

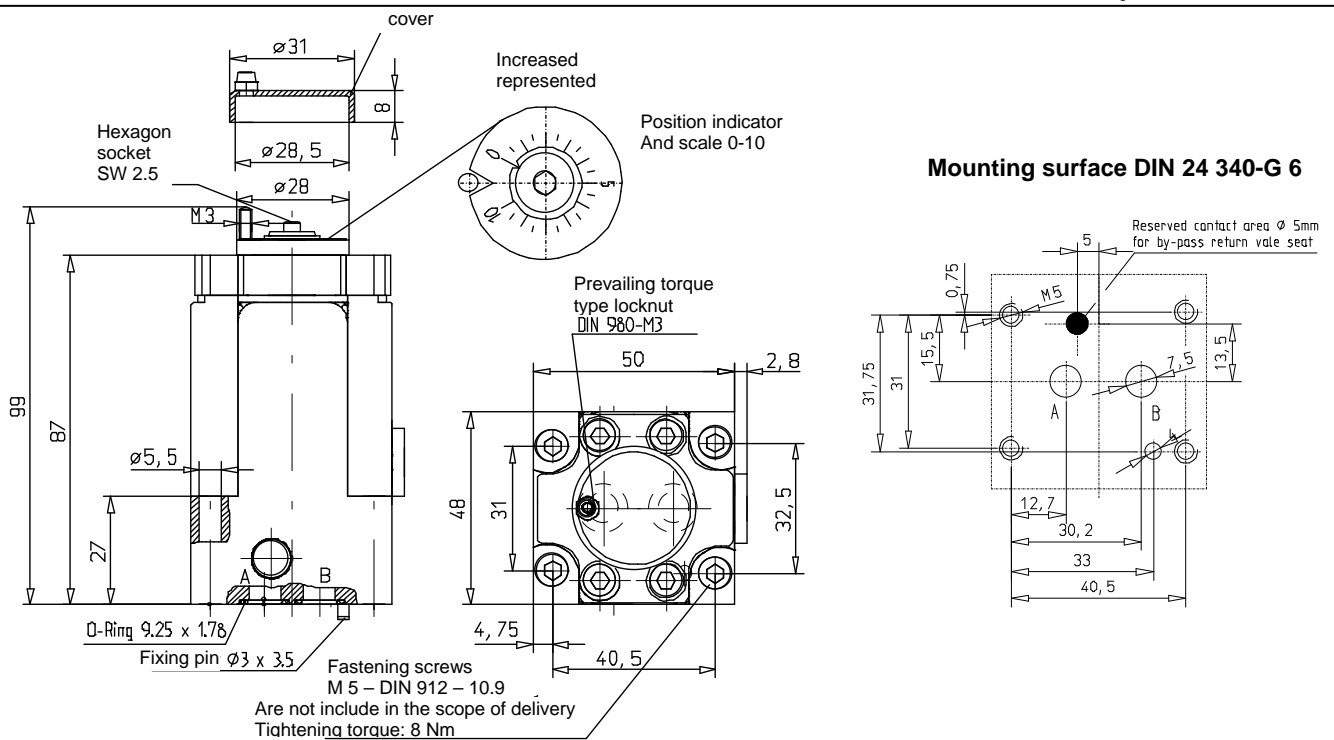
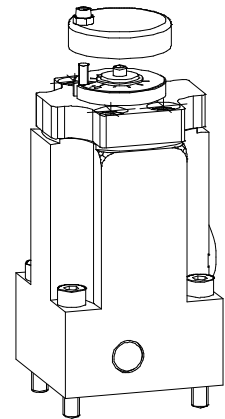
2-way flow control valves are flow valves (throttle valves) with integrated pressure balance. The valves control an adjustable volume flow independently of pressure modification in the inlet or outlet line automatically to obtain a constant value. They can be mounted on the inlet or outlet side of the consumer. Due to the screen – like design of the adjusting throttle, the value is largely independent of the fluid viscosity.

FEATURES

- setting angle 300°
- 7 rated setting volume ranges
- assembly on connection plates with pipe joints, intermediate plates - elements for vertical linkage or control block
- standard sealing material Buna N / NBR, other materials are possible

Characteristics of the special equipment M 555

Valves in the modified execution **M 555** haven't any adjusting knob or by-pass check valve. The regulation is adjustable via a hex head wrench. A frequent adjustment should be avoided. When desired an accurate adjustment can be made by the factory. A cover belongs to the valve, which can be attached and inserted by a prevailing torque type locknut.



