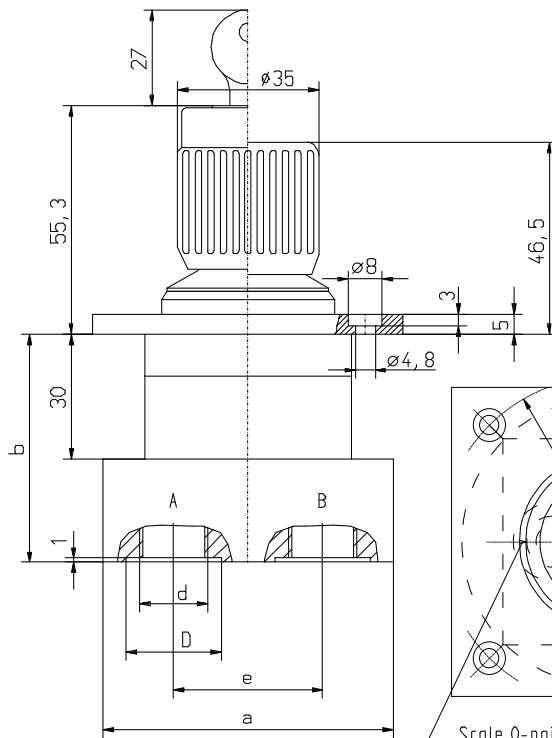


Throttle valves are hydraulic valves in which the volume flow depends on the throttle valve cross section and differential pressure. The control valve can be adjusted by means of orifice to ensure that, as far as possible, the equipment's efficiency by viscosity.

### FEATURES

- 7 orifice sizes to set
- Scaled control knob, setting angle 150°
- Control knob can be locked optionally – VW locking E 10
- Pipe conduit connection: Screw holes – to DIN 3852 T.2
- With by - pass return valve
- Standard sealing material Buna N / NBR, other materials possible



all dimensions in mm

| Dimensions ( mm )               |        |         |      |
|---------------------------------|--------|---------|------|
| Recommended flow rage ( l/min ) |        |         |      |
|                                 | u to 4 | u to 10 | > 10 |
| a                               | 50     | Ø70     | Ø70  |
| b                               | 50     | 55      | 55   |
| ØD                              | 19     | 23      | 27   |
| d                               | G 1/4  | G3/8    | G1/2 |
| e                               | 26     | 36      | 36   |
| Weight ( kg )                   |        |         |      |
|                                 | 1,3    | 1,6     | 1,6  |

\* to ISO 228/1

### ORDER INFORMATION

In the case of design „ S „  
one safety key.

| Description                                         | Throttle Valve | 11 D | R | S | 6 | H | 3 | M15 |
|-----------------------------------------------------|----------------|------|---|---|---|---|---|-----|
| Type series                                         |                |      |   |   |   |   |   |     |
| Series code letter                                  |                |      |   |   |   |   |   |     |
| Return valve fitted: with = R                       |                |      |   |   |   |   |   |     |
| without = without Code                              |                |      |   |   |   |   |   |     |
| Actuation: Control knob without lock = without Code |                |      |   |   |   |   |   |     |
| Control knob with lock = S                          |                |      |   |   |   |   |   |     |
| Flow rate: 1; 2; 3; 4; 5; 6; 7                      |                |      |   |   |   |   |   |     |
| Pressure stage: N = up 100 bar; H = up 210 bar;     |                |      |   |   |   |   |   |     |
| 3H = up 315 bar; 4H = up 450 bar                    |                |      |   |   |   |   |   |     |
| Size: 2 = G 1/4; 3 = G3/8; 4 = G 1/2 nach ISO 228/1 |                |      |   |   |   |   |   |     |
| Supplementary data for special models               |                |      |   |   |   |   |   |     |
| e.g. special Viton sealings (FKM) = M 15            |                |      |   |   |   |   |   |     |

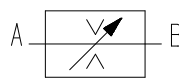
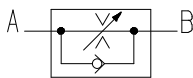
### ACCESSORY

