GHM Messtechnik GmbH – Sales Center International
Schloßstraße 6 ● 88453 Erolzheim ● Germany
Fon +49-7354-937233-0 ● Fax -88
www.ghm-messtechnik.de ● info@ghm-messtechnik.de

Flow - sight glass, flap, ball

Characteristics

System	Flow	Sight glass Flap Ball
Evaluating	Display	
Nominal widths	DN 8..50	
Range	0.1..250 l/min	
Media	Water Oils	
Pressure resistance	Max. 16 bar	
Temperature	up to 200 °C	

Applications

- **Visual flow control of fluids**
- **Test equipment**
- **Filling plants**

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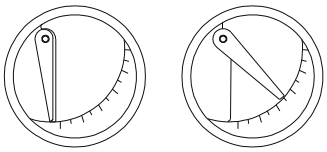
Function and benefits

The liquid medium enters the sight glass and can be visually checked for quality and consistency.

Flap

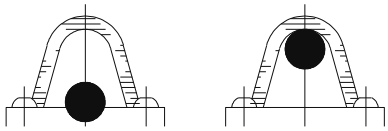
The position of the flap can be read on a scale.



The flap indicates the position in the sight glass.

Ball

A ball in a glass dome shows that flow is present. The device design is also applicable for gases.
Function: Yes/No display



With its position in the sight glass, the ball indicates a trend of the flow value.

Device overview

Principle	Device		Range l/min	Pressure resistance in bar	Medium temperature	Materials	Connection	Page
Sight glass	**FH**		0..65	PN 16	-20..+200 °C	Red bronze	G $^1/_2$..G 1	**3**
	ON		0..40	PN 6	-20..+70 °C	Brass	G $^1/_4$..G $^1/_2$	**4**
	OW		0.250	PN 16	-20..+70 °C	Brass	G $^1/_4$..G 1	**5**
	WR1		0..220	PN 16	-20..+100 °C	Brass or stainless steel	G $^1/_4$..G 1$^1/_2$	**6**
Flap	**FQ**		2.1..24	PN 16	-20..+200 °C	Red bronze	G $^1/_2$..G 1	**8**
	FK		5..56	PN 16	-20..+170 °C	Tin bronze	G $^1/_2$..G 2	**7**
	SK		3..195	PN 16	-20..+170 °C	Tin bronze	G $^1/_2$..G 2	**9**
Ball	**BL**		0.3..23	PN 16	-20..+200 °C	Stainless steel	G $^1/_4$..G 1$^1/_2$	**10**

Accessories	● Type ZV / ZE (Filter)	**11**

Errors and technical modifications reserved.

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www.ghm-messtechnik.de ● info@honsberg.com

Flow Indicator FH-...GR

- **No moving parts internally**
- **Installation location as desired**
- **For heavily soiled or coloured fluids**
- **Double-sided large-surface window**
- **Natural glass**

Characteristics

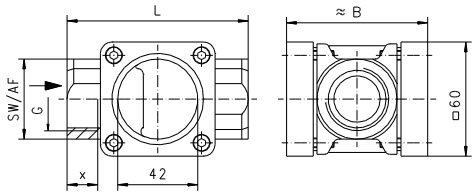
Devices made from solid red bronze, where the medium can be visually examined through the sight glass (fluid level, colour, bubbles,...).

Technical data

Nominal width	DN 15..25
Process connection	female thread G $^1/_2$..G 1
$Q_{max.}$	G $^1/_2$ - 25 l/min G $^3/_4$ - 45 l/min G 1 - 65 l/min
Pressure resistance	PN 16 bar
Medium temperature	0..100 °C water -20..+200 °C oils
Ambient temperature	-20..+100 °C
Materials medium-contact	Rg 5, CW614N, soda lime glass, Klingersil C4400
Medium	water, oils
Weight	see table "Dimensions and weights"
Installation location	as desired

Dimensions and weights

G	Types	L	B	SW	X	Weight kg
G $^1/_2$	FH-015GR	85	68	38	14	1.20
G $^3/_4$	FH-020GR					1.10
G 1	FH-025GR	95	74	42	16	1.25



Ordering code

FH - [1.] [2. G] [3. 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

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Flow Indicator ON-...GM

- **No moving parts internally**
- **For heavily soiled or coloured fluids**
- **Natural glass**

Characteristics

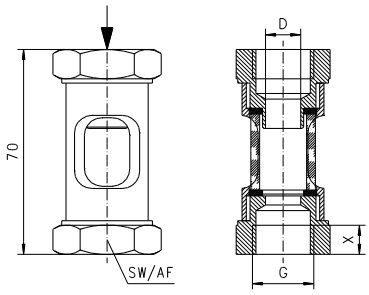
Devices made from solid brass, where the medium enters from above, and so can be visually examined through the sight glass (colour, bubbles, amount...). The device has a drip nozzle for the inspection of small flow rates.

