

Pressure relief valve pilot operated VP-DBP10

DESCRIPTION

HYDAC pilot-operated pressure relief valves limit pressure in meter-in in the system or control the power build-up in meter-out in hydraulic actuators.

FEATURES

- Interface according to ISO 6264-08
- Low flow loss due to maximum size bore holes
- Remote control via port X possible



Nominal size 10
up to 400 l/min
up to 350 bar

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MODEL CODE

VP-DBP 10 070 V S01 / V

Type

Pressure relief valve, pilot operated

Nominal size

10

Pressure ranges

070 = 4 up to 70 bar

210 = 4 up to 210 bar

350 = 4 up to 350 bar

Type of adjustment

V = adjustable with tool

Series

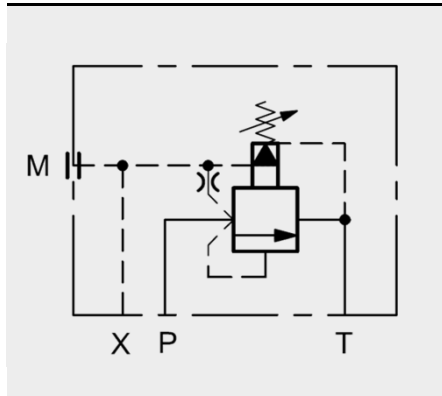
S01 = standard

Sealing material

V = FKM

N = NBR

SPOOL TYPES / SYMBOLS



ACCESSORIES

	Designation	Part no.
Seal kits (3-part set)	29,82 x 2,62 -FKM -90 Sh (2 pcs)	3526098
	9,13 x 2,62 -FKM -90 Sh (1 pcs)	
	29,82 x 2,62 -NBR -90 Sh (2 pcs)	3526094
	9,13 x 2,62 -NBR -90 Sh (1 pcs)	
Mounting screws (4 pcs)	DIN EN ISO 4762-M16x50-10.9	603171

FUNCTION

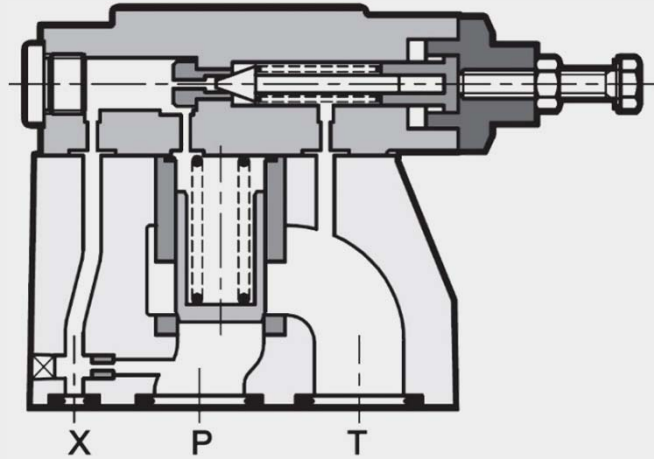
The pilot operated pressure relief valve VP-DBP10 has a pilot and a main stage – both are poppet type. Its function is to limit the pressure in the system.

The valve is normally closed. If the hydraulic force at port P exceeds the pre-set spring tension of the pilot stage, the poppet opens and oil flows from the rear of the main piston to the tank port T. Due to the resulting pressure difference, the main piston moves against the return spring and allows oil from port P to T. This continues until the system pressure is equal to the spring pressure and the valve closes again.

Attention:

Pressures at port T increase the cracking pressure.

SECTION VIEW



TECHNICAL DATA ¹

General specifications

MTTFd	According to EN ISO 13849-1:2015 Tabelle C1 & C2	
Ambient temperature	[°C]	-20 to +50
Installation position	No orientation restrictions	
Weight	[kg]	4,3
Material	Valve casing:	Cast iron
	Name plate:	Aluminium
Surface coating	Valve casing:	Phosphate plated

Hydraulic specifications

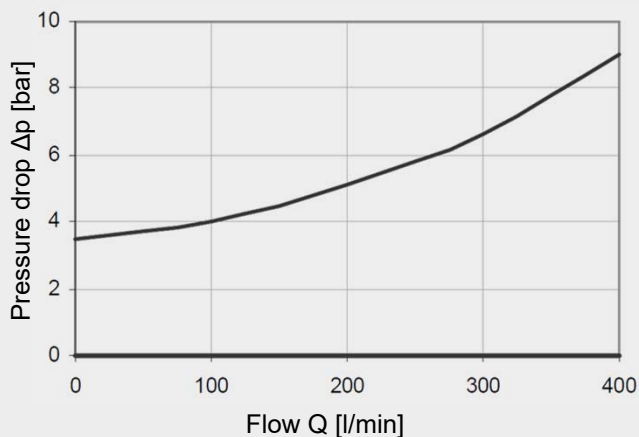
Operating pressure	[bar]	Port X, P, T: $p_{max} = 350$
Pressure ranges	[bar]	4 up to 70 4 up to 210 4 up to 350
Nominal flow	[l/min]	400
Operating fluid	Hydraulic oil to DIN 51524 part 1, 2 and 3	
Media operating temperature range	[°C]	-20 to +80
Viscosity range	[mm ² /s]	10 to 400 (25 is recommended)
Permitted contamination level of operating fluid	Class 20/18/15 to ISO 4406	
Sealing material	FKM (standard), NBR	

