PRESSURE RELIEF VALVE

manual control – Plate configuration
Subplate mounting according to DIN 24 340 – C 6 - 2
Pilot-operated - 315 bar to 40 l/min

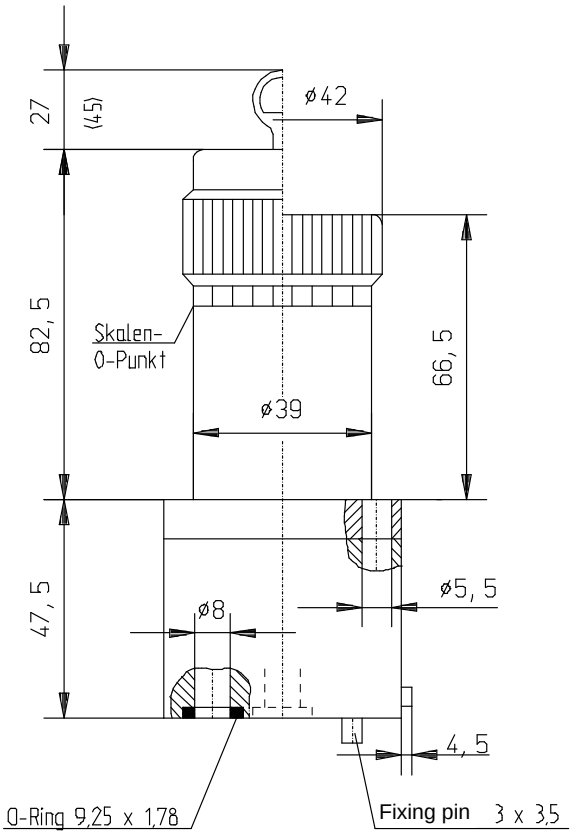
Type

60 A...C

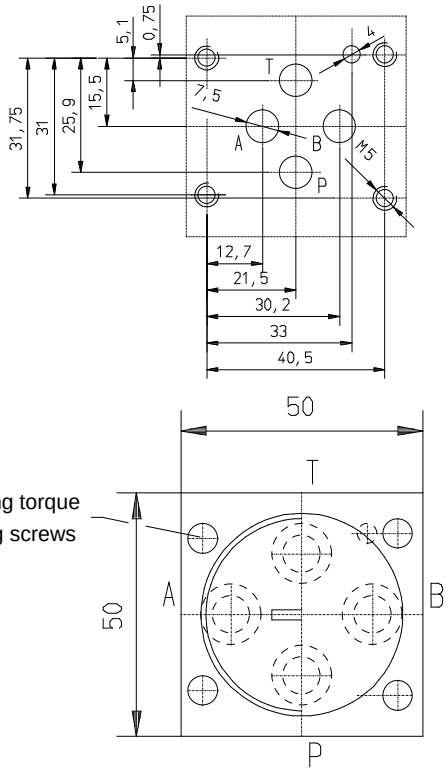
A valve which limits maximum pressure by exhausting fluid when the required pressure is reached.

FEATURES

- Scaled control knob, setting angle 325°
- Control knob can be locked optionally - VW-locking E 10
- 4 setting volume flow ranges
- minimum set pressure for all pressure setting ranges 7 bar
- with control port for remote control or unloading pressure and with internal or external control oil drain as an option
- Assembly on sub plates with pipe connecting for vertical stacking or control block
- Standard sealing elastomer Viton (FKM)



Mounting surface according to DIN 24 340-C6-2



ORDER INFORMATION
The scope of the valve includes the O rings on the bottom of the valve for sealing, four fastening screws M 5 x 55, DIN 912-12.9 tightening torque9.5 Nm. The delivery scope includes for the “S”-model one safety key.

Name

Pressure Relief Valve	60 A	S	315	X	C	M325

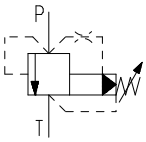
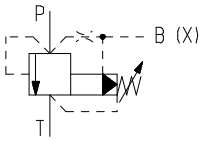
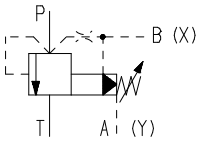
Type series
Series code letter
Actuation: control knob without lock = **without code**
control knob with lock = **S**
Rated setting pressure: in bar **70; 140; 210; 315**
valve variant control oil drain (see symbol)
without external control oil drain = **without code**
with control oil drain „B“ = X
with control oil drain „B“ and „A“ **= XY**
CETOP-Mounting surface (DIN 24 340-C6-2)
Supplementary data for special models
e.g. special sealings from Chemraz = **M 325**

ZUBEHÖR

Connecting plates: see dimension sheet 9-74-060-2003

CHARACTERISTICS

1. General

Symbol			
Typen	60A	60A...X	60A..XY
Design	two stage:	pilot control main control	= seat valve = piston-type valve
Mounting position	any		
Direction of volume flow	P to T		
Weight	approx. 1.25 kg		
Ambient temperature	-20℃ to +80℃		

