

Electric Drives
and Controls

Hydraulics

Linear Motion and
Assembly Technologies

Pneumatics

Service

Rexroth
Bosch Group

Throttle and throttle check valve

RE 27219/01.09
Replaces: 03.06

1/6

Types MG and MK

Size 6 to 30
Component series 1X
Maximum operating pressure 315 bar
Maximum flow 400 l/min



Table of contents

| Contents | Page |
|-----------------------|------|
| Features | 1 |
| Ordering code | 2 |
| Standard types | 2 |
| Symbols | 2 |
| Function, section | 3 |
| Technical data | 4 |
| Characteristic curves | 5 |
| Unit dimensions | 6 |

Features

- Suitable for direct in-line installation
- Pressure and viscosity-dependent

Ordering code

| | | G | 1X/ | * |
|-------------------------|------|---|-----|---|
| Throttle valve | = MG | | | Further details in the clear text |
| Throttle check valve | = MK | | | Seal material |
| Size 6 | = 6 | | | NBR seals |
| Size 8 | = 8 | | | FKM seals |
| Size 10 | = 10 | | | (other seals upon request) |
| Size 15 | = 15 | | | Attention! |
| Size 20 | = 20 | | | Observe compatibility of seals |
| Size 25 | = 25 | | | with hydraulic fluid used! |
| Size 30 | = 30 | | | |
| For threaded connection | = G | | | 1X = Component series 10 to 19 (10 to 19: unchanged installation and connection dimensions) |
| | | | | No code = |
| | | | | V = |

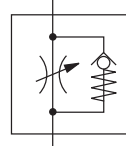
Standard types and components are contained in the EPS (standard price list).

Symbols

Type MG



Type MK

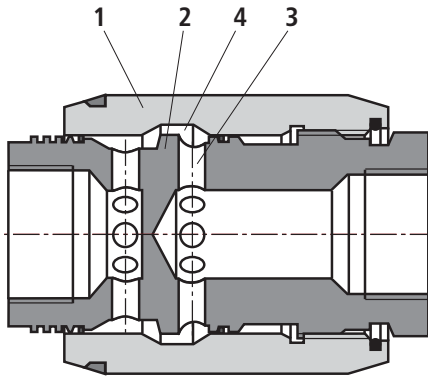


Function, section

The valve types MG and MK are pressure- and viscosity-dependent throttle and throttle check valves.

Type MG (throttle valve)

Throttling occurs in both flow directions. The pressure fluid reaches the throttling point (4) via the lateral bores (3). The throttling point is formed between the housing (2) and the adjustable sleeve (1). By rotating the sleeve (1), the cross-section of the throttling point (4) can be changed infinitely.

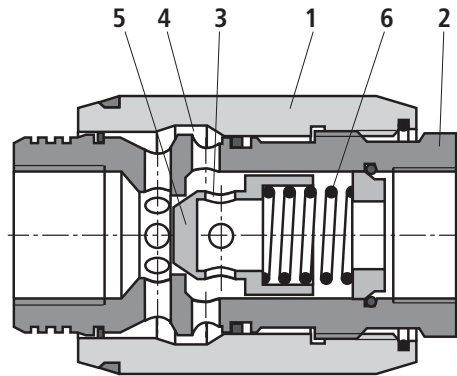


Throttle valve type MG

Type MK (throttle check valve)

When fluid flows through the valve in throttling direction, spring (6) and the pressure fluid press the poppet (5) onto the seat, thus blocking the connection. The pressure fluid uses the lateral bores (3) to reach the throttling point (4), which is formed between the housing (2) and the adjustable sleeve (1).

In the opposite direction, the pressure acts on the front face of the poppet (5), lifts the same from the seat, and allows the fluid to flow. The pressure fluid flows through the valve without being throttled. At the same time, a part of the pressure fluid flows through the annular gap, which results in the desired self-cleaning effect.



Throttle check valve type MK

Technical data (For applications outside these parameters, please consult us!)

general

| | | | | | | | | |
|---------------------------|----|--|-----|-----|-----|-----|-----|-----|
| Size | | 6 | 8 | 10 | 15 | 20 | 25 | 30 |
| Weight | kg | 0.3 | 0.4 | 0.7 | 1.1 | 1.9 | 3.2 | 4.1 |
| Installation position | | Any | | | | | | |
| Ambient temperature range | °C | -30 to +80 (NBR seals) -20 to +80 (FKM seals) | | | | | | |

