

2-Way Flow Control Valves Size 10



Interface to DIN 24 340 and ISO

PN [$p_{max.}$] = 315 bar

7500994.06.02.06

Description (standard units)

Construction

Control function from P to A by means of two throttles connected in series, i.e. a firmly adjustable throttle behind a variable one (differential pressure piston) which maintains the pressure drop across the firmly adjustable throttle - and thus the oil flow - at a constant level. In the opposite direction from A to P the oil is allowed to flow freely via a check valve.

Actuation

The pressure is set manually with a rotary knob. The setting can, if desired, be safeguarded by means of locking (E-10-closure) or by means of a lead seal.

Mounting

The units are bolted on subplates and sealed by O-rings or installed in switchboards. This version has threaded connections.

Line connection

Threaded connection, interface to DIN 24 340 and ISO.



Features

- Favorable flow control thanks to triangle-shaped cross section of the orifice plate and to the wide angle of adjustment of the control button
- Possibility of calibration
- Designs available with roller actuation, installation in switchboard possible
- By-pass check valve incorporated

Type code

Flow control valve

M	R	10	001	3	O	...
			1	2	3				4

- 1 Actuation: **HV** – By hand, lockable
R – Roller
- 2 Line connection: **G** – Subplate, interface to DIN 24340 and ISO
C4 – Threaded connection G 1/2 switchboard installation (internal thread to DIN ISO 228/1)
- 3 Flow: **4** – 16 l/min
5 – 32 l/min
52 – 50 l/min
- 4 Sealing material: **O** – Perbunan
V – Viton

Subplate

P	MR	10	G	4	001	...	O	O
						1		

- 1 Engineering version: **1**

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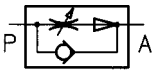


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Parameters according to VDI 3268

Type designation	2-way flow control valve
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General parameters

Symbol	
Design	Orifice plate-type throttle behind differential pressure piston
Type of mounting	Flange
Line connection	Subplate
Mounting position	Optional
Flow direction	P to A flow control function A to P free flow via check valve
Weight [kg]	3.8
Weight of subplate [kg]	2
Ambient temperature range ϑ_u [°C]	-20 ... +50
Size [NG]	10

Design [l/min]	16	32	50
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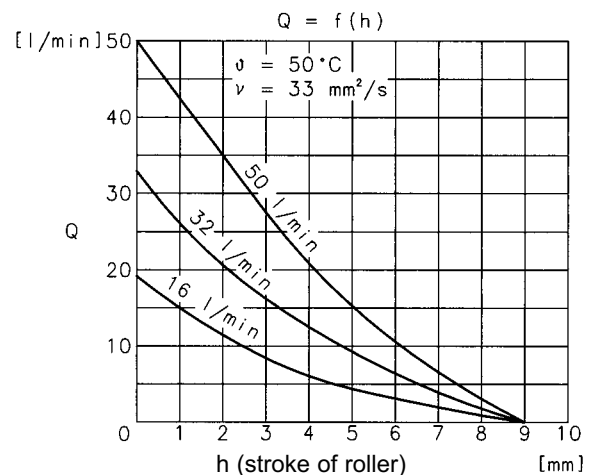
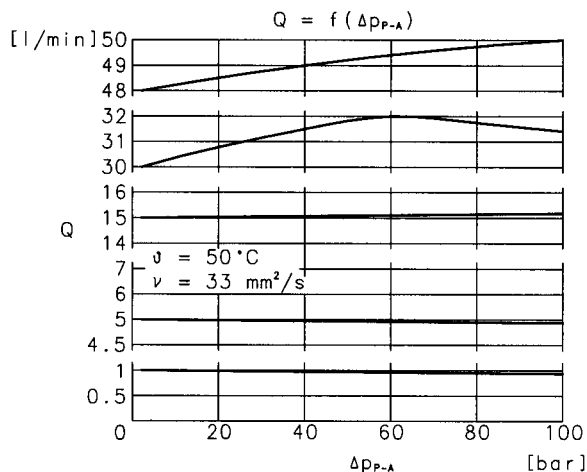
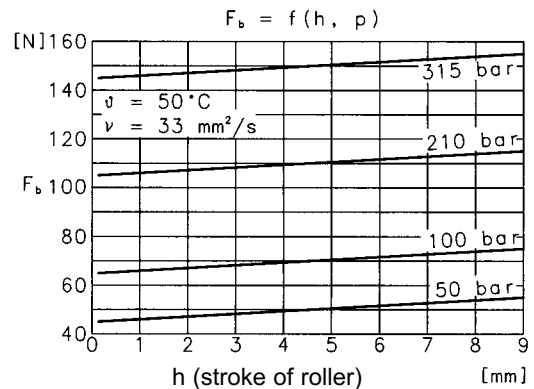
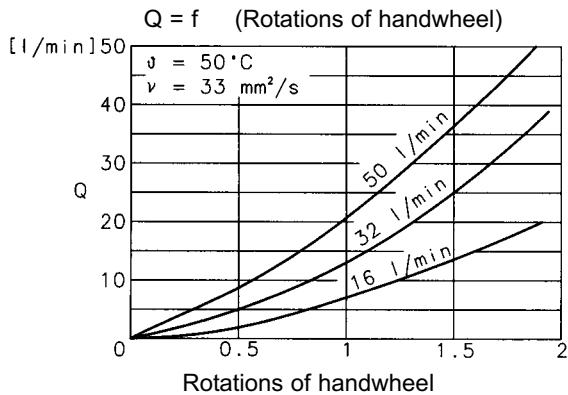
Hydraulic parameters

