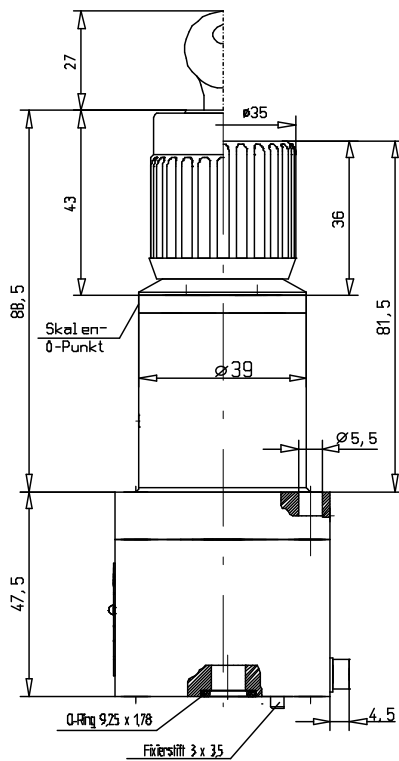
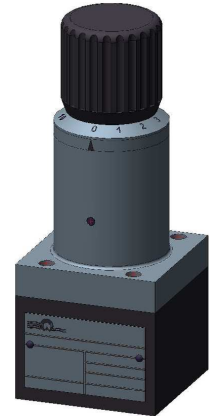


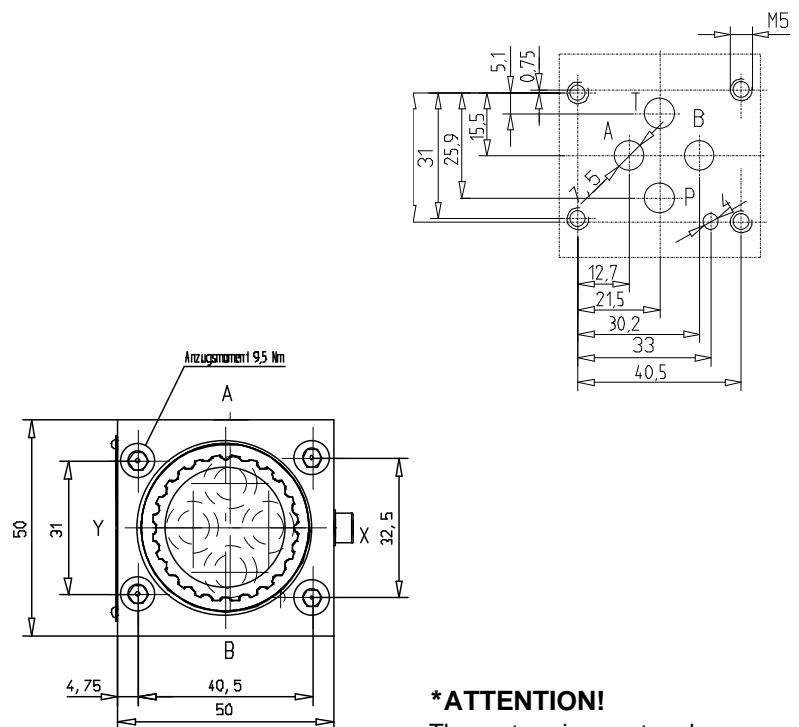
Pressure control valves control an infinitely adjustable pressure in the outlet flow to a system switched in series largely independently of primary pressure and volume flow. 2-way pressure control valves do not dispose of a secondary pressure balance, i.e. a pressure increase on the consumer's side is not compensated for this.

**FEATURES**

- scaled control knob, setting angle 325°
- control knob can be locked optionally – VW-locking E 10
- 5 setting pressure ranges
- Minimum set pressure for all pressure setting ranges 7 bar
- alternative variants with control ports for valve remote adjustment and/or pressure relief and internal or external control oil feedback
- assembly on connection plates with pipe connections, intermediate plates-elements for vertical linkage or control block
- Standard sealing material Viton (FKM)



**Mounting surface DIN 24 340-C6-1**



**\* ATTENTION!**

The port assignment and identification does not correspond to the recommended standards.  
 Standard connection codes:  
**P = B; T = A; A = Y; B = X.**

**ORDER INFORMATION**

The scope of delivery includes the O-rings at the lower side of the valve, four fastening screws M 5 x 55, DIN 912-12.9 tightening torque 9.5 Nm and for code "s" one safety key.

