Rexroth
Bosch Group

2-way flow control valve

RE 18351/06.13 1/8
Replaces: 04.11

Type MH2FR

Size 04
Component series 2X
Maximum operating pressure 420 bar
Rated flow 0.4/0.7/1.2 l/min


H7740

Table of contents

Features

- Screw-in cartridge valve
- Mounting cavity R/MH2FR04K
- Low start-up jump

Information on available spare parts:
www.boschrexroth.com/spc

Ordering codes

MH2FR	04	K	A – 2X /		*

2-way flow control valve

Size 04 **= 04**

Screw-in cartridge valve **= K**

Pump connection at channel A **= A**

Component series 20 to 29 **= 2X**
(20 to 29: Unchanged installation and connection dimensions)

Rated flow [1)]
0.4 l/min **= 0.4**
0.7 l/min **= 0.7**
1.2 l/min **= 1.2**

For further information, see the plain text

Seal material
no code = NBR seals
V = FKM seals
(other seals on request)
Attention!
Observe compatibility of seals with the hydraulic fluid used!

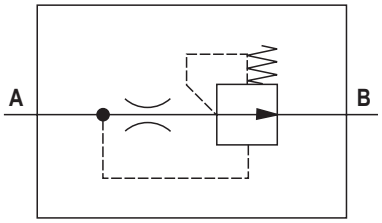
[1)] See page 5

Preferred types

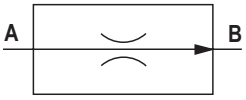
Type	Material number
MH2FR 04 KA2X/0.4V	R900753499
MH2FR 04 KA2X/0.7V	R901047887
MH2FR 04 KA2X/1.2V	R901137792

Symbols (detailed and simplified)

Detailed



Simplified



Function, section

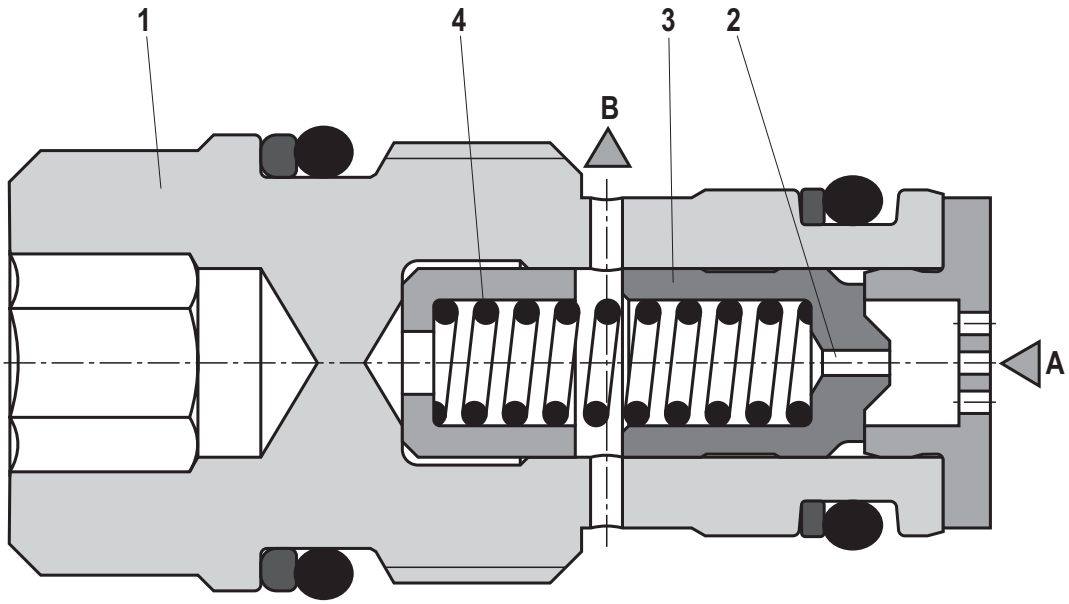
The valve type MH2FR is a 2-way flow control valve for block design installation. It is used for pressure and temperature-independent flow stabilization.

