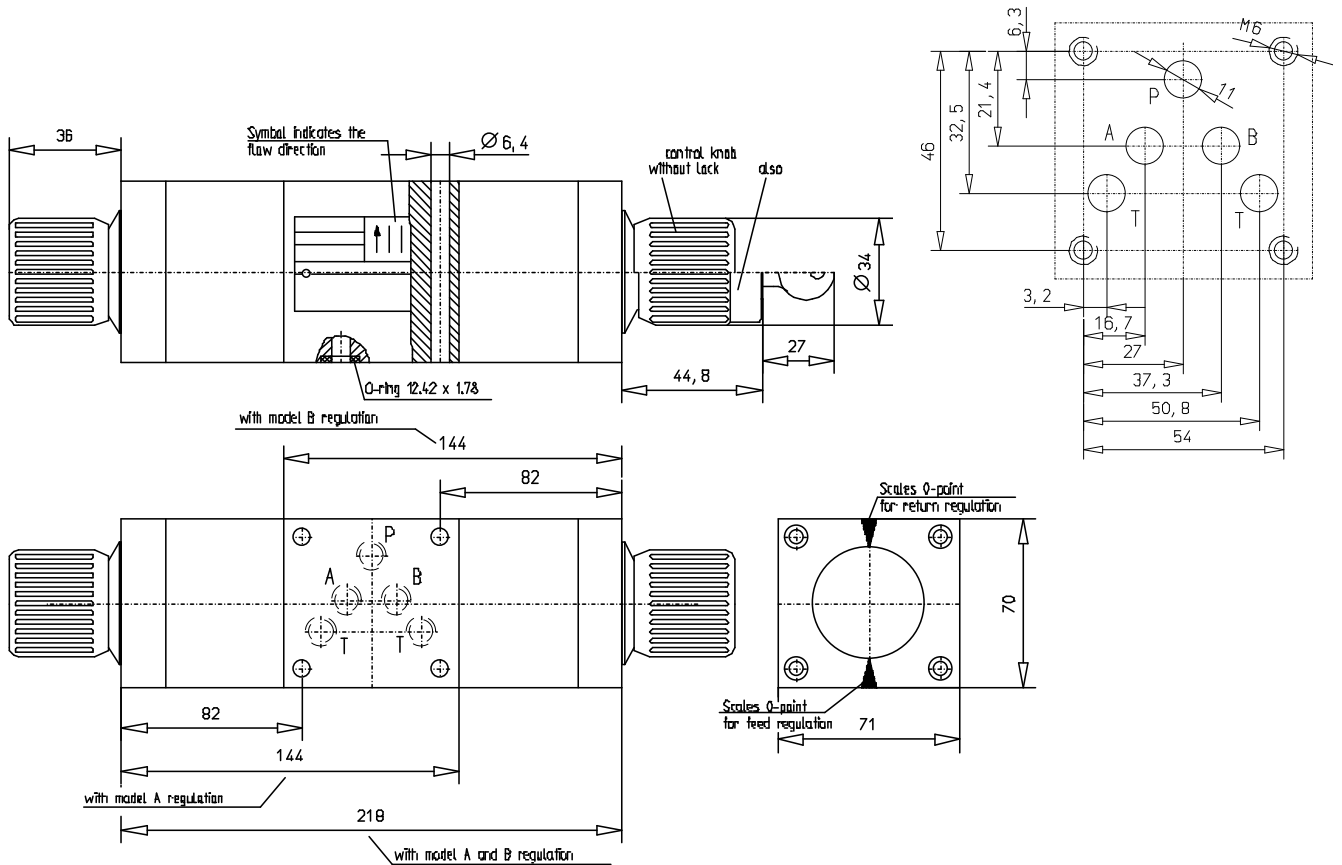


2-way flow control valves are flow valves (throttle valves) with integrated pressure balance. The valves automatically keep constant an adjustable outlet flow independent of pressure variations in the inlet and outlet lines.

### FEATURES

- inner plate valve for height linkage
- flow control function at connection **A** or **B** or **A and B**
- forward or return flow
- 3 rated setting volume flow ranges
- graduated control knob
- control knob with lock as an option VW lock E 10
- with bypass check valve for unthrottled return flow
- Standard sealing material Buna N/NBR

### Mounting surface DIN 24 340-A 10



### ORDER INFORMATION

The scope of delivery of the flow control valve includes the o-rings for sealing of the connecting. The delivery scope includes for the "S" - model one safety key.

Name \_\_\_\_\_ **2-way flow control valve 200 B S 63 A/B R Z M15**

#### Type series

#### Series code letter

**Actuation:** Control knob without lock = **without Code**  
Control knob withlock = **S**

Rated adjustment volume flow: **25; 40; 63;** l/min.

**A** or **B** = flow control at connection A or B

**A/B** = flow control at connection A and B

**V** = forward flow

**R** = return flow

**Z** = modular stack valve

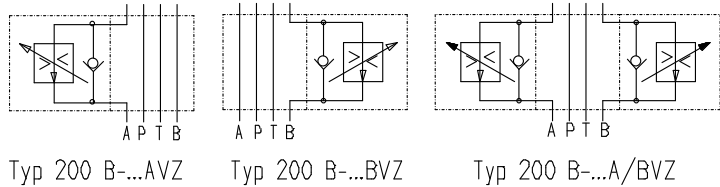
Supplementary data for special models

e.g. special sealings from Viton (FKM) = **M15**

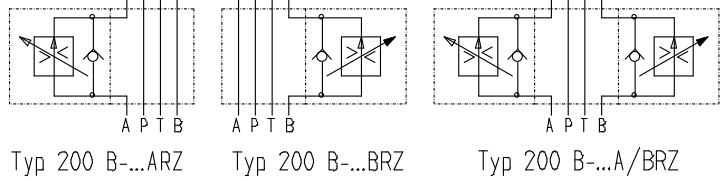
# CHARACTERISTICS

## 1. General

Symbol (forward flow)  
Type series code letter



Symbol (return flow)  
Type series code letter



Design

Set throttle: rotary disk valve with triangular opening, orifice-type  
Differential pressure valve: downstream the set throttle  
Check valve: spring-loaded ball seated valve