Name **2-way pressure control valve 603 B S 315 C M325**

**Type series**

**Series code letter**

**Actuation:** control knob without lock = **without Code**  
 control knob with lock = **S**

**rated setting pressure:** in bar **35; 70; 140; 210; 315**

**CETOP-mounting surface (DIN 24 340-C6-1)**

**Supplementary data for special models**

e.g. special sealings of Chemraz = **M 325**

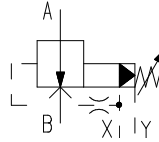
**ACCESSORIES**

**connecting plates:** see dimension sheet 9-74-603-1004

## CHARACTERISTICS

### 1. General

Symbol



Design

pilot-operated: pilot control = seat valve  
main control = piston-type valve

Mounting position

any

Direction of volume flow

P to T

Weight

approx. 1.25 kg

Ambient temperature range

-20°C to +80°C

### 2. Hydraulic characteristics

Rated pressure  $\Delta$  max. pressure

connection A; B; X = 315 bar  
connection Y = 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 temperature range

-20°C to +70°C

Viscosity range

5 - 350 mm<sup>2</sup>/min

Control volume flow

approx. 350 cm<sup>3</sup>/min

Contamination level/Filtering

Class 16/13 according to ISO 4406 or 7 according to NAS 1638  
(recommended filter: minimum retaining rate  $\beta_{5-10} \geq 75$ )

### 3. Type of actuation

manual via control knob

Setting angle

325°

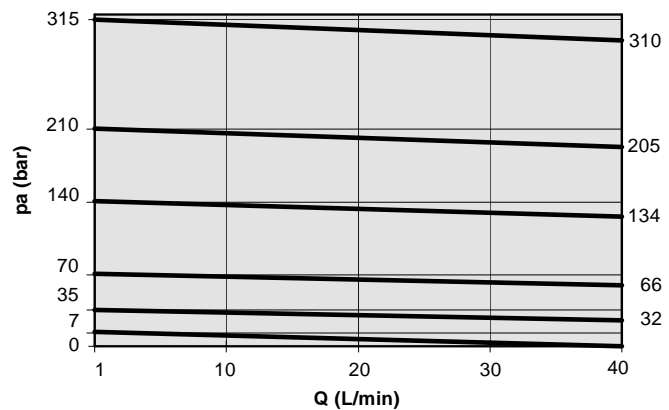
Controlling torque

approx. 40 Ncm

## CHARACTERISTICS

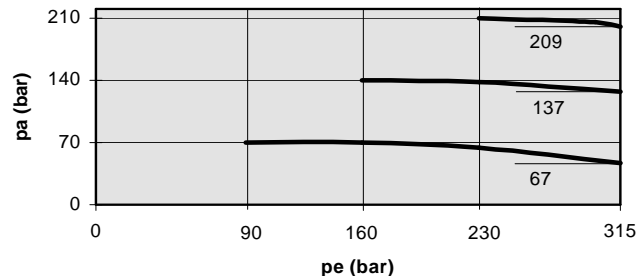
#### pa-Q-characteristics; pa=f(Q, pe=cons.)

Fig. 1 shows the dependence of the volume flow for the output pressure and the minimum rated pressure. Measured at a volume flow of 20 bar above the output pressure, control oil drain outlet is depressurised to the tank.



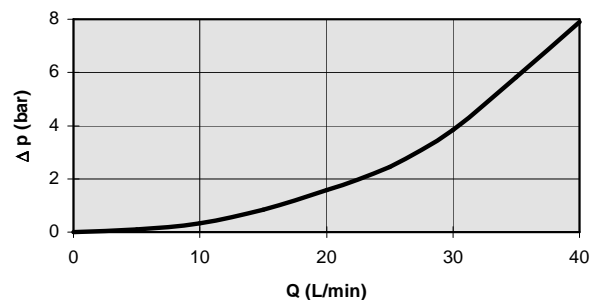
#### pa-pe-characteristics; pa=f(pe, Q=con s.)

Fig. 2 shows the control characteristics for the output pressure in relationship to the input pressure at a flow rate of 30 l/min, control oil drain outlet is depressurised to the tank.



#### $\Delta p$ -Q-characteristics; $\Delta p=f(Q)$

Fig. 3 shows the pressure loss in relationship to the flow rate for the reverse flow direction from connection B to A or from A to B with no load on connection X.



## Description of the valve

### 1. Valve

The valve consists of two stages. It mainly consists of the main control part, which is controlled by an pressure adjusting knob. Due to the pilot control the pressure is controlled or limited almost independent of the volume flow. The control oil for the anticipatory control is taken out on the primary side and is kept constant by current regulator. The scaled control knob adjusted stepless the pressure.

The control knob is connected to an elevating screw and pre-stressed with a pressure spring. The force of the pressure spring works by valve cone on pilot control valve seat against the hydraulic strength of the hydraulic fluid in the control circuit and produces the target pressure as reference pressure for the control piston in the main valve is impressed.

The control spool has the function of a pressure balance and control the desired operating pressure. Via the

master control unit flow hydraulic fluid as much as the adjusted pressure is not exceeded, only.

In time of the function control oil flow to the tank via the pilot valve constantly.

The valve is equipped with four ports the main ports A and B for inlet and outlet and the control ports X and Y. Via port Y the pilot oil is drained. In order to avoid valve vibrations we recommended to make the control oil return to the tank separately; without exerting pressure and without interference. Port 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 used by magnification the control oil volume so that the dampening characteristics change.

### 2. Material

The valve parts are made of structural steel. The external 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 36mm<sup>2</sup>/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.