



# **FLOW** **2025**



**FLOW INDICATORS**



# SA-01

## Flow Indicator with or without Rotor, with Wiper for Self-Cleaning



## Features

/Gases

/Low viscous liquids

/ Small dimensions for assembly

/ Brass and stainless steel versions

/ Any mounting position

/ Optionally, with or without rotor

Visual indicating of flow

/ With internal wiper blades for  
internal cleaning of the sight glass

## Description:

The SA-01 series of flow indicators is intended for visual indication of flow through a pipe. The medium passing through it can be viewed through a sight glass. Optionally, a rotor placed into the flow is set into motion by the medium which serves as a visual confirmation of the flow. Wiper blades mounted in the device get pressed inside against the sight glass. By simply rotating the sight glass manually, the inside can be cleaned of deposits, formation of algae or calcification without the need to interrupt the process. Thus, elaborate maintenance and cleaning operations can be dispensed with.

## Application:

The SA-01 series of flow indicators is deployed for monitoring fluids of low and medium viscosities (up to 150 cSt) in pipes. Optionally the unit can indicate the flow of gases and is equipped with ball bearings in this case.





# Technical Specifications:

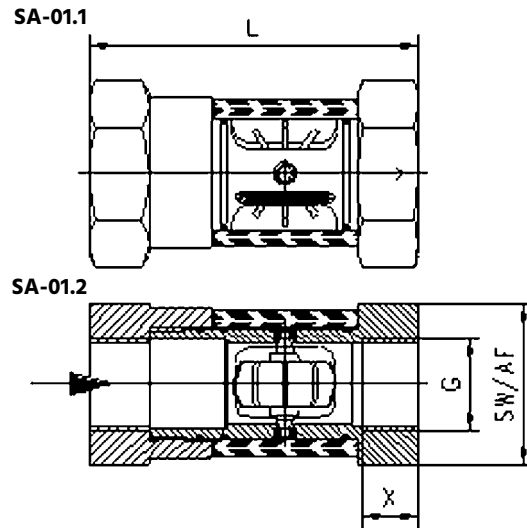
|                                 |   |
|---------------------------------|---|
| <b>max. Pressure /</b>          | 16 bar  |
| <b>Pressure drop at Qmax. /</b> |   |
| SA-01.1:                        | on request  |
| SA-01.2:                        | 0.25 bar at Qmax  |
| <b>Media temperature /</b>      | SA-01.1: 0...+100°C<br>SA-01.2: 0...+100°C  |
| <b>Ambient temperature /</b>    | SA-01.1: 0...+100°C<br>SA-01.2: 0...+100°C  |
| <b>Materials /</b>              |   |
| Housing:                        |   |
| SA-01.x.x.1:                    | brass CW614N nickel plated  |
| SA-01.x.x.2:                    | st. steel 1.4305  |
| Sight glass:                    | borosilicate glass  |
| Wiper:                          |   |
| SA-01.x.x.1:                    | NBR   |
| SA-01.x.x.2:                    | FKM   |
| Media:                          | water, oil, gases   |
| O-ring:                         |   |
| SA-01.x.x.1:                    | NBR   |
| SA-01.x.x.2:                    | FKM   |
| Rotor (SA-01.2.x.x only):       | 1/4"..1" POM red,<br>1/4" and 1/2" Nylon white  |
| Mounting position:              | any, not in down pipe   |
| Bearing:                        | sleeve bearing for fluids: peek;<br>sleeve bearing for gases:<br>steel 100 CR 6 chrome coated;<br>ball bearing, greaseless, for gases |

Devices for smaller flow volumes and higher operating temperatures on request.