The valve basically consists of the housing (1), throttling point (2), and pressure compensator (3) with compression spring (4).

For pressure-independent flow stabilization in channel B, a pressure compensator (3) is connected downstream to the throttling point (2).

If the direction of flow runs from A to B through the valve, the pressure in channel A exerts force on the pressure compensator (3). The pressure compensator moves to the control position until the forces are balanced. If the pressure in channel A or B changes, the pressure compensator (3) keeps readjusting and thereby maintains a constant pressure drop via the throttling point (2). The constant pressure drop and the unchanging cross-section of the throttling point (2) provide for a constant flow.

In the direction of flow from B to A, the return flow runs freely via the throttling point (2).



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

general

Weight	kg	0.30
Installation position		Any
Ambient temperature range	°C	–30 to +80 (NBR seals) –15 to +80 (FKM seals)
Surface protection		None – surface protection has to be provided by painting the components or the entire assembly (e.g. valve and housing).

hydraulic

Maximum operating pressure	bar	420
Rated flow [2]	l/min	0.4 0.7 1.2
Hydraulic fluid		See table below
Hydraulic fluid temperature range	°C	–30 to +80 (NBR seals) –15 to +80 (FKM seals)
Viscosity range	mm^2/s	10 to 800
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)		Class 20/18/15 [1]

Hydraulic fluid		Classification	Suitable sealing materials	Standards
Mineral oils		HL, HLP	NBR, FKM	DIN 51524
Bio-degradable	– insoluble in water	HEES	NBR, FKM	VDMA 24568
	– soluble in water	HEPG	FKM	

☞ **Important information on hydraulic fluids.**

- For more information and data on the use of other hydraulic fluids, refer to data sheet 90220 or contact us.
- There may be limitations regarding the technical valve data (temperature, pressure range, life cycle, maintenance intervals, etc.)!
- The flash point of the hydraulic fluids used has to be 40 K above the maximum solenoid surface temperature.
- **Bio-degradable:** If bio-degradable hydraulic fluids are used that are also zinc-solvent, there may be an accumulation of zinc.

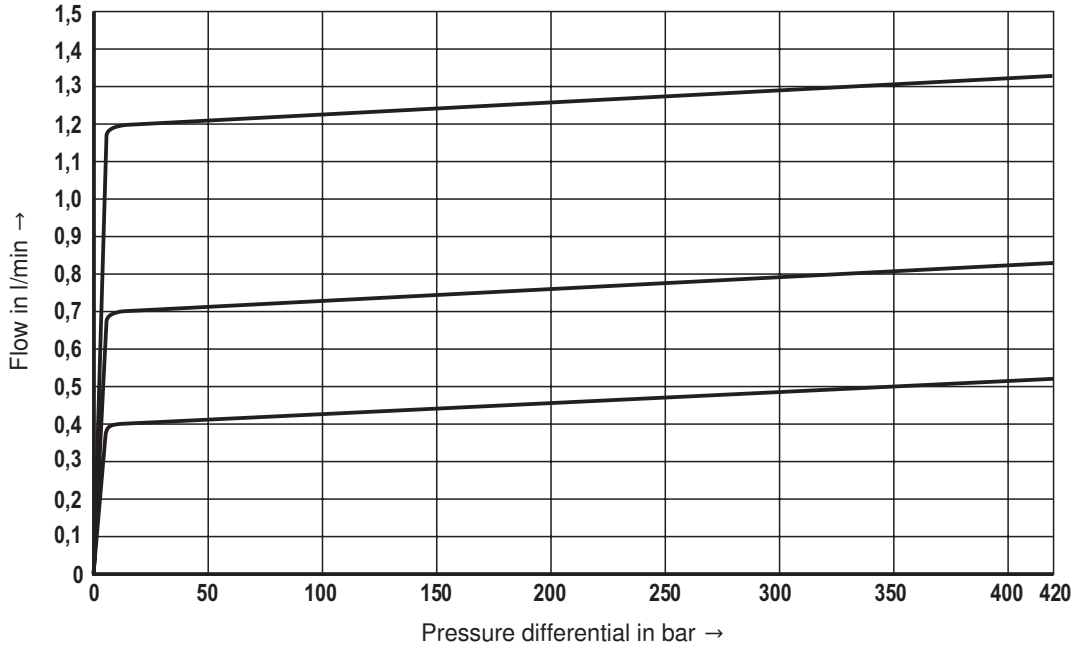
[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Use effective filtration to prevent faults and to increase the life cycle of the components at the same time.

