Flow Regulator

Product Information

A. u. K. Müller

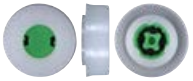
Solenoid valves
Control valves
Special valves and systems

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Series MR

MR04		Tm: 65 °C (149 °F) max.
MR 05 (MR 07)		Tm: 65 °C (149 °F) max.
MR 06		Tm: 65 °C (149 °F) max.
MR 11		Tm: 65 °C (149 °F) max.
MR 12		Tm: 90 °C (194 °F) max.
MR 19		Tm: 98 °C (208 °F) max.

Description

Flow regulators maintain a defined flow independent from the supplies pressure. They are recommended to ensure a uniform distribution of water also in case of pressure fluctuations.

Pressure differences might be caused by level differences in multistorey buildings as well as if showers are taken simultaneously e.g. in commercial shower applications.

Flow regulators are usually installed directly into the inlet of faucets, flow heaters, solenoid valves, or similar. Depending on the valves design, they can be placed in the inlet, in the valve seat or in the outlet nozzle.

In a lot of applications flow limitations are already standard (e.g. 6 l/min or 8 l/min for faucets).

In addition to the constant water supply, the user saves water while keeping the accustomed comfort using washstand or shower.

Applications

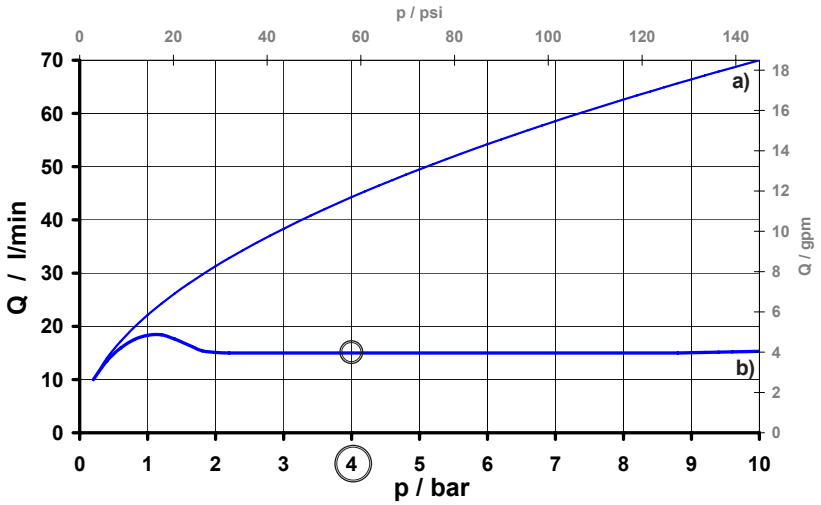
- Solenoid valves
- Sanitary faucets
- Instantaneous water heaters
- Vending machines
- Eye shower

Characteristics

- Reduced water consumption
- Constant flow rate
- Reduced decrease of pressure in water conduits used by several consumers
- Compensation of pressure surge

Typical Performance Curve

a) without flow regulator
b) with flow regulator
nominal flow rate defined at 4 bar



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Series MR

MR 04

Ø 19,0 mm

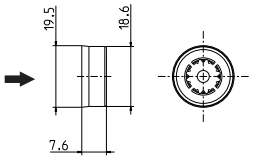
nominal flow rate at 4 bar					
Q [l/min]	Q [USgal/min]	Tolerance	Id.-no.	Outlet Side View Inlet	Colour Code
5,0	1,3	± 15 %	003177		red
8,0	2,1	± 15 %	003178		black
10,0	2,6	± 15 %	003179		white
12,0	3,2	± 15 %	003180		orange
14,0	3,7	± 15 %	003181		light blue
15,0	3,9	± 15 %	003182		purple
16,0	4,2	± 15 %	003183		grey
18,0	4,8	± 15 %	003172		brown
20,0	5,3	± 15 %	003173		green

Technical Data

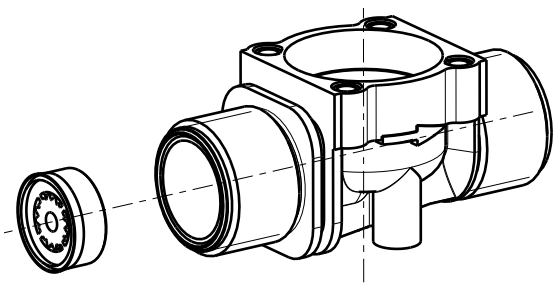
T-Medium	65	°C max.
p-Operating	1 - 10	bar

Materials

star-shaped regulating element	POM
socket	PA
regulating element / elastomer	EPDM



Mounting example



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Series MR

MR 05 (MR07)