hydraulic

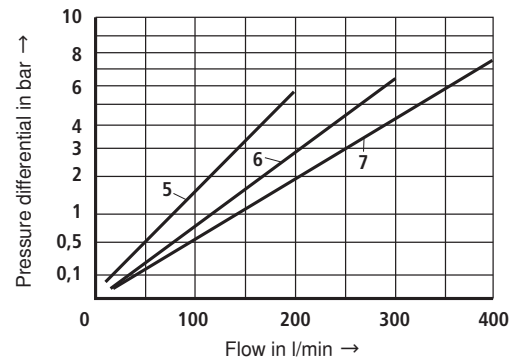
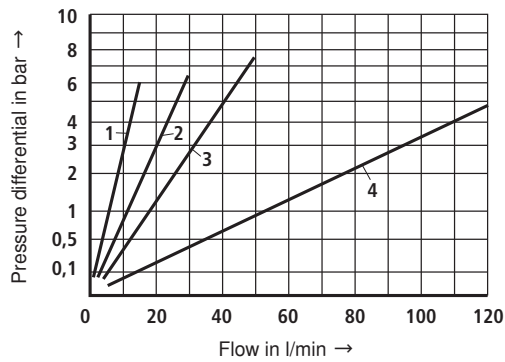
| | | |
|---|--------------------|--|
| Maximum operating pressure | bar | 315 |
| Cracking pressure (type MK) | bar | 0.5 |
| Maximum volume flow | L/min | See characteristic curves page 5 |
| Pressure fluid | | Mineral oil (HL, HLP) according to DIN51524, other hydraulic fluids upon request |
| Pressure fluid temperature range | °C | -30 to +80 (NBR seals) -20 to +80 (FKM seals) |
| Viscosity range | mm ² /s | 10 to 800 |
| Maximum permitted degree of contamination of the pressure fluid - cleanliness class according to ISO 4406 (c) | | Class 20/18/15 ¹⁾ |

¹⁾ The cleanliness classes specified for the components must be adhered to in hydraulic systems. Efficient filtration prevents malfunctions and at the same time prolongs the service life of components.

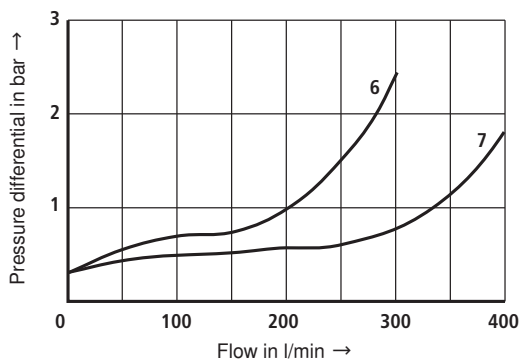
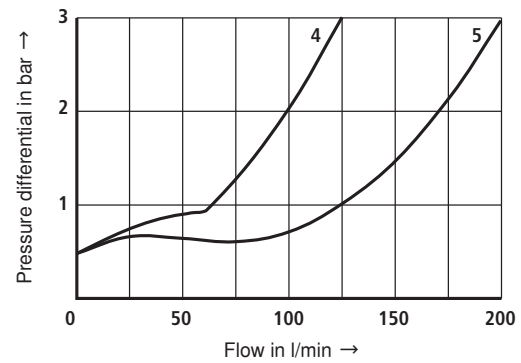
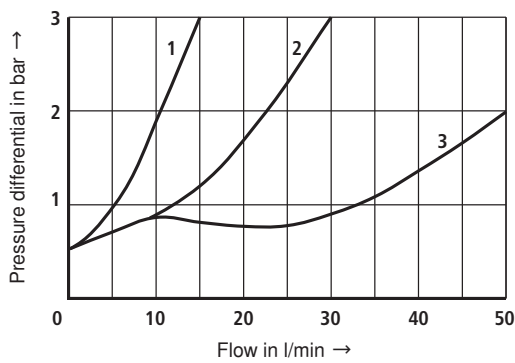
For the selection of the filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 und RE 50088.

Characteristic curves (measured with HLP46, $\vartheta_{oil} = 40 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$)

Δp - q_v characteristic curves with open throttle (types MK and MG)

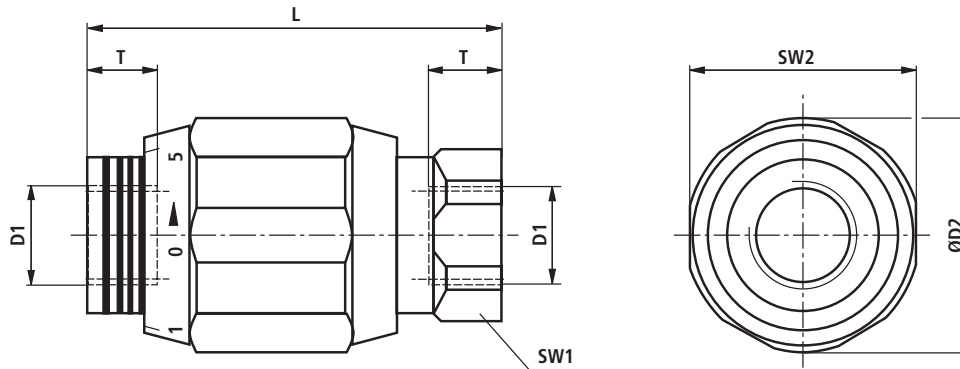


Δp - q_v characteristic curves with open check valve and closed throttle (type MK)



- 1 NG6
- 2 NG8
- 3 NG10
- 4 NG15
- 5 NG20
- 6 NG25
- 7 NG30

Unit dimensions (dimensions in mm)



| Size | D1 | ØD2 | L | SW1 | SW2 | T |
|------|--------|-----|-----|-----|-----|----|
| 6 | G1/4 | 34 | 65 | 22 | 32 | 12 |
| 8 | G3/8 | 38 | 65 | 24 | 36 | 12 |
| 10 | G1/2 | 48 | 80 | 30 | 46 | 14 |
| 15 | G3/4 | 58 | 100 | 41 | 55 | 16 |
| 20 | G1 | 72 | 110 | 46 | 70 | 18 |
| 25 | G1 1/4 | 87 | 130 | 55 | 85 | 20 |
| 30 | G1 1/2 | 93 | 150 | 60 | 90 | 22 |

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