For filter selection, see www.boschrexroth.com/filter.

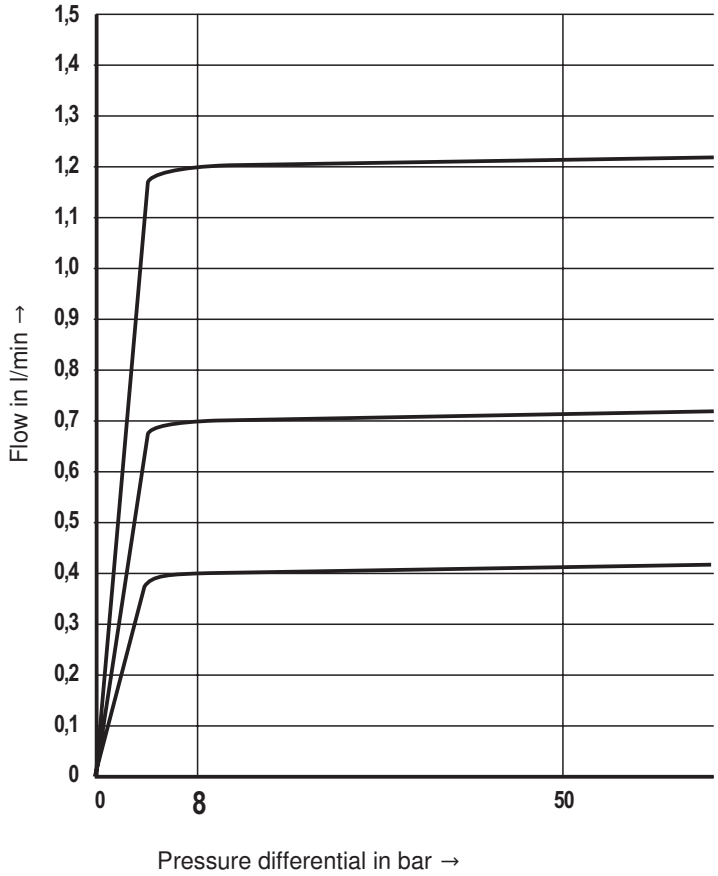
[2] At the beginning of control (8 bar), the stated flow is present with a tolerance of ±15 %.

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C)