2. Hydraulic characteristics

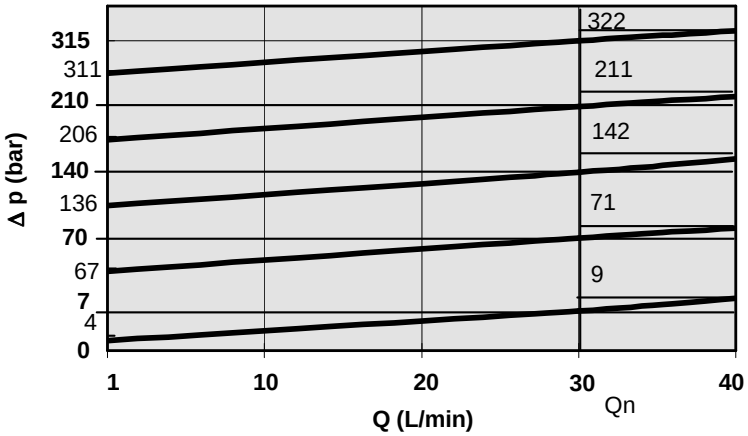
Rated pressure ≙ max. pressure	connection A; B = 315 bar connection T = 315 bar with external oil control eduction connection T = 70 bar with internal oil control eduction connection A = 70 bar
Setting pressure range	7 - 35 bar; 7 - 70 bar; 7 - 140 bar; 7 - 210 bar; 7 - 315 bar
Hydraulic fluid	Hydraulic oil according to DIN 51 524 (1,2)
Hydraulic fluid range	-20℃ to +70℃
Viscosity range	5 – 350 mm²/min
Control volume flow	approx. 350 cm³/min
Contamination level/ filtering	General permit table class 16/13 according to ISO 4406 or 7 according to NAS 1638 (recommended filter: minimum retaining rate $\beta_{5\text{-}10} \geq 75$)

3. Type of actuation

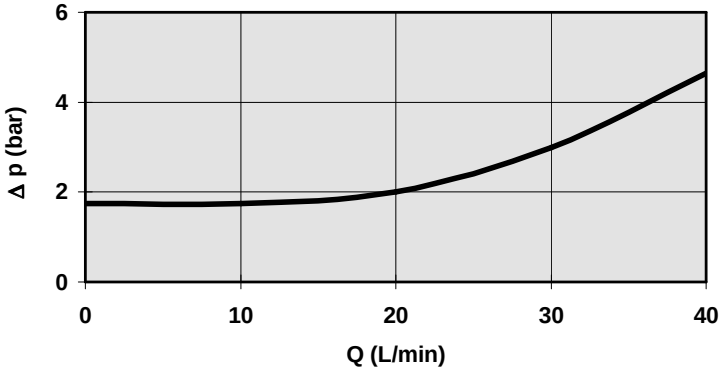
	manual via control knob
Setting angle	325°
Controlling torque	approx. 40 Ncm

CHARACTERISTICS

Pressure flow signal function
Δp-Q-characteristics; Δp=f (Q)
Fig. 1 shows the volume flow dependency by the different adjustment pressure controlling and the minimum setting pressure range. (external oil control eduction and without pressure to the tank). By using an internal oil control eduction increases the adjustment pressure by the pressure at connector T.



Δp-Q characteristics; Δp= f (Q)
Fig. 2 shows the pressure loss over the valve at relieved connector B.



Valve description

1. Valve

The valve consists of two stages. It mainly consists of the main control part, and a pilot valve. The pressure can be controlled continuously by means of the scaled control knob. By using the control knob which is coupled with an elevating screw is spring-loaded and pre-stressed. The force acts via a screw drive, spring-loaded and a valve cone upon the pilot valve cone against the hydraulic force of the hydraulic liquid in the control piston in the main valve as reference pressure. The resulting pressure is stamped onto the control piston in the main valve as reference pressure. The control piston takes up the function of a pressure balance controlling the pressure within the hydraulic circuit in accordance with the pilot control pressure.

The valve is equipped with four ports, the main ports P and T for inlet and outlet plus the control ports B and alternatively A. Via port A (Y), the pilot control oil is drained. In order to avoid valve vibrations we recommend to make the control oil return to the tank separately; without exerting pressure and without interference. Port B (X) allows for the external valve relief on the hand and for remote control on the other hand. The port must be closed if this function is not required. In case of vibration of the system this port can be using by magnification the control oil volume so that the dampening characteristics change. With valve-variable Y the is exhausted the control oil over port T.

2. Materials

The valve components are made of structural steel. The external valve parts are bronzed or galvanized. All wear parts are hardened. The control knob is made of aluminium, with a plastic core and the lock cylinder is made of brass.

For applications in excess of the given specification, please contact Schiedrum.

All specified parameters are partially based on long user's experience and partly on measurements made in laboratories. The data are typical of the valve and can deviate in series. All measurements were carried out on a test stand with an oil viscosity of 36mm²/sec and a filter mesh of < 10 µm. All data given here should be used as description of the product only and they are not to understand as warranty in the sense of law.