

PO, WR1, FR, RM

Роторные индикаторы и датчики потока без выходного сигнала

GHM MESSTECHNIK



Технические характеристики

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Flow Indicator PO



- Simple flow display
- Rotatable connections
- Removable connections thanks to clip-fitting
- Different connection possible on each side

Characteristics

Mechanical flow indicator, for fluid media, with rotor for quantitative flow display. The rotor turns in proportion to the flow.

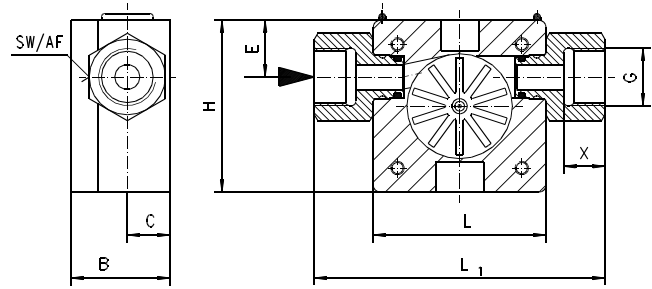
Technical data

Nominal width	DN 10, DN 25	
Process connection	female thread G 3/8, G 1	
Display range	0.1..100 l/min	for details see table "Ranges and weights"
Q_{max.}	to 100 l/min	
Pressure resistance	PN 16 bar	
Medium temperature	0..60 °C	
Ambient temperature	0..60 °C	
Materials medium-contact	PPS, PSU Ultrason, PVDF, ceramic ZrO ₂ -TZP, Iglidur X, FKM	
Medium	water (oils have a tendency to a higher running-up value)	
Weight	see table "Ranges and weights"	
Installation location	as desired, except for inwards flow from above	

Ranges and weights

G	Types	PN bar	Range l/min H ₂ O	Weight kg
G 3/8	PO-010GVA020	16	0.1 - 1.5	0.1
	PO-010GVA050		0.2 - 10.0	
	PO-010GVA070		0.4 - 12.0	
G 1	PO-025GVA080	16	2.0 - 30.0	0.4
	PO-025GVA120		3.0 - 60.0	
	PO-025GVA160		4.0 - 100.0	

Dimensions



G	H	L	L1	B	C	E	SW	X
G 3/8	50	50	84	29	12.5	16.5	22	12
G 1	70	70	110	53	23.0	27.5	38	18

Handling and operation

Installation

Installation location as desired (please ensure best possible venting).
Because of the rotatable connections, no further adapter is required.

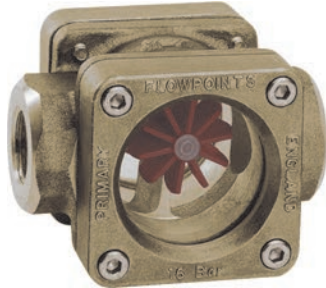
Ordering code

PO- 1. 2. 3. 4. 5.

○=Option

1. Nominal width		
010	DN 10 – G 3/8	
025	DN 25 – G 1	
2. Mechanical connection		
G	female thread	
3. Connection material		
V	PVDF	
M	○ CW614N	
K	○ stainless steel	
4. Housing material		
A	PPS with transparent polysulfone cover	
5. Inwards flow drilling		
020	Ø 2	•
050	Ø 5	•
070	Ø 7	•
080	Ø 8	•
120	Ø 12	•
160	Ø 16	•

Flow Indicator FR-...GR



- Rotor on both sides directly behind natural glass
- Installation location as desired

Characteristics

Mechanical flow indicator, for fluid media, with twin rotor for quantitative flow display. The rotor turns in proportion to the flow. Robust construction in red bronze/brass

Technical data

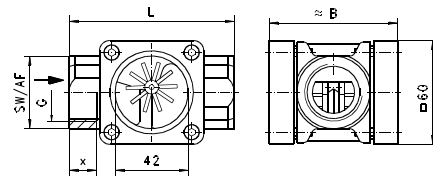
Nominal width	DN 15..25	
Process connection	female thread G 1/2..G 1	
Display range	2.5..65 l/min	for details see table "Ranges"
Q_{max.}	to 65 l/min	
Pressure resistance	PN 16 bar	
Medium temperature	0..+100 °C	
Ambient temperature	0..+100 °C	
Materials medium-contact	Rg 5, CW614N, soda lime glass, POM Klingersil C4400	
Medium	water (oils have a tendency to a higher running-up value)	
Weight	see table "Dimensions and weights"	
Installation location	as desired, except for inwards flow from above	