Flow q_V depending on inlet pressure p

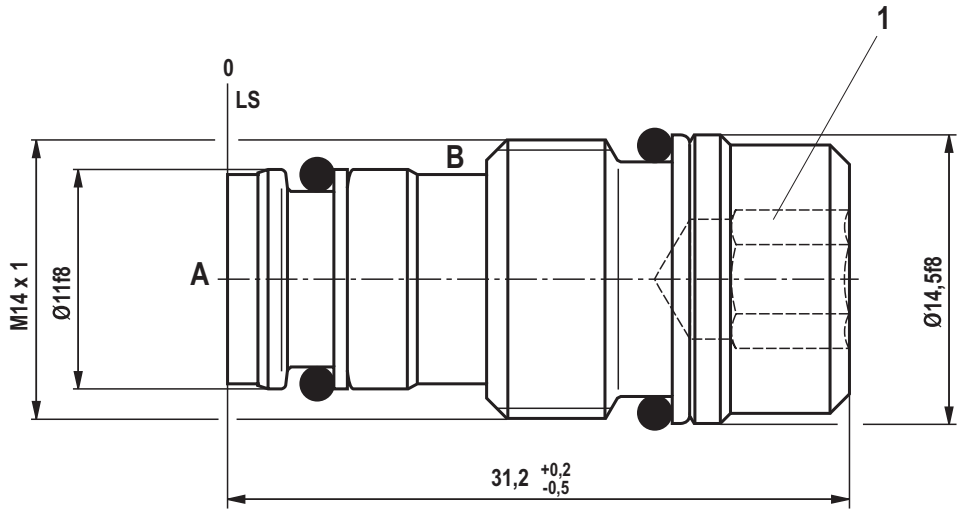


Admissible flow tolerance



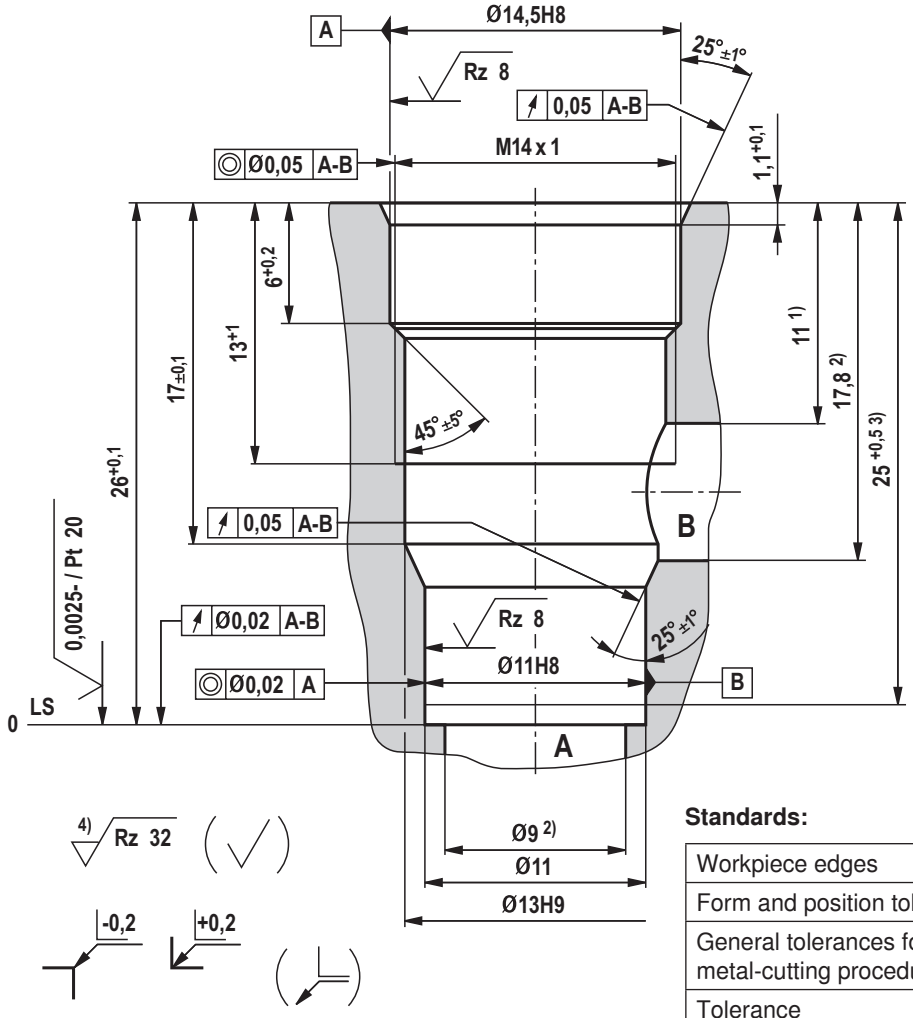
At the **beginning of control** (**8 bar**), the stated flow is present with a tolerance of **±**15 %.