Operating pressure range [bar]	... 315			
Operating pressure drop Δp_{p-A}	min. [bar]	5		
	max. [bar]	310		
Pressure fluid temperature ϑ_m	max. [°C]	+70		
Viscosity range ν [mm ² /s]		12 ... 500		
Actuation	By hand or roller lever			
Actuation force F_b [N]		For roller lever see characteristic curve $F_b = f(h, p)$		
Twisting moment when manually actuated M_b [cm N]		10		
Flow	Q_{min} [l/min]	0.1	0.1	0.1
	Q_{max} [l/min]	16	32	50
Angle of rotation α [°]	approx. 700			

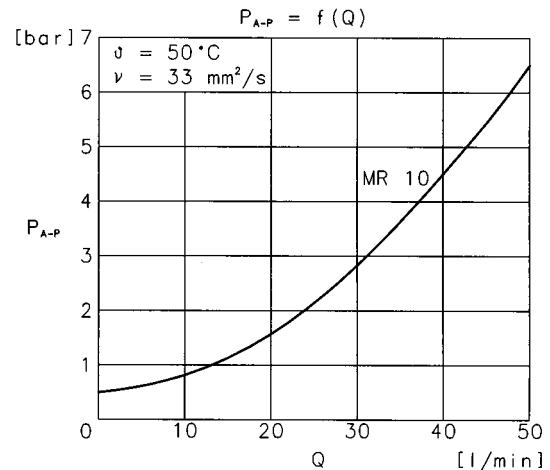
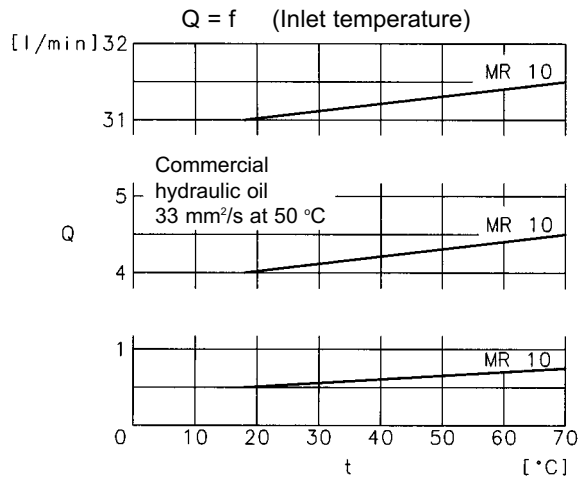
Filter

Filter size s [mm]	0.01 (for Q up to 0.5 l/min)
	0.05 (for Q exceeding 0.5 l/min)

Characteristic curves



Characteristic curves



Ordering

The units are designated by their type number. The composition of this number can be drawn from the type code. The standard versions are listed in the type survey. When ordering any of the standard versions, please state type number as well as catalog number to preclude possible misinterpretations.

When inquiring about or ordering units not listed in our type survey of this publication, the type number made up by you by means of the type code, however, will do. The corresponding catalog number will then be stated in our confirmation of order.

Units with flanged connection are delivered complete with mounting bolts and O-rings. The subplate must be ordered separately.

Example of order

2-way flow control valve size 10. Flow up to 32 l/min, with manual adjustment, lockable and corresponding subplate, screwed connection G 1/2.

Flow control valve:

Type No.: M R 10 HV G 5 001 3 O O
Cat. No.: **5100185**

Subplate:

Type No.: P MR 10 G 4 001 1 O O
Cat. No.: **2854200**

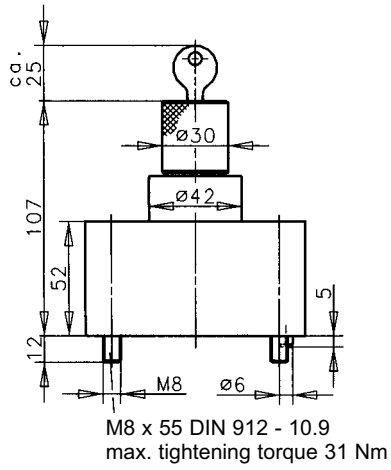
For corresponding plate-type rectifying unit, see publication 7500995.