### Nominal diameters & flow values:

| Con-<br>nection<br>G | L (mm) | with rotor             |                         |                             | with rotor (air)            |                             | with-<br>out<br>rotor |     |
|----------------------|--------|------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------|-----|
|                      |        | Qmin. (l/min)<br>1 cST | Qmin. (l/min)<br>40 cST | Qmin. (l/min)<br>41-150 cST | Qmin. (l/min<br>abs., 20°C) | Qmax. (l/min<br>1 bar abs.) |                       |     |
| 1/4"                 | 4      | 0,7                    | 1,5                     | 2,7                         | 4                           | 18                          | 60                    | 15  |
| 3/8"                 | 8      | 0,8                    | 1,5                     | 2,8                         | 8                           | 20                          | 150                   | 20  |
| 1/2"                 | 12     | 1,4                    | 1,8                     | 3,2                         | 12                          | 25                          | 250                   | 30  |
| 3/4"                 | 25     | 1,4                    | 2,7                     | 5,9                         | 25                          | 25                          | 250                   | 60  |
| 1"                   | 40     | 1,7                    | 3                       | 7                           | 40                          | 35                          | 350                   | 90  |
| 1 1/4"               | 80     | 8                      | 5,9                     | 7,9                         | 80                          | 60                          | 600                   | 150 |
| 1 1/2"               | 100    | 8                      | 7,3                     | 7,9                         | 100                         | 70                          | 700                   | 220 |

# Dimensions in mm:



SA-01.1 (without rotor)

SA-01.2 (with rotor)

| Con-<br>nection G | L (mm) | X (mm) | SW (mm) | weight (kg) | Con-<br>nection G | L (mm) | X (mm) | SW (mm) | weight (kg) |
|-------------------|--------|--------|---------|-------------|-------------------|--------|--------|---------|-------------|
| 1/4"              | 71     | 9      | 36      | 0.3         | 1/4"              | 71     | 9      | 36      | 0.35        |
| 3/8"              | 71     | 9      | 36      | 0.3         | 3/8"              | 71     | 9      | 36      | 0.35        |
| 1/2"              | 86     | 13     | 46      | 0.6         | 1/2"              | 86     | 13     | 46      | 0.65        |
| 3/4"              | 94     | 16     | 46      | 0.6         | 3/4"              | 94     | 16     | 46      | 0.65        |
| 1"                | 104    | 16     | 46      | 0.6         | 1"                | 104    | 16     | 46      | 0.65        |
| 1 1/4"            | 120    | 19     | 65      | 1.5         | 1 1/4"            | 120    | 19     | 65      | 1.6         |
| 1 1/2"            | 130    | 20     | 65      | 1.6         | 1 1/2"            | 130    | 20     | 65      | 1.7         |

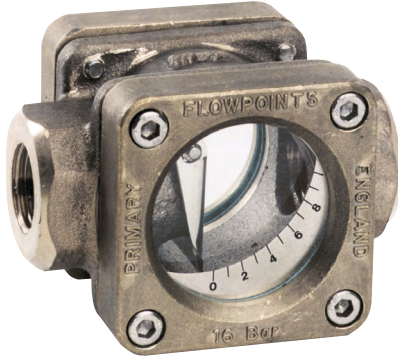
# Ordering Codes:

|                             |  |    |    |    |    |   |
|-----------------------------|--|----|----|----|----|---|
| <b>Order number</b>         | SA-01.   | 2. | 3. | 1. | 2. | 1 |
| <b>SA-01 Flow Indicator</b> |  |    |    |    |    |   |
| <b>Version /</b>            | 1 = without rotor<br>2 = with rotor  |    |    |    |    |   |
| <b>Process connection /</b> | 1 = female thread G 1/4"<br>2 = female thread G 3/8"<br>3 = female thread G 1/2"<br>4 = female thread G 3/4"<br>5 = female thread G 1"<br>6 = female thread G 1 1/4"<br>7 = female thread G 1 1/2" |    |    |    |    |   |
| <b>Material /</b>           | 1 = brass<br>2 = stainless steel   |    |    |    |    |   |
| <b>Media /</b>              | 1 = fluids<br>2 = air with ball bearings   |    |    |    |    |   |
| <b>Option /</b>             | 0 = none<br>1 = wipers from EPDM   |    |    |    |    |   |



# DA-01

## Sight Flow Indicator



## Features

- / Buckle-free glass-mounting
- / Large inspection window
- / High temperature range
- / Reading possible on both sides
- / Visual evaluation of media
- / Excellent media compatibility

## Description:

The DA-01 series of flow indicators is meant for visual and quantitative control on fluid measuring substances. The device has large surfaced sight glasses fitted on both sides and provided with a graduated scale. A fine polished stainless steel flap fitted within the flow area gets lifted by the flow of media and, depending on the volume of flow, shows the current rate of flow on the scale. The flap is mounted on a stainless steel axis and operates with fine linearity purely depending on the gravitation. The DA-01 can be mounted vertically as well as horizontally. Due to its high temperature resistance it can be deployed in many ways.