Technical data

Nominal width	DN 8..15
Process connection	female thread G $^1/_4$..G $^1/_2$
$Q_{max.}$	G $^1/_4$ - 15 l/min G $^3/_8$ - 20 l/min G $^1/_2$ - 40 l/min
Pressure resistance	PN 6 bar
Medium temperature	-20..+70 °C
Ambient temperature	-20..+70 °C
Materials medium-contact	CW614N pickled, natural glass
Medium	water, oils
Weight	see table "Dimensions and weights"
Installation location	vertical inwards flow from above; other installation arrangements without drip nozzle function.

Dimensions and weights

G	Types	D	SW	X	Weight kg
G $^1/_4$	ON-008GM	5	19	12	0.08
G $^3/_8$	ON-010GM	8	27	11	0.16
G $^1/_2$	ON-015GM	12	32	10	0.20



Ordering code

ON - [1.] [2. G] [3. M]

1.	**Nominal width**	
	008	DN 8 - G $^1/_4$
	010	DN 10 - G $^3/_8$
	015	DN 15 - G $^1/_2$
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass

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Flow Indicator OW-...GM

- **No moving parts internally**
- **Installation location as desired**
- **For heavily soiled or coloured fluids**
- **Natural glass**

Characteristics

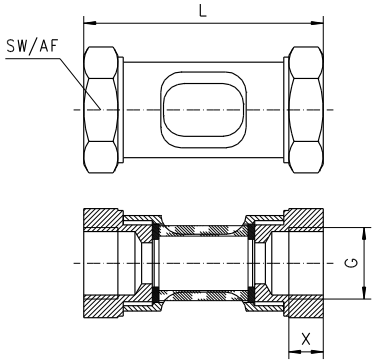
Devices made from solid brass, where the medium can be visually examined through the sight glass (fluid level, colour, bubbles,...).

Technical data

Nominal width	DN 8..50
Process connection	female thread G 1/4..G 2
$Q_{max.}$	G 1/4 - 15 l/min G 3/8 - 20 l/min G 1/2 - 30 l/min G 1 - 90 l/min G 1 1/2 - 220 l/min G 2 - 250 l/min
Pressure resistance	PN 6 bar
Medium temperature	-20..+70 °C
Ambient temperature	-20..+70 °C
Materials medium-contact	DN 8..15 - CW614N pickled, natural glass DN 25..50 - CW614N nickelled, acrylic glass
Medium	water, oils
Weight	see table "Dimensions and weights"
Installation location	as desired

Dimensions and weights

G	Types	L	SW	X	Weight kg
G 1/4	OW-008GM	70	19	12	0.08
G 3/8	OW-010GM		27	11	0.16
G 1/2	OW-015GM		32	10	0.20
G 1	OW-025GM	90	46	19	0.82
G 1 1/2	OW-040GM	130	60	23	1.40
G 2	OW-050GM	148	65	25	1.50



Ordering code

OW - [1.] [2. G] [3. M]

1.	Nominal width	
	008	DN 8 - G 1/4
	010	DN 10 - G 3/8
	015	DN 15 - G 1/2
	025	DN 25 - G 1
	040	DN 40 - G 1 1/2
	050	DN 50 - G 2
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass

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Flow Indicator WO1-...GM / K

- **No moving parts internally**
- **Internal wiper provides ability to clean the glass without removing the device.**
- **Installation location as desired**
- **For heavily soiled or coloured fluids**
- **360 ° visibility**

Characteristics

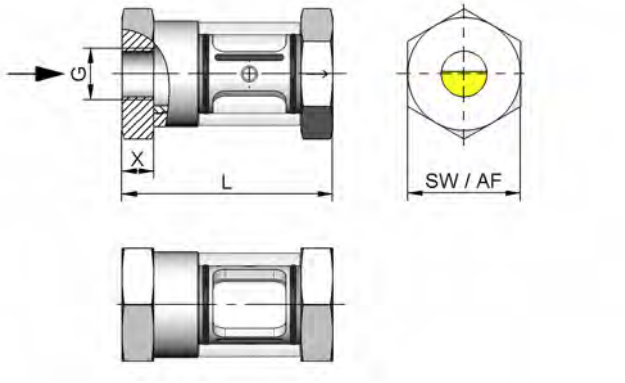
Devices made from solid brass or stainless steel, where the medium can be visually examined through the sight glass (fluid level, colour, bubbles, ...). A wiper makes it possible to clean the sight glass.