Weight

4,8 kg e.g. 7,3 kg

Mounting position

any

Direction of volume flow

according to symbol; any desired

Ambient temperature

-25°C to +80°C

## 2. Hydraulic characteristics

Rated pressure / max. pressure

210 bar for all connections

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>/sec

Rated volume flow range

25; 40; 63 l/min.

min. adjustable and controllable volume flow

approx. 200 cm<sup>3</sup>/min

Druckflüssigkeitstemperaturbereich

-20°C bis +60° C

Volume flow via check valve

65 l/min. max.

Contamination level / filtering

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

## 3. Type of actuation

Manual via control knob

Controlling torque

approx. 100 Ncm

Setting angle

150°

## CHARACTERISTICS

### Q- $\Delta p$ characteristic

Fig. 1 shows the control response of the flow control valve for the different rated flow ranges dependent on pressure difference as well as the minimum pressure difference required for operation. The pressure loss in the ducts carrying oil only are not taken into consideration.

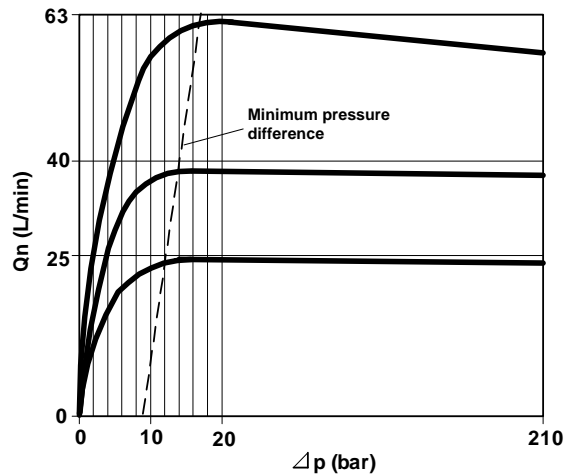
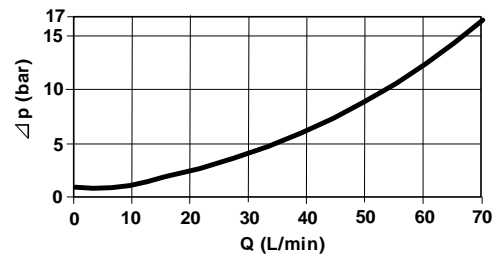


Fig. 1

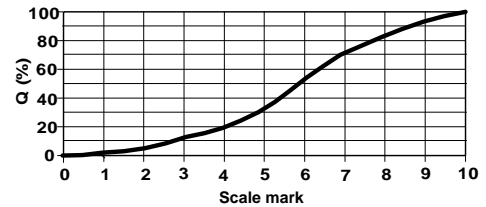
### $\Delta p$ -Q characteristic line; $\Delta p = f(Q)$

Fig. 2 shows the pressure loss of the valve for the volume flow through the by-pass return with the setting screen closed.



### Q-S-characteristic; $Q = f(\text{skale position})$

Fig. 3 shows a typical dependency of the volume flow as a function of the valve setting angle or the control knob scaling (the scale is linear)



## Valve description

### 1. Valve

The valves automatically keep constant an adjustable outlet flow independent of pressure variations in the inlet and outlet lines. Depending on the design, control can be on the forward or return flow side of the consumer. The volume flow can be controlled infinitely by means of the control knob with a scale graduation from zero till ten. The set pressure range is from zero to the selected rated volume flow.

For a wide range of application, the setting orifice for



controlling the volume flow is not affected by viscosity or contamination. This is achieved by setting throttle with orifice-like design developed by us. This setting orifice works by overlaying so that a defined volume flow without leakage oil is achieved.

The valves are delivered from the assembly line for regulation in the A or B, or A and B connection. A volume flow is made independent of the pressure by means of the differential pressure valve (pressure balance). It provides a constant pressure difference at the setting orifice and is arranged downstream of the orifice (secondary control). Due to the very compact design, the flow can be adjusted within msec. in case of pressure changes. The pressure balance is open in its normal position. Thus, there may be a starting step change when switching on the valve. The volume flow is controlled in one direction of flow only. The direction of the control flow is indicated by the symbol on the name plate. The opposite direction of flow, there is a bypass check valve for an un throttled return flow at a very small pressure loss. It is designed as a spring-loaded ball-seated valve.

### 2. Materials

The valve parts are made of engineering steel. The external valve parts are black-finished, the top cover is galvanized, all wear parts are hardened. The un lockable control knob is made from aluminium, with a plastic core. The lockable control knob is made from aluminium, with a plastic core and the lock cylinder is made from brass.

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

All specified parameters are partially based on long years of experience. The data are typical and may slightly deviate depending on the valve series. All measurements were carried out on a test stand with an oil viscosity of 36 mm<sup>2</sup>/s, a filter mesh width of < 10  $\mu$ m. All data given here should be used as description for the product only and they are not to understand as warranty (guaranteed quality) in the sense of law.