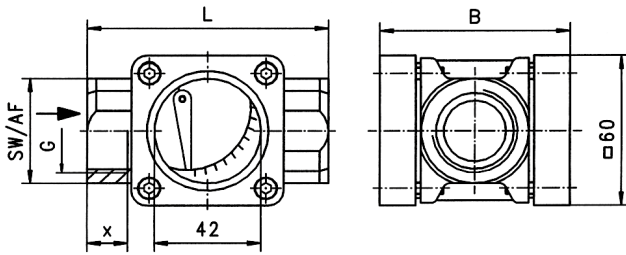
## Application:

Flow indicators are deployed for visual and quantitative control of fluid and gaseous media. The device has versatile applicability, especially in the construction of equipment, in process measurement technology or as general monitoring of compressors, cooling subassemblies, blowers and others.



# DA-01 Flap Indicator:

## Dimensions in mm



| Type        | G    | L  | B  | X  | SW | kg  |
|-------------|------|----|----|----|----|-----|
| DA-01.1/4/7 | 1/2" | 85 | 68 | 14 | 38 | 1.0 |
| DA-01.2/5/8 | 3/4" | 85 | 68 | 14 | 38 | 1.0 |
| DA-01.3/6/9 | 1"   | 95 | 74 | 16 | 42 | 1.  |

## Process connection

| Type        | Nominal diameter | Range in l/min | Q <sub>max</sub> in l/min |
|-------------|------------------|----------------|---------------------------|
| DA-01.1/4/7 | 15               | 2.1..17        | 25                        |
| DA-01.2/5/8 | 20               | 2.1..20        | 45                        |
| DA-01.3/6/9 | 25               | 2.1..24        | 65                        |

## Divisions

| l/min H <sub>2</sub> O | 1   | 2   | 3   | 4   | 5   | 6   | 7    | 8    | 9    | 10 |
|------------------------|-----|-----|-----|-----|-----|-----|------|------|------|----|
| 2.1..17                | 2.1 | 3.2 | 3.8 | 4.3 | 4.7 | 5   | 5.7  | 7.5  | 9.5  | 17 |
| 2.1..20                | 2.1 | 3.2 | 4.5 | 5.2 | 5.6 | 6.3 | 7.5  | 8.9  | 11.6 | 20 |
| 2.1..24                | 2.1 | 4.0 | 5.0 | 7.0 | 7.8 | 9.1 | 11.1 | 14.0 | 17.8 | 24 |

## Technical Specifications

|                            |                            |
|----------------------------|----------------------------|
| <b>max. Pressure /</b>     | 16 bar                     |
| <b>Temperature /</b>       | 200°C                      |
| <b>Pressure drop /</b>     | 0.09 bar for 2 m/s         |
| <b>Housing /</b>           | gunmetal BS 1400 LG 2      |
| <b>Flap /</b>              | stainless steel 1.4401     |
| <b>Axis /</b>              | stainless steel 1.4305     |
| <b>Window /</b>            | Soda-Lime-Glass BS 3463    |
| <b>Seals /</b>             | C 4400 (Klingersil®)       |
| <b>Rings /</b>             | brass                      |
| <b>Scale plate /</b>       | stainless steel 1.4319     |
| <b>Mounting position /</b> | vertically or horizontally |

# Ordering Codes:

|                     |        |    |    |
|---------------------|--------|----|----|
| <b>Order number</b> | DA-01. | 3. | 1. |
|---------------------|--------|----|----|

|                             |
|-----------------------------|
| <b>DA-01 Flap Indicator</b> |
|-----------------------------|