Technical data

Nominal width	DN 8..40	
Process connection	female thread G $^1/_4$..G $1^1/_2$	
$Q_{max.}$	G $^1/_4$ - 15 l/min G $^3/_8$ - 20 l/min G $^1/_2$ - 30 l/min G $^3/_4$ - 60 l/min G 1 - 90 l/min G $1^1/_4$ - 150 l/min G $1^1/_2$ - 220 l/min	
Pressure resistance	PN 16 bar	
Medium temperature	-20..+100 °C	
Ambient temperature	-20..+70 °C	
Materials medium-contact	*Brass construction*: CW614N nickelled, borosilicate glass, NBR	*Stainless steel construction:* 1.4305, borosilicate glass, FKM
Medium	water, oils	
Weight	see table "Dimensions and weights"	
Installation location	as desired	

Dimensions and weights

G	Types	L	SW	X	Weight kg
G $^1/_4$	WO1-008G.	71	36	9	0.3
G $^3/_8$	WO1-010G.				
G $^1/_2$	WO1-015G.	86	46	13	0.6
G $^3/_4$	WO1-020G.	94		16	
G 1	WO1-025G.	104			
G $1^1/_4$	WO1-032G.	120	65	19	1.5
G $1^1/_2$	WO1-040G.	130		20	1.6



Ordering code

WO1 - 1. [ ] 2. [G] 3. [ ]

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
	032	DN 32 - G $1^1/_4$
	040	DN 40 - G $1^1/_2$
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass
	K	stainless steel

Options

- Wiper seal made from EPDM

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Flow Indicator FK-...GR

- **High temperature resistance**
- **Double-sided large-surface window**
- **Natural glass**
- **Visualisation of the flow rate**

Characteristics

Mechanical flow indicator for fluid media. A plastic flap in the area of flow is lifted by the volume flow, and indicates the present flow rate.

Technical data

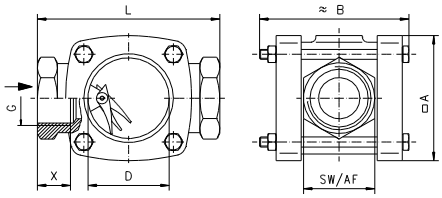
Nominal width	DN 15..50	
Process connection	female thread G 1/2..G 2	
Display range	5..250 l/min	for details see table "Ranges"
$Q_{max.}$	to 250 l/min	
Pressure resistance	PN 16 bar	
Media temperature	0..+100 °C water -20..+170 °C oil	
Ambient temperature	-20..+100 °C	
Materials medium-contact	cast tin bronze, grey iron, crown hardened glass, Flexicarb with nickel reinforcement, 1.4436, PA 6.6	
Medium	water (oils available on request)	
Weight	see table "Dimensions and weights"	
Installation location	Standard: Horizontal inwards flow from the left; optionally inwards flow from below, installation position affects the range.	

Ranges

G	Approx. inflow rate l/min H_2O	$Q_{max.}$ recommended	Types
G 1/2	5	25	FK-015GR
G 3/4	7	40	FK-020GR
G 1	14	60	FK-025GR
G 1 1/2	27	120	FK-040GR
G 2	56	250	FK-050GR

Dimensions and weights

G	Types	L	A	B	D	SW	X	Weight kg
G 1/2	FK-015GR	90	60	74	40	36	14	0.9
G 3/4	FK-020GR							0.8
G 1	FK-025GR	110	76	95	49	43	18	1.6
G 1 1/2	FK-040GR	130	90	116	60	61	20	3.0
G 2	FK-050GR	170	114	138	80	74	25	5.9



Ordering code

FK - [1.] [2. G] [3. R]

1.	**Nominal width**	
	015	DN 15 - G 1/2
	020	DN 20 - G 3/4
	025	DN 25 - G 1
	040	DN 40 - G 1 1/2
	050	DN 50 - G 2
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	R	cast tin bronze

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Flow Indicator FQ-...GR

- **High temperature resistance**
- **Double-sided large-surface window**
- **Natural glass**
- **Display of flow rate**

Characteristics

Mechanical flow indicator for fluid media. A stainless steel flap in the area of flow is lifted by the volume flow, and indicates the present flow rate.

