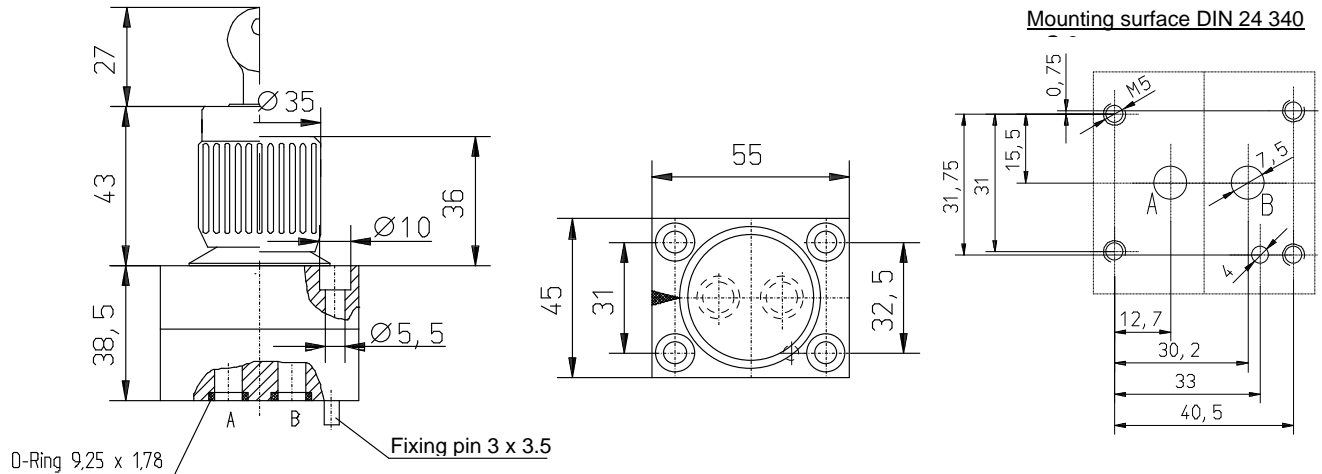


Throttle valves are hydraulic valves in which the volume flow depends on the throttle valve cross section and differential pressure. The control valve can be adjusted by means of orifice to ensure that, as far as possible, the equipment's efficiency by viscosity.

**FEATURES**

- 7 orifice size to set
- Scaled control knob, setting angle 150°
- Mounting surface according to DIN 24 340 – G 6
- with or without by-pass check valve
- Assembly on connection plates with pipe connections or control block
- Standard sealing material Buna N (NBR), other materials possible



**ORDER INFORMATION**

The scope of the delivery includes the 0 rings at the bottom of the valve, four Fastening screws M5x 40 DIN 912-10.9, M<sub>A</sub>=8 Nm (for pressure stage 3H screw-material 12.9, M<sub>A</sub> 9,5 Nm)

Name

Throttle valve	10	D	R	S	6	H	C	M15
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Type series

Series code letter

By-pass check valve

R = with ; without = no Coding

Actuation: Control knob without lock = without Code

Control knob with lock = S

Flow rate: 1; 2; 3; 4; 5; 6; 7

Pressure stage: N = to 100 bar; H = to 210 bar;

3H = to 315 bar

Subplate mounting: according to DIN 24 340-G6

Supplementary data for special models

e.g. special sealing Viton (FKM) = M 15

**ACCESSORY:**

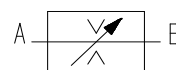
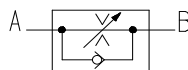
Connecting plates:

see dimension sheet 9-74-030-2002

**CHARACTERISTICS**

**1. General**

Symbol



Design

Adjustment throttle: flat rotary valve with triangular notch, rectangular opening

Check valve: spring-loaded ball valve

Mounting position

any

Direction of volume flow

A to B, B to A unthrottled return flow with check valve

Ambient temperature

-25°C to +80°C

## 2. Hydraulic Characteristics

Rated pressure / max. pressure

pressure stage: N to 100 bar; H to 210 bar, 3H to 315 bar

Hydraulic fluid

Hydraulic oil according to DIN 51 524 and 51 525

and flame resistant hydraulic fluids of the group HFA, HFB und HFC. Use anhydrous and synthetic flame resistant hydraulic fluids take special sealing.

Hydraulic fluid range

-20°C to +80°C

Viscosity range

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

max. permissible volume flow via the check valve

30 l/min.

Contamination level/Filtering

General permissible 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 ( $\Delta p$  210 bar)

approx. 350 Ncm

Setting angle

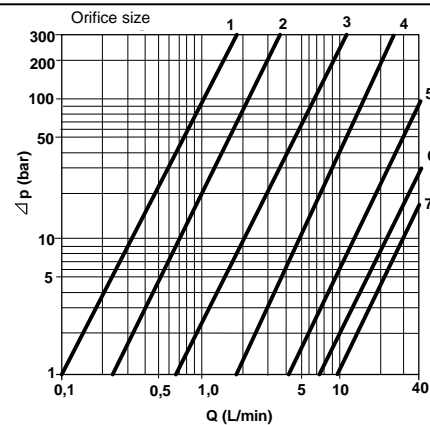
150°

## CHARACTERISTICS

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

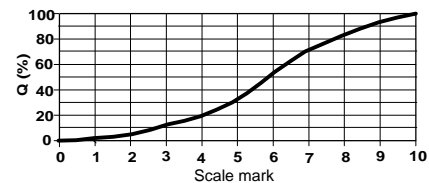
The volume flow dependency on the orifice size and pressure difference on the orifice, when the orifice is full open. This Valve can be used for pressure stage: N up to approx. 70 bar by pressure stage H (not for 3H) without by-pass check valve in reserved flow direction by identical  $\Delta p$ -Q-ratio.

Max. orifice size (mm<sup>2</sup>): 1 = 0,1; 2 = 0,3; 3 = 1,0; 4 = 3,0; 5 = 8,3; 6 = 12,8; 7 = 20.



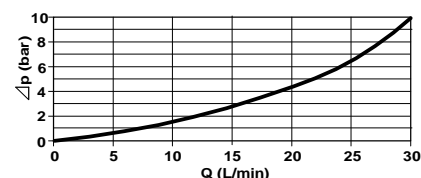
### Q-S-characteristic Q = f (Scale mark)

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



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

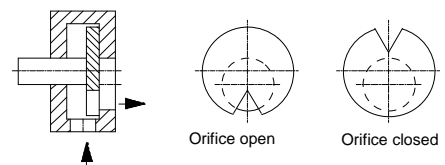
The pressure drop in relation to the flow from connection B to A via return check valve with the orifice restrictor closed.



## Description of the valve

### 1. 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 define volume flow without leakage oil is achieved. There fore the settings of very small flows is possible.



### 2. Materials

The valve components are of structural steel. The valve housing is burnished, the top cover is galvanized, all wear parts are hardened. The control knob is made from aluminium, with a plastic core. The lockable control knob is made of burnished steel, of aluminium and the lock cylinder is made of 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 of < 10 μm and an optimally adjusted electronic control system. 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.

Subject to changes for further developments.