Ranges

G	Types	Running-up amount for rotor l/min H ₂ O	Q _{max.} recommended
G 1/2	FR-015GR	2.5	25
G 3/4	FR-020GR	3.0	45
G 1	FR-025GR	5.0	65

Dimensions and weights

G	Types	L	B	SW	X	Weight kg
G 1/2	FR-015GR	85	68	38	14	1.20
G 3/4	FR-020GR					1.10
G 1	FR-025GR	95	74	42	16	1.25



Ordering code

FR - 1. 2. 3.
FR - G R

1.	Nominal width
015	DN 15 - G 1/2
020	DN 20 - G 3/4
025	DN 25 - G 1
2.	Process connection
G	female thread
3.	Connection material
R	red bronze

Flow Indicator RM



- Good view of rotor
- High temperature resistance
- Dome form

Characteristics

Mechanical flow indicator, for fluid media, with rotor for quantitative flow display. The rotor turns in proportion to the flow. Robust construction using red bronze / brass or stainless steel.

Technical data

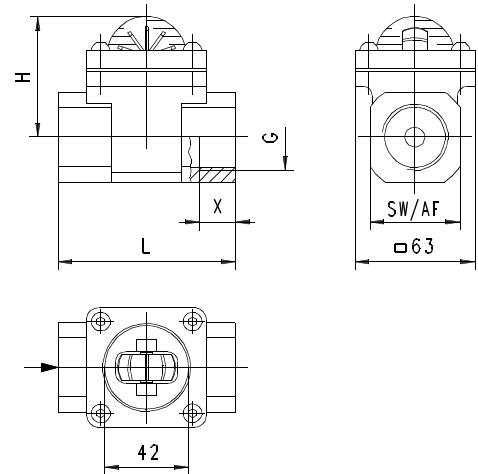
Nominal width	DN 8.0.25	
Process connection	female thread G 1/4..G 1	
Display range	0.7..60 l/min	for details see table "Ranges"
Pressure loss	up to 0.7 bar	
Q_{max.}	to 60 l/min	
Pressure resistance	PN 16 bar	
Medium temperature	0..+100 °C water 0..+200 °C oils	
Ambient temperature	0..+200 °C	
Materials medium-contact	<i>red bronze model:</i> Rg, CW614N, borosilicate glass, 1.4301, PPS, Klengersil C-4400	<i>Stainless steel construction:</i> 1.4408, CW614N, borosilicate glass, 1.4301, PPS Klengersil C-4400
Medium	water (oils have a tendency to a higher running-up value)	
Weight	see table "Dimensions and weights"	
Installation location	as desired, except for inwards flow from above	

Ranges

G	Types	Running-up amount for rotor l/min H ₂ O	Q _{max.} recommended	Pressure loss bar at Q _{max.} H ₂ O
G 1/4	RM-008G.	0.7	8	0.20
G 3/8	RM-010G.	0.8	10	0.15
G 1/2	RM-015G.	1.0	20	0.40
G 3/4	RM-020G.	1.2	40	0.25
G 1	RM-025G.	1.5	60	0.70

Dimensions and weights

G	Types	L	H	SW	X	Weight kg
G 1/4	RM-008G.	76	53	28	12	0.70
G 3/8	RM-010G.				16	
G 1/2	RM-015G.				14	
G 3/4	RM-020G.	89	66	45	18	1.25
G 1	RM-025G.				18	1.20



Ordering code

RM - 1. 2. 3.
 G

Q=Option

1. Nominal width
008 DN 8 - G 1/4
010 DN 10 - G 3/8
015 DN 15 - G 1/2
020 DN 20 - G 3/4
025 DN 25 - G 1
2. Process connection
G female thread
3. Connection material
R red bronze
K <input type="checkbox"/> stainless steel

Flow Indicator WR1-...GM / K



- Internal wiper provides ability to clean the glass without removing the device.
- Sliding bearing made from PEEK for liquids, or grease-free ball bearing for air and gases
- Rotor visible from 360°

Characteristics

Mechanical flow indicator, for fluid media, with rotor for quantitative flow display. The rotor turns in proportion to the flow. Robust construction in brass or stainless steel.