Technical data

Nominal width	DN 15.0.25	
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	
Media temperature	0..+100 °C water -20..+200 °C oil	
Ambient temperature	-20..+100 °C	
Materials medium-contact	Rg 5, CW614N, 1.4310, 1.4305, Soda lime glass, Klingersil C4400	
Materials, non-medium-contact	aluminium	
Medium	water (oil available on request)	
Weight	see table "Dimensions and weights"	
Installation location	Standard: Horizontal inwards flow from the left; optionally inwards flow from below, installation position affects the range.	

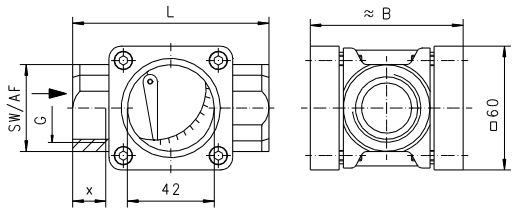
Ranges

Details in the table correspond to horizontal inwards flow with decreasing flow rate.

G	Display range l/min H_2O	$Q_{max.}$ recommended	Types
G $^1/_2$	2.1 - 17.0	25	FQ-015GR
G $^3/_4$	2.1 - 20.0	45	FQ-020GR
G 1	2.1 - 24.0	65	FQ-025GR

Dimensions and weights

G	Types	L	B	SW	X	Weight kg
G $^1/_2$	FQ-015GR	85	68	38	14	1.20
G $^3/_4$	FQ-020GR					1.10
G 1	FQ-025GR	95	74	42	16	1.25



Scaling

Scale divisions 1 to 10.

Display range l/min H_2O	Scale divisions									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
2.1 - 17	2.1	3.2	3.8	4.3	4.7	5.0	5.7	7.5	9.5	17.0
2.1 - 20	2.1	3.2	4.5	5.2	5.6	6.3	7.5	8.9	11.6	20.0
2.1 - 24	2.1	4.0	5.0	7.0	7.8	9.1	11.1	14.0	17.8	24.0

Ordering code

	1.	2.	3.
FQ -		**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

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Flow Indicator SK-...GR

- **High temperature resistance**
- **Double-sided large-surface window**
- **Natural glass**
- **Display of flow rate**

Characteristics

Mechanical flow indicator for fluid media. A stainless steel flap in the area of flow is lifted by the volume flow, and indicates the present flow rate.

Technical data

Nominal width	DN 15..50	
Process connection	female thread G 1/2..G 2	
Display range	3..195 l/min	for details see table "Ranges"
$Q_{max.}$	to 250 l/min	
Pressure resistance	PN 16 bar	
Media temperature	0..+100 °C water -20..+170 °C oil	
Ambient temperature	-20..+100 °C	
Materials medium-contact	cast tin bronze, grey iron, crown hardened glass, Flexicarb with nickel reinforcement, 1.4436	
Materials, non-medium-contact	aluminium	
Medium	water (oils available on request)	
Weight	see table "Dimensions and weights"	
Installation location	Standard: Horizontal inwards flow from the left; optionally flow from botton, installation position affects the range.	

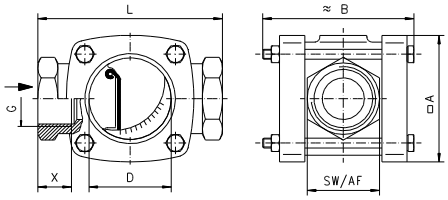
Ranges

Details in the table correspond to horizontal inwards flow with decreasing flow rate.

G	Display range l/min H_2O	$Q_{max.}$ recommended	Types
G 1/2	3 - 25	30	SK-015GR025
G 3/4		40	SK-020GR025
G 1	5 - 40	60	SK-025GR040
G 1 1/2	10 - 76	120	SK-040GR076
G 2	15 - 195	250	SK-050GR195

Dimensions and weights

G	Types	L	A	B	D	SW	X	Weight kg
G 1/2	SK-015GR.	90	60	74	40	36	14	1.0
G 3/4	SK-020GR.							
G 1	SK-025GR.	110	76	95	49	43	18	1.8
G 1 1/2	SK-040GR.	130	90	116	60	61	20	3.4
G 2	SK-050GR.	170	114	138	80	74	25	5.9



Scaling

Scale divisions 1 to 10.