ORDER INFORMATION

The scope of delivery includes the O-rings for sealing the connection bores.

Name **2-Way-flow control valve 20 K 25 M555**

Types series

Series code letter

Rated volume flow in l/min 0.4; 1.0; 2.5; 6.3; 10; 16; 25

Supplementary data for special models

ACCESSORY

Valve fastening screw set: Order-No.: 44-020-00928
 4 pcs. hexagon socket head cap screws M 5 x 35 DIN 912 – 10.9

Connecting plates – Order-No.: see dimension sheet 9-74-030-2002

Flow rectifier plates: see dimension sheet 71 CCZ (9-74-071-0016)

Valve fastening screw set: for combination with rectifier plates Type 71 CCZ:
 Order-No.: 44-020-00921
 4 pcs. hexagon socket head cap screws M 5 x 75 DIN 912 – 10.9

CHARACTERISTICS

1. General

Symbol



Design

Adjustment throttle: flat rotary valve with triangular notch, screen-like design
Differential pressure valve: switched in series with the adjustment throttle

Weight

Valve: 1.2 kg

Mounting position

any

Direction of volume flow

A to B controlled, B to A unthrottled return flow

Ambient temperature range

-25°C to +80°C

2. Hydraulic Characteristics

Rated pressure / max. pressure

315 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 mm²/sec

Rated volume flow range

0.4; 1.0; 2.5; 6.3; 10; 16; 25 l/min

min. adjustable volume flow

approx. 15 cm³/min

Contamination level/filtering

General permit table class 18/15 according to ISO 4406
or 9 according NAS 1638(recommended filter: min. retaining rate $\beta_{10-15} \geq 75$)

3. Type of actuation

manual via prevailing torque type locknut

Controlling torque

approx. 60 Ncm

Setting angle

300°

CHARACTERISTICS

Q-S characteristics; Q=f (scale mark)

Fig. 1 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).

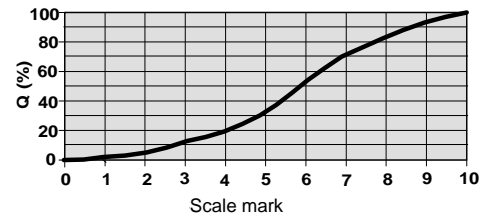


Fig.1

Q-Δp characteristics; Q=f (Δp)

Fig. 2 shows the control behaviour of the valve for the volume flow direction A to B for the various rated flow volume ranges as well as the minimum pressure difference required for the function.

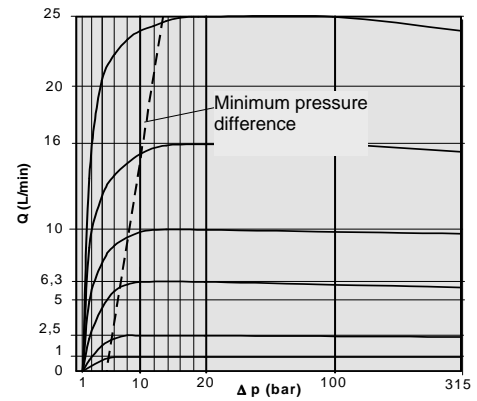


Fig. 2

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.

Q-t characteristics; Q = f (t, p = constant)

Fig. 3 shows the volume flow change depending on the oil temperature at a constant pressure difference of 100 bar for 3 different setting values. Measured using hydraulic oil HLP 46 (ISO-VG 46)=46mm²/sec. at 40°C. For longer volume flows, the temperature influence becomes smaller. For smaller flow, low viscosity oils result in smaller volume flow deviations.

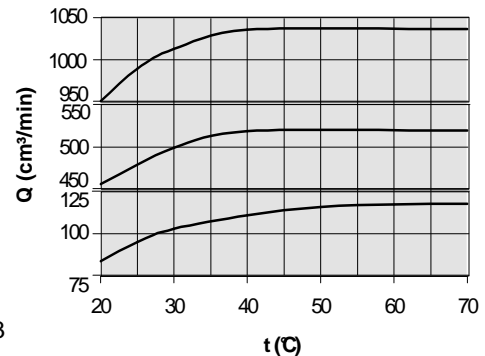


Fig. 3