### Process connection /

- 1 = G 1/2" female
- 2 = G 3/4" female
- 3 = G 1" female
- 4 = R 1/2" female
- 5 = R 3/4" female
- 6 = R 1" female
- 7 = 1/2"-NPT female
- 8 = 3/4"-NPT female
- 9 = 1"-NPT female

### Option /

- 0 = none
- 1 = borosilicateglas for steam and condensate up to 6 bar



# DA-02

## Sight Flow Indicator



## Features

- / Buckle-free glass-mounting
- / Large inspection window
- / High temperature range
- / Reading possible on both sides
- / Visual evaluation of media
- / Excellent media compatibility

## Description:

The DA-02 series of flow indicators is intended for visual monitoring of fluid and gaseous media. The measuring medium lifts a Teflon® ball resting on the valve of the housing. As the volume of flow increases the ball becomes visible in the dome made of borosilicate glass. From its position, it is possible to draw a conclusion on the current volume of flow. The device is suited for mounting it horizontally with its dome showing upwards.

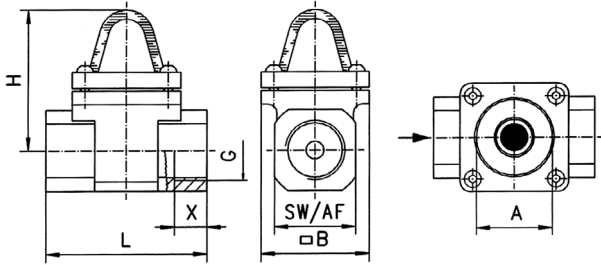
## Application:

Flow indicators are deployed for visual and quantitative control of fluid and gaseous media. The device has versatile applicability, especially in the construction of equipment, in process measurement technology or as general monitoring of compressors, cooling subassemblies, blowers and others.



# DA-02 Ball Indicator:

## Dimensions in mm



| Type     | G      | L   | A  | B  | H   | SW | kg  |
|----------|--------|-----|----|----|-----|----|-----|
| DA-02.1  | 1/4"   | 76  | 42 | 60 | 81  | 28 | 0.8 |
| DA-02.2  | 3/8"   | 76  | 42 | 60 | 81  | 28 | 0.7 |
| DA-02.3  | 1/2"   | 76  | 42 | 60 | 81  | 28 | 0.7 |
| DA-02.4  | 3/4"   | 89  | 42 | 60 | 100 | 45 | 1.4 |
| DA-02.5  | 1"     | 89  | 42 | 60 | 100 | 45 | 1.3 |
| DA-02.5a | 1 1/4" | 118 | 50 | 73 | 126 | 62 | 2.7 |
| DA-02.6  | 1 1/2" | 118 | 50 | 77 | 126 | 62 | 2.5 |

## Process connection

| Type     | Connection  | Range H <sub>2</sub> O in l/min | Q <sub>max</sub> H <sub>2</sub> O in l/min |
|----------|-------------|---------------------------------|--|
| DA-02.1  | G 1/4" IG   | 0.3..1.5                        | 4  |
| DA-02.2  | G 3/8" IG   | 0.3..1.5                        | 8  |
| DA-02.3  | G 1/2" IG   | 0.3..1.5                        | 12   |
| DA-02.4  | G 3/4" IG   | 2.5..5.0                        | 25   |
| DA-02.5  | G 1" IG     | 4.0..8.0                        | 40   |
| DA-02.5a | G 1 1/4" IG | 11..23                          | 60   |
| DA-02.6  | G 1 1/2" IG | 11..23                          | 60   |

## Technical Specifications

|                            |                                |
|----------------------------|--------------------------------|
| <b>max. Pressure /</b>     | 16 bar                         |
| <b>Temperature /</b>       | 200°C                          |
| <b>Pressure drop /</b>     | 0.1..0,3 bar for 2 m/s         |
| <b>Housing /</b>           | stainless steel 1.4401, 1.4301 |
| <b>Ball /</b>              | PTFE                           |
| <b>Dome /</b>              | borsosilicate glass            |
| <b>Seals /</b>             | Viton® and Klingersil® C4400   |
| <b>Mounting position /</b> | horizontal                     |