Ø 9,5 mm

nominal flow rate at 4 bar

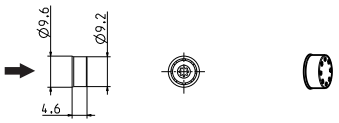
Q [l/min]	Q [USgal/min]	Tolerance	Id.-no.	Outlet Side View Inlet	Colour Code
0,5	0,13	± 50%	003387		yellow
1,0	0,26	± 30%	004703		pink
1,4	0,37	± 30%	003174		light blue
1,9	0,50	± 30%	004275		black
2,5	0,66	± 30%	003175		green
3,0	0,79	± 30%	004184		purple
3,5	0,93	± 20%	004830		dark blue
5,0	1,32	± 20%	003084		red
6,0	1,58	± 20%	010495		grey
8,0	2,11	± 20%	003176		white
9,0	2,38	± 20%	004756		orange

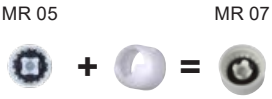
Technical Data

T-Medium	65	°C max.
p-Operating	1 - 10	bar

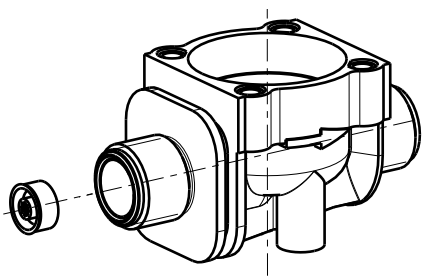
Materials

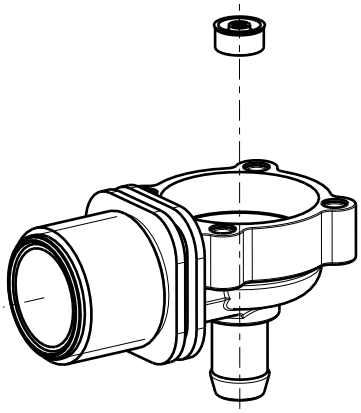
star-shaped regulating element	POM
socket	POM
regulating element / elastomer	EPDM





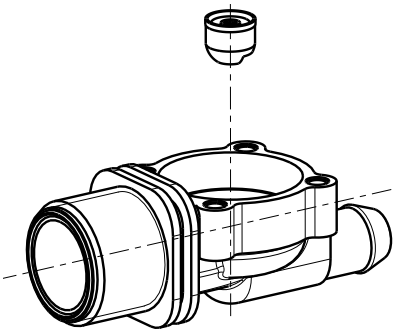
Mounting examples MR 05





Flow regulators that are used inside the valves, can only be mounted at the factory. Retrofitting is not possible.

Mounting example MR 07



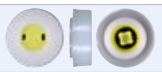
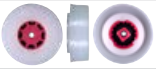
The flow regulator MR 07 is used in straight and multi-chamber valves and can only be mounted at the factory. Retrofitting or individual sale of the MR 07 is therefore not possible.

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Series MR

MR 06

Ø 19,0 mm

nominal flow rate at 4 bar					
Q [l/min]	Q [USgal/min]	Tolerance	Id.-no.	Outlet Side View Inlet	Colour Code
0,5	0,13	± 50 %	004327		yellow
1,0	0,26	± 30 %	004833		pink
1,4	0,37	± 30%	004328		light blue
1,9	0,50	± 30%	004329		black
2,5	0,66	± 30%	004330		green
3,0	0,79	± 30%	004331		purple
3,5	0,93	± 20%	004832		dark blue
5,0	1,32	± 20%	006598		red
6,0	1,58	± 20%	010967		grey
8,0	2,11	± 20%	009999		white
9,0	2,38	± 20%	004335		orange

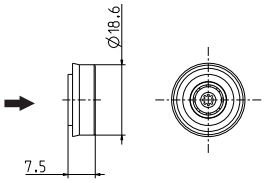
Technical Data

T-Medium	65	°C max.
p-Operating	1 - 10	bar

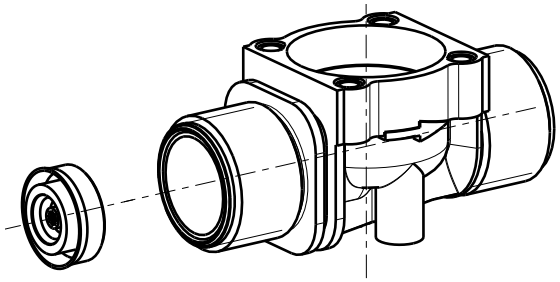
Materials

star-shaped regulating element	POM
socket	POM
regulating element / elastomer	EPDM





