40	10	30
016	5	16	5	20



p_v - Q - Curves

Viscosity = 34 mm²/s