Type survey (standard versions)

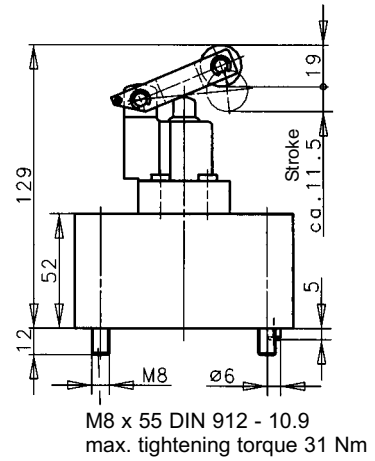
Size NG	Q [l/min]	Δp_{p-A} [bar]	Actuation	Line connection	Type	Cat. No.
10	0.1 ... 16	5 ... 310	By hand lockable	Subplate G 1/2 P MR 10 G 4 001 1 O O Cat.No. 2854200	M R 10 HV G 4 001 3 O O	5100184
	0.1 ... 32				M R 10 HV G 5 001 3 O O	5100185
	0.1 ... 50				M R 10 HV G 52 001 3 O O	5100186
	0.1 ... 16				By roller lever	M R 10 R G 4 001 3 O O
	0.1 ... 32		M R 10 R G 5 001 3 O O	5100188		
	0.1 ... 50		M R 10 R G 52 001 3 O O	5100189		
	0.1 ... 16		By hand	Subplate G 1/2 for switchboard installation	M R 10 HV C4 4 001 3 O O	5100210
	0.1 ... 32				M R 10 HV C4 5 001 3 O O	5100209

Dimensional drawings

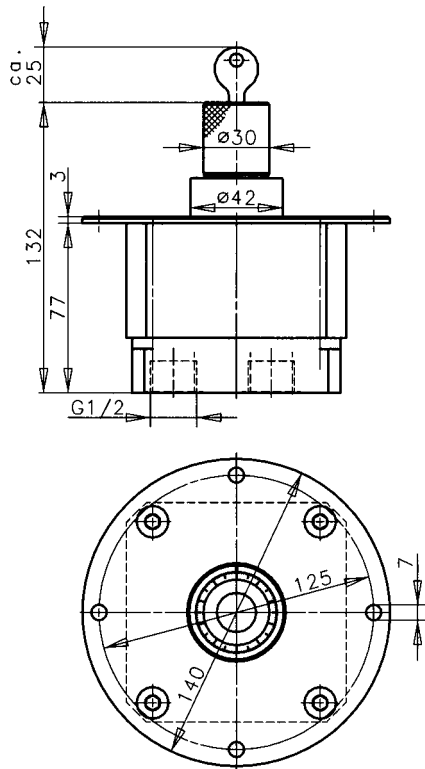
**Flow regulation valves
M R 10 HV ...**



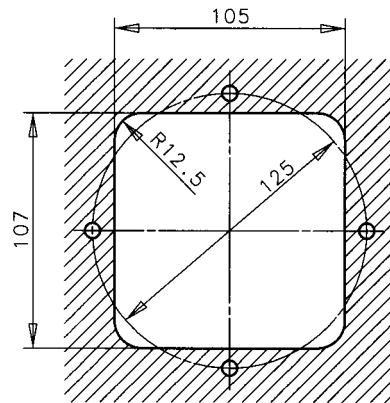
M R 10 R ...



M R 10 HV C ...