Mounting example



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Series MR

MR 11

Ø 19,0 mm

nominal flow rate at 4 bar

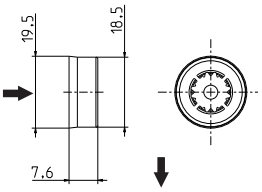
Q [l/min]	Q [USgal/min]	Tolerance	Id.-no.	Outlet Side View Inlet	Colour Code
5,0	1,3	± 15 %	007623		red
8,0	2,1	± 15 %	007624		black
10,0	2,6	± 15 %	006956		white
12,0	3,2	± 15 %	007625		orange
14,0	3,7	± 15 %	011349		light blue
15,0	3,9	± 15 %	011348		purple
16,0	4,2	± 15 %	011347		grey
18,0	4,8	± 15 %	011346		brown
20,0	5,3	± 15 %	007626		green

Technical Data

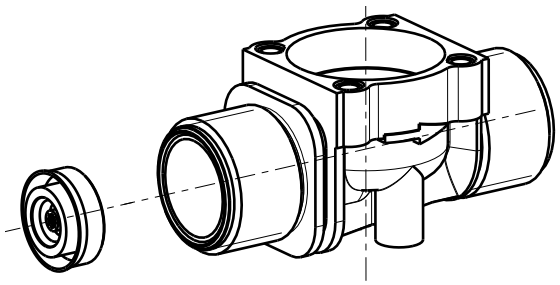
T-Medium	65	°C max.
p-Operating	1 - 10	bar

Materials

star-shaped regulating element	POM
socket	POM
regulating element / elastomer	EPDM



Mounting example



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Series MR

MR 12

Ø 9,5 mm

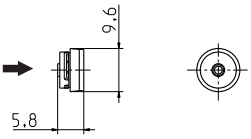
nominal flow rate at 4 bar				
Q [l/min]	Q [USgal/min]	Tolerance	Id.-no.	Inlet Side View Einlaufseite
4,0	1,06	± 20%	008926*	
5,0	1,32	± 20%	008079	
5,0	1,32	± 20%	008673*	

Technical Data

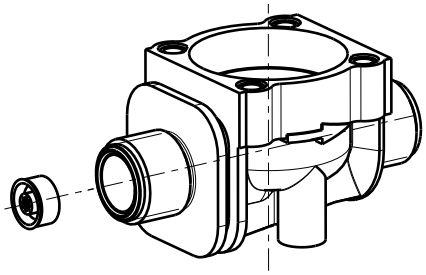
T-Medium	90	°C max.
p-Operating	1 - 10	bar

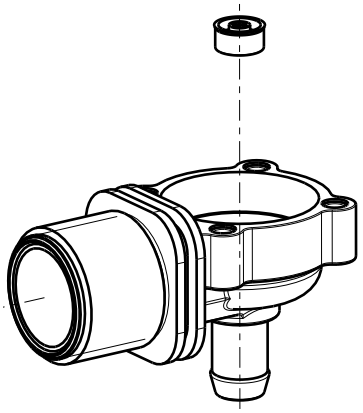
Materials

star-shaped regulating element	PA 6/6
regulating element / elastomer	NBR or FKM*



Mounting examples





Flow regulators that are used inside the valves, can only be mounted at the factory. Retrofitting is not possible.

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Series MR

MR 19

Ø 19,0 mm

nominal flow rate at 4 bar

Q [l/min]	Q [USgal/min]	Tolerance	Id.-no.	Outlet / Side View / Inlet
3,5	0,9	± 15 %	006903	
3,8	1,0	± 15 %	006904	
5,0	1,3	± 15 %	006905	
7,6	2,0	± 15 %	006902	
8,0	2,1	± 15 %	006834	
10,0	2,6	± 15 %	006588	
12,0	3,1	± 15 %	006799	
15,0	3,9	± 15 %	006899	
15,0	3,9	± 15 %	008721*	
16,0	4,2	± 15 %	006923	
18,0	4,8	± 15 %	007556	
18,0	4,8	± 15 %	008836*	
20,0	5,3	± 20 %	006900	
22,0	5,8	± 20 %	006901	



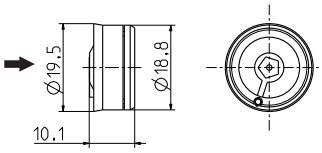
US-Patent Nr. 5 899 224

Technical Data

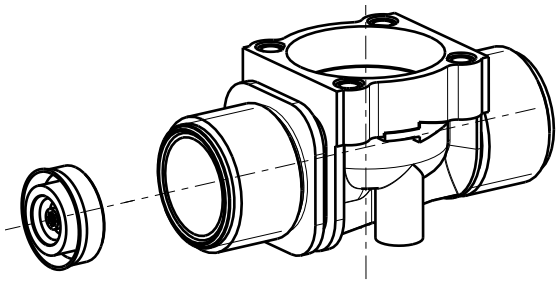
T-Medium	98	°C max.
p-Operating	1 - 10	bar

Materials

star-shaped regulating element	PEI
socket	PEI
regulating element / elastomer	EPDM or FKM*



Mounting example



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