# Odering Codes:

Order number **DA-02. 3**

**DA-02 Ball Indicator**

### Process connection /

- 1 = G 1/4" female
- 2 = G 3/8" female
- 3 = G 1/2" female
- 4 = G 3/4" female
- 5 = G 1" female
- 5a= G 1 1/4" female
- 6 = G 1 1/2" female



# DA-04

## Plastic Sight Flow Indicator



## Features

- / Air and Gases
- / Small dimensions for assembly
- / Resistant to many chemicals
- / Any mounting position
- / Temperature max. 80°C
- / Pressure max. 10 bar

## Description:

The DA-04 Series Flow Indicators are designed to provide a visual indication of flow through a pipeline and are very rugged with good structural integrity. The position and the centrifugal movement of the rotor and the liquid state of the medium can be observed through the polycarbonate outer wall. The rotor is used here as an indicator of how strong the flow is, since the number of revolutions of the rotor increases with increasing flow.

## Application:

The DA-04 flow indicators are used to monitor gases or liquids with low and medium viscosities (up to 150 cSt) in pipelines.

### Areas of application:

- Water
- Oil
- Coolants
- Chemicals
- Air and gases
- Corrosives

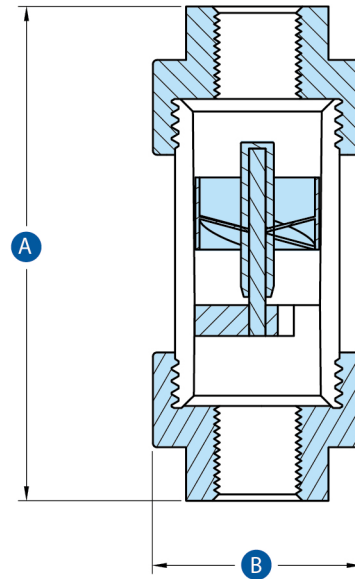




# Technical Specifications:

- max. Pressure / 10 bar
- max. Media temperature / 80°C
- Materials /**
  - Housing: polycarbonate
  - Spindle: stainless steel Ø 4mm
  - Impeller: PPS
  - Seals: Viton
  - Process connection: bronze/ SS 316/ aluminium/ PVC
  - Mounting position: any

# Dimensions in mm:



# Ordering Codes:

|                             |               |           |           |          |
|-----------------------------|---------------|-----------|-----------|----------|
| <b>Order number</b>         | <b>DA-04.</b> | <b>1.</b> | <b>3.</b> | <b>1</b> |
| <b>DA-04 Flow Indicator</b> |               |           |           |          |
| <b>Process connection /</b> |               |           |           |          |
| 1 = bronze                  |               |           |           |          |
| 2 = stainless steel         |               |           |           |          |
| 3 = aluminium               |               |           |           |          |
| 4 = PVC                     |               |           |           |          |
| <b>Size /</b>               |               |           |           |          |
| 1 = 1/4"                    |               |           |           |          |
| 2 = 3/8"                    |               |           |           |          |
| 3 = 1/2"                    |               |           |           |          |
| 4 = 3/4"                    |               |           |           |          |
| 5 = 1"                      |               |           |           |          |
| <b>Thread /</b>             |               |           |           |          |
| 1 = BSP                     |               |           |           |          |
| 2 = NPT                     |               |           |           |          |

| Size (mm) | Size (zoll) | Dim A Length (mm) | Dim B Width (mm) | Weight (kg) | Max. Flow LPM |
|-----------|-------------|-------------------|------------------|-------------|---------------|
| 8         | 1/4"        | 120               | 50,8             | 0,60        | 20            |
| 10        | 3/8"        | 120               | 50,8             | 0,60        | 20            |
| 15        | 1/2"        | 127               | 50,8             | 0,60        | 20            |
| 20        | 3/4"        | 127               | 50,8             | 0,60        | 40            |
| 25        | 1"          | 127               | 50,8             | 0,60        | 40            |