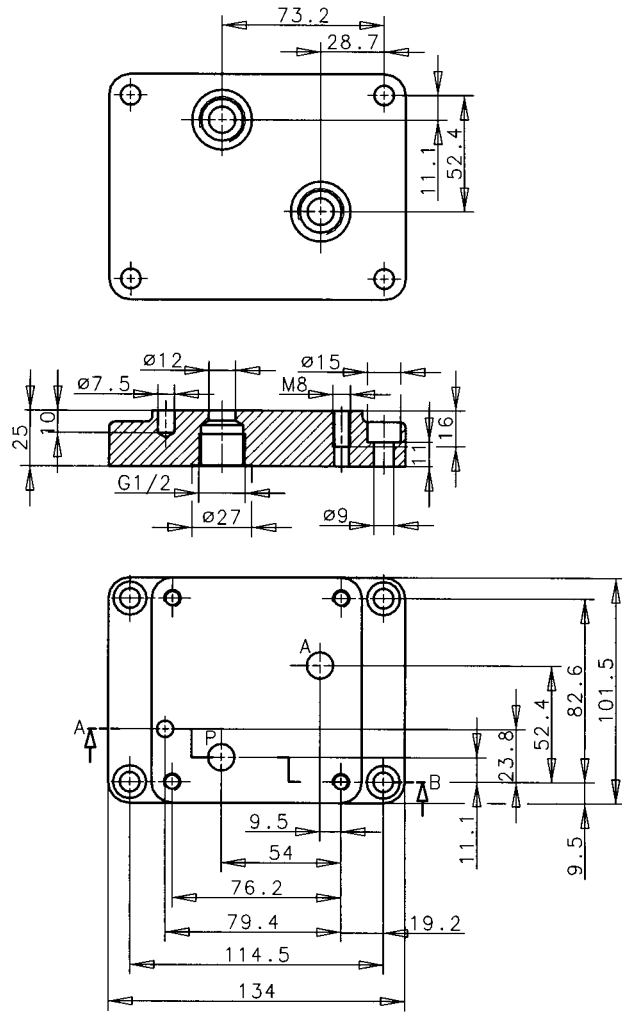


Recess in mounting wall

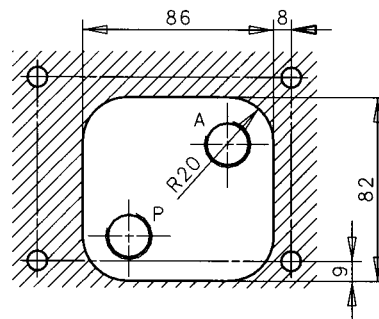


Dimensional drawings

Subplate G 1/2

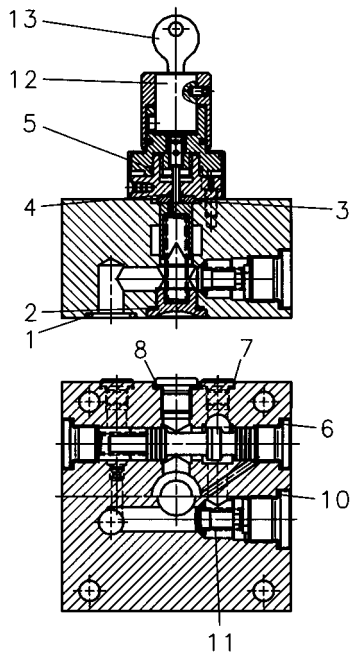


Recess in mounting wall

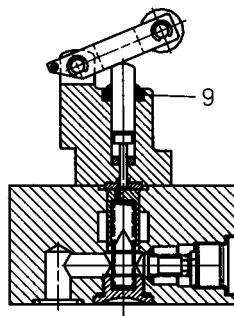


Spare parts drawings

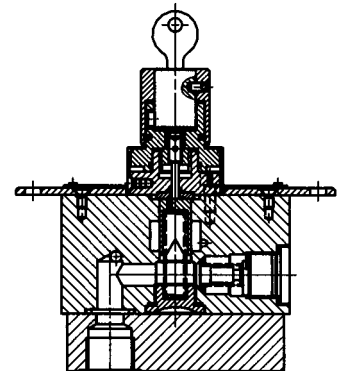
M R 10 HV G ...



M R 10 R G ...



M R 10 HV C ...



Spare parts (Number of pieces)

Part	Designation	M R 10 HV G M R 10 HV C	M R 10 R G	Cat. No.
1	O-ring (17.1 x 2.6)	2	2	0701290
2	O-ring (20.3 x 1.8)	1	1	0701259
3	O-ring (17.1 x 2.6)	1	1	0701290
4	O-ring (2.8 x 1.6)	1	1	0655263
5	O-ring (20.3 x 1.8)	1	-	0701259
6	Sealing ring (A 16 x 20 DIN 7603-Cu)	2	2	0700834
7	Sealing ring (A 10 x 14 x 1)	1	1	0700829
8	Sealing ring (14 x 18 x 1.5 DIN 7603-Cu)	1	1	0700832
9	Sealing ring (10 x 18 x 7)	-	1	0701017

Part	Designation	M R 10 HV G M R 10 HV C	M R 10 R G	Cat.No.
10	Sealing ring (A 20 x 24 DIN 7603-Cu)	1	1	0700836
11	Check valve	1	1	0657371
12	Lock cylinder with key	1	-	0568519
13	Key	1	-	0660051

Mounting bolts

Part	Designation	M R 10 HV G M R 10 HV C	M R 10 R G	Cat.No.
-	Cylinder bolt (M 8 x 55 DIN 912-10.9)	4	4	0700442

Spare parts kits

1 set of spare parts consists of parts:	1 to 5	1 to 4, 9	0729137 0729138
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