Display range l/min H_2O	Scale divisions 1	2	3	4	5	6	7	8	9	10
3 - 25	3	4	5	7	8	9	10	14	20	25
5 - 40	5	7	9	10	13	15	18	21	28	40
10 - 76	10	14	19	22	27	30	36	44	63	76
15 - 195	15	23	29	35	41	46	59	79	118	195

Ordering code

	1.	2.	3.	4.
SK -		**G**	**R**	

1.	**Nominal width**								
	015	DN 15 - G 1/2							
	020	DN 20 - G 3/4							
	025	DN 25 - G 1							
	040	DN 40 - G 1 1/2							
	050	DN 50 - G 2							
2.	**Process connection**								
	G	female thread							
3.	**Connection material**								
	R	cast tin bronze							
4.	**Display range**								
	025	3 - 25 l/min						●	●
	040	5 - 40 l/min					●		
	076	10 - 76 l/min				●			
	195	15 - 195 l/min			●				

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Flow Indicator BL

- **High temperature resistance**

Characteristics

Mechanical flow indicator for fluid, gaseous, or aggressive media. The medium enters the valve housing and raises the Teflon ball which is resting in the valve seat. Robust construction in stainless steel.

Technical data

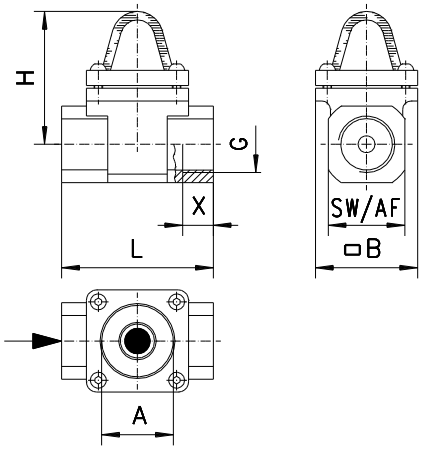
Nominal width	DN 8..40	
Process connection	female thread G 1/4..G 1 1/2	
Display range	0.3..23 l/min	for details see table "Ranges"
$Q_{max.}$	to 60 l/min	
Pressure	PN 16	
Media temperature	-20..+200 °C	
Ambient temperature	-20..+200 °C	
Materials medium-contact	1.4436, 1.4410, PTFE, borosilicate glass, Klingersil C4400	
Materials, non-medium-contact	1.4436, borosilicate glass	
Medium	water (oils, gases and aggressive media available on request)	
Weight	see table "Dimensions and weights"	
Installation location	horizontal inwards flow; glass dome on top	

Ranges

G	Ball l/min H_2O		$Q_{max.}$ recommended	Types
	initial movement	fully visible		
G 1/4	0.3	1.5	4	BL-008GK
G 3/8			8	BL-010GK
G 1/2			12	BL-015GK
G 3/4	2.5	5.0	25	BL-020GK
G 1	4.0	8.0	40	BL-025GK
G 1 1/2	11.0	23.0	60	BL-040GK

Dimensions and weights

G	Types	L	H	A	B	SW	X	Weight kg
G 1/4	BL-008GK	76	67	42	60	28	12	0.8
G 3/8	BL-010GK						16	0.7
G 1/2	BL-015GK						14	
G 3/4	BL-020GK	89	78			45	18	1.4
G 1	BL-025GK							1.3
G 1 1/2	BL-040GK	118	95	50	77	62	30	2.5



Ordering code

BL - 1. [ ] 2. [G] 3. [K]

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
	040	DN 40 - G 1 1/2
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	K	stainless steel

Accessories

Filter

Type ZV

Type ZE

The HONSBERG filters are offered for the protection of the devices from dirt or as independent components for coarse and fine filtration of liquids.

For more information, see additional product information.

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Product Overview

„Industrial Sensors and Instrumentation“

Temperature
Flow
Level / Filling Height
Analysis
Humidity
Pressure
Weighing Instruments









„Process Instrumentation “Hygienic Design“

GHM*adapt*
Temperature
Flow
Level / Filling Height
Analysis







“Laboratory Instrumentation“


„Industrial Electronics“

Displays / Controller
Transmitter / Signal conditioning
Isolating converters
Safety and Monitoring Devices
Power Electronics
Calibration and Testing










“Measuring Data Acquisition“

Data Logging and Monitoring
Test Bench Measurement Technology
Renewable Energies