Flow rectifier plate typ 71 BZ see dimension sheet 9-74-071-1004

## SPECIFICATION

### 1.General

#### Symbols



#### Design

Adjustment throttle: flat rotary valve with triangular notch, screen -like design

#### Weight

Check valve: spring-loaded ball valve

#### Mounting position

1,0 kg

#### Direction of volume flow

Any

#### Ambient temperature range

A to B controlled, B to A unthrottled back flow with check valve

- 25 °C to + 80 °C

### 2.Hydraulic characteristics

#### Nominal pressure / max.pressure

Pressure stage:

N = up to 100 bar; H = up to 210 bar; 3H = up to 315 bar; 4H = up to 450 bar

#### Hydraulic fluid

Hydraulic oil according to DIN 51 524 (1,2)

#### Hydraulic fluid temperature range

- 20 °C to + 80 °C

#### Viscosity range

5 to 350 mm²/s

#### Max. flow through by pass check valve

30 l/min

#### Contamination level / filtering

General permissible class 19/16 according to ISO 4406 or 10 according NAS 1638(recommended filter: min. retaining rate  $\beta_{20} \geq 75$ )

### 3.Type of actuation

manual via control knob

#### Setting angle

150°

#### Controlling torque ( $\Delta p = 210$ bar)

approx. 350 Ncm

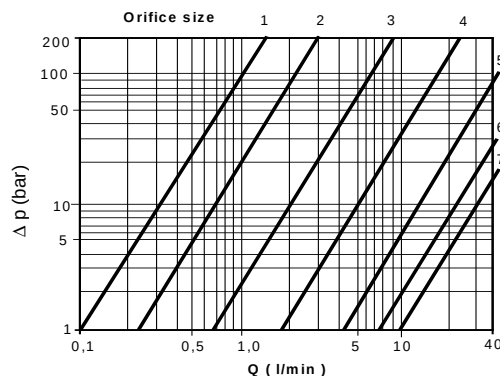
## CHARACTERISTICS

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

The volume flow dependency on the orifice size and pressure difference on the orifice, when the orifice is full open. This Valve can be used for pressure stage: N up to approx. 35 bar and H up to approx. 70 bar ( not for 3H and 4H) without by-pass check in reversed flow direction by identical  $\Delta p$ -Q-ratio.

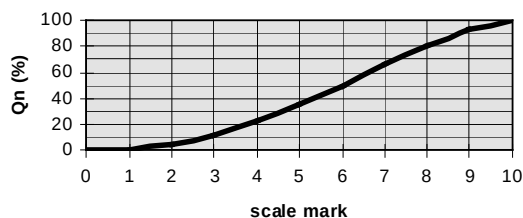
Max. orifice sizes (mm²):

1 = 0,1; 2 = 0,3; 3 = 1,0; 4 = 3,0; 5 = 8,3; 6 = 12,8; 7 = 17,9



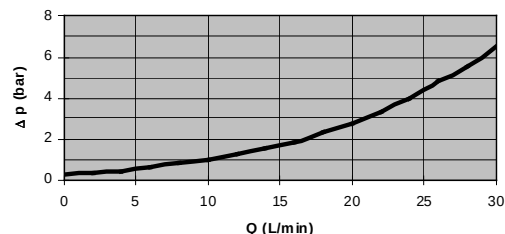
### Q-S-Kennlinie; $Q = f(\text{Scale mark})$

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



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

the pressure drop in relation to the flow from connection B to A via return check valve with the orifice restrictor closed.



### Valve

With this valve the orifice range can be adjusted between zero and the rated flow by means of the scaled control knob. For a wide range of application, the rated flow is not affected by Viscosity or contamination. This is achieved by the setting throttle with orifice - like - design developed by us. This setting throttle works by overlaying so that a defined volume flow without leakage oil is achieved. There fore the settings of very small flows is possible.

For applications in excess of the given specifications, 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 36 mm²/sec and a filter mesh of < 10 µm. All data given here should be used as description for the product only and they are not to understand as warranty (*zugesicherte Eigenschaft*) in the sense of law.