¹ see „Conditions and Instructions for Valves“ in brochure 53.000

PERFORMANCE

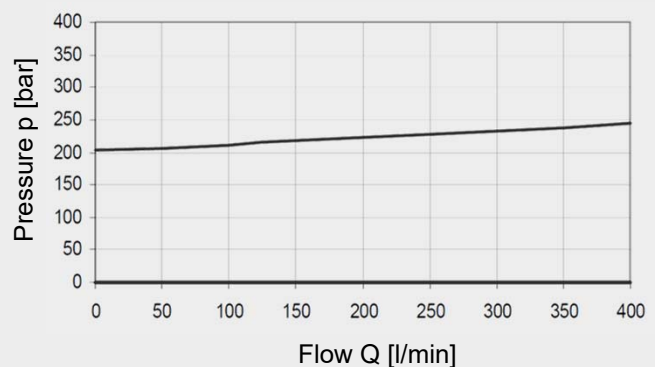
Pressure drop

measured at $v = 36 \text{ mm}^2/\text{s}$ and $T_{oil} = 50^\circ\text{C}$



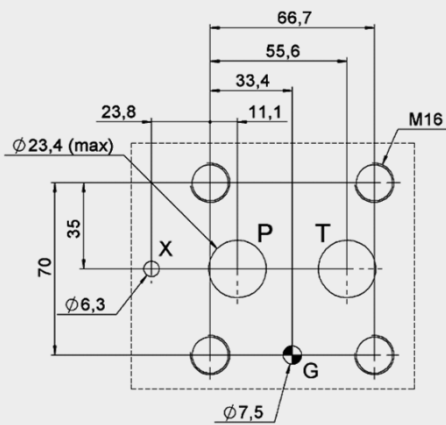
P-Q performance

measured at $v = 36 \text{ mm}^2/\text{s}$ and $T_{oil} = 50^\circ\text{C}$



DIMENSIONS

Interface according to ISO 6264-08-13-* -97 (Cetop 4.4.2-2-R08-350)

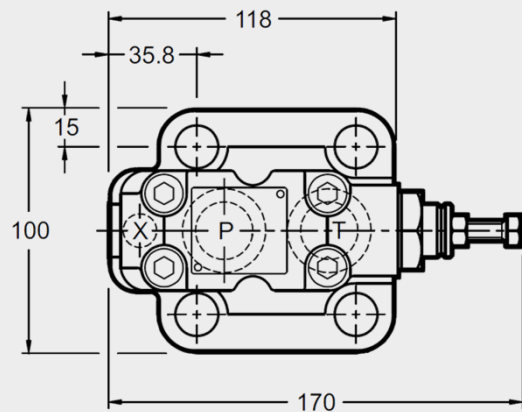
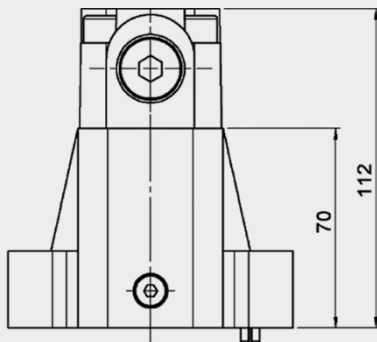
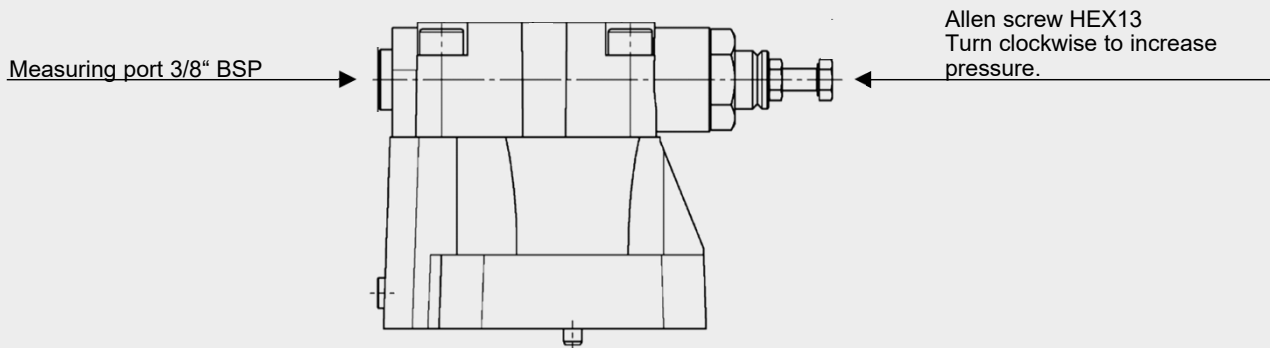


Mounting screws

(not included in delivery)

DIN EN ISO 4762 - M16x50 – 10.9

Tightening torque: 170 Nm



Note

The information in this brochure relates to the operating conditions and applications described. For applications not described, please contact the relevant technical department. All technical details are subject to change without notice.

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