Technical data

Nominal width	DN 8..40	
Process connection	female thread G 1/4..G 1 1/2	
Display range	0.7..700 l/min	for details see table "Ranges"
Q_{max.}	to 700 l/min	
Pressure resistance	PN 16 bar	
Medium temperature	0..+100 °C	
Ambient temperature	0..+70 °C	
Materials medium-contact	Brass construction: CW614N nickelled, borosilicate glass, NBR DN 8..25: POM red DN 32..40: Nylon white for fluids: PEEK for gases: Steel 100 CR 6 chrome coated	Stainless steel construction: 1.4305, borosilicate glass, FKM
Medium	water, gases (oils have a tendency to a higher running-up value)	
Weight	see table "Dimensions and weights"	
Installation location	as desired, except for inwards flow from above	

Ranges

Fluids

G	Start-up quantity for rotor, l/min			Q _{max.} recommended	Types
	H ₂ O	40 mm ² /s	41..150 mm ² /s		
G 1/4	0.7	1.5	2.7	4	WR1-008G.W
G 3/8	0.8		2.8	8	WR1-010G.W
G 1/2	1.4	1.8	3.2	12	WR1-015G.W
		2.7	5.9	25	WR1-020G.W
G 1	1.7	3.0	7.0	40	WR1-025G.W
G 1 1/4	8.0	5.9	7.9	80	WR1-032G.W
G 1 1/2		7.3		100	WR1-040G.W

Special ranges are available.

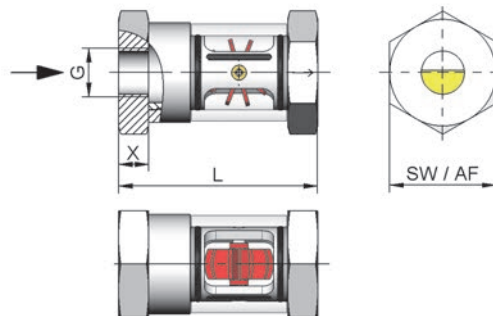
Air / gases

G	Running-up amount for rotor l/min 1 bar abs 20 °C	Q _{max.} recommended	Types
G 1/4	18	60	WR1-008G.G
G 3/8	20	150	WR1-010G.G
G 1/2	25	250	WR1-015G.G
G 3/4	25	250	WR1-020G.G
G 1	35	350	WR1-025G.G
G 1 1/4	60	600	WR1-032G.G
G 1 1/2	70	700	WR1-040G.G

Special ranges are available.

Dimensions and weights

G	Types	L	SW	X	Weight kg
G 1/4	WR1-008G.	71	36	9	0.35
G 3/8	WR1-010G.				
G 1/2	WR1-015G.	86	46	13	0.65
G 3/4	WR1-020G.	94		16	
G 1	WR1-025G.	104			
G 1 1/4	WR1-032G.	120	65	19	1.60
G 1 1/2	WR1-040G.	130		20	1.70



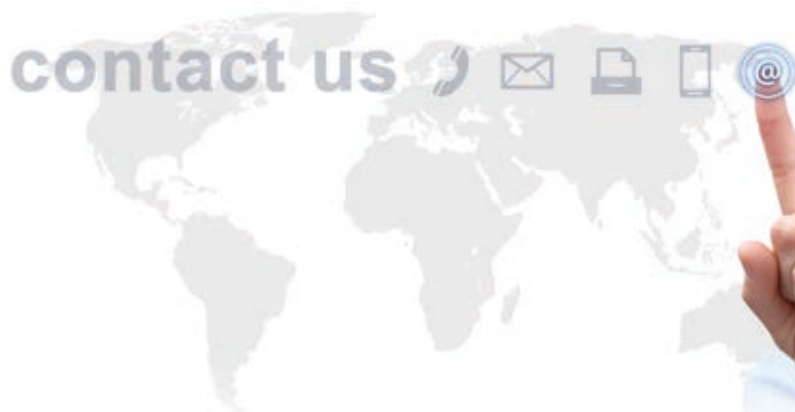
Ordering code

WR1 - 1. 2. 3. 4. G

1. Nominal width	2. Process connection	3. Connection material	4. For medium
008 DN 8 - G 1/4	G female thread	M brass	W fluids
010 DN 10 - G 3/8		K stainless steel	G air and gases
015 DN 15 - G 1/2			
020 DN 20 - G 3/4			
025 DN 25 - G 1			
032 DN 32 - G 1 1/4			
040 DN 40 - G 1 1/2			

Options

- smaller start-up quantities / special diaphragm
- Wiper seal made from EPDM



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