Unit dimensions (dimensions in mm)



1 SW6 internal hexagon; tightening torque $M_A = 20^{+5}$ Nm

Mounting cavity R/MH2FR (dimensions in mm)



[1] Minimum dimension
[2] Maximum dimension
[3] Depth of fit
[4] Visual inspection

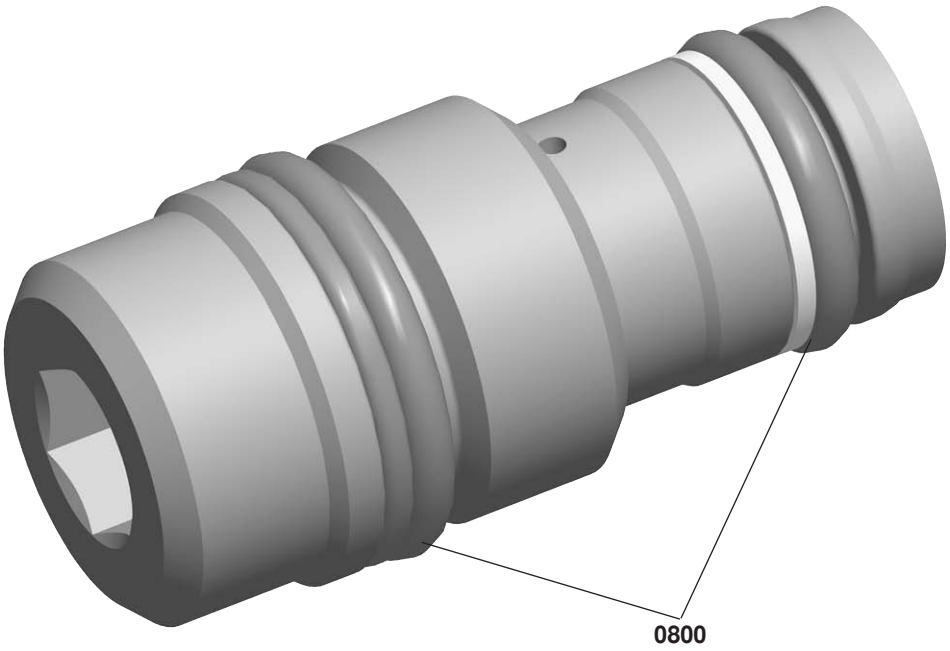
LS = Location of shoulder

All seal ring insertion faces are rounded and free of burrs

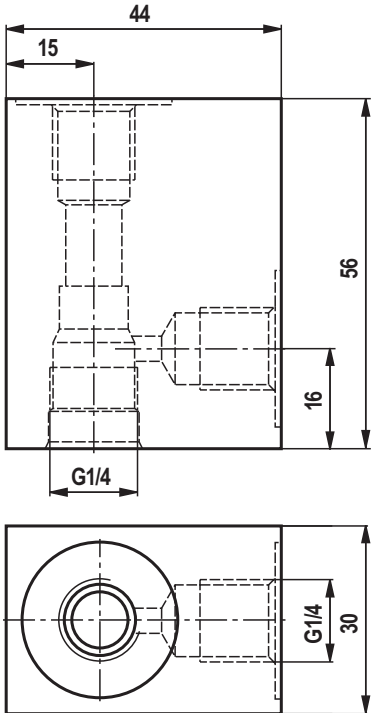
Standards:

Workpiece edges	ISO 13715
Form and position tolerance	ISO 1101
General tolerances for metal-cutting procedures	ISO 2768 (mK)
Tolerance	ISO 8015
Surface condition	ISO 1302

Individual components available



Item	Denomination	Material no.
0800	SEAL KIT MH2FR 04 K1X/2X/V	R900723359
	Housing MH1DBD 4 G10/EV01 G1/4, M14 x 1 (see below)	R900835780



Notes

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