# SA-05



## Sight Flow Indicator with Female Thread in Gray Cast Iron, Steel Casting or Stainless Steel

### Features

- / Temperature up to 280°C
- / G1/4" to G2"
- / PN16, PN25 or PN40
- / Indicator with flap, drip tube or rotor
- / Optionally with NPT connection

### Description:

Flow indicators are intended for visualization of flows in pipes. In the case of SA-05, a drip tube or a rotating plastic rotor or a movable flap are viewed through two glasses mounted in a robust flow armature for visual control of flow. Air bubbles and solid particles flowing along or the rotor's rotation speed and the position of the deflected flap enable the observer to quantitatively estimate the volume of flow.

### Application:

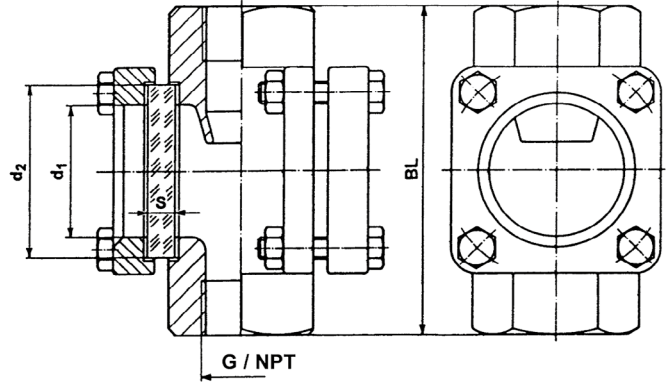
The SA-05 series of flow indicators possesses a cylindrical female thread connection which can also be designed as a conical NPT thread. They can be deployed for up to 40 bar of maximum pressure and 280°C maximum temperature. The range of materials available includes gray cast iron, steel casting or stainless steel with soda-lime or borosilicate glass. Due to these properties the SA-05 is mainly deployed in the entire manufacturing and processing industry.



# Technical Specifications:

|                            |   |
|----------------------------|---|
| <b>Materials /</b>         | gray cast iron GG25 or<br>steel casting GS-C25 or<br>stainless steel 1.4408   |
| <b>Cover /</b>             | GG25 for gray cast iron version<br>GS-C25 for steel casting version<br>1.4408 for stainless steel version                   |
| <b>Screws /</b>            | 4.6/5.6 vz for gray cast and steel casting<br>A4-70 for stainless steel version   |
| <b>Optical display /</b>   | smooth passage, from G3/4" with drip tube<br>or flap made of st. steel 1.4571 or rotor<br>made of POM or rotor made of PTFE |
| <b>Glass material /</b>    | NaCa glass DIN 8902 up to max.<br>150°C or borosilicate glass DIN 7080<br>up to max. 280°C                                  |
| <b>Seals /</b>             | graphite (others on request)  |
| <b>Process conn. /</b>     | G1/4"-female to G2"-female (NPT on request)   |
| <b>Pressure /</b>          | PN16, PN25 or PN40<br>(gray cast iron max. 16 bar)  |
| <b>Media temperature /</b> | SA-05.(1 or 2) max. 150°C for NaCa glass,<br>280°C for borosilicate glass<br>SA-05.3 max. 120°C - SA-05.4 max. 260°C        |

# Dimensions in mm:



## Cast Iron SA-05.x.1

| Connection | BL  | d1 | d2  | S 16 bar |
|------------|-----|----|-----|----------|
| G 1/4"     | 100 | 32 | 45  | 10       |
| G 3/8"     | 100 | 32 | 45  | 10       |
| G 1/2"     | 100 | 32 | 45  | 10       |
| G 3/4"     | 120 | 48 | 63  | 10       |
| G 1"       | 120 | 48 | 63  | 10       |
| G 1 1/4"   | 160 | 65 | 80  | 12       |
| G 1 1/2"   | 160 | 65 | 80  | 12       |
| G 2"       | 180 | 80 | 100 | 15       |

## Cast Iron or St. Steel SA-05.x.2/3

| Connection | BL  | d1 | d2  | S 16 bar | S 25 bar | S 40 bar |
|------------|-----|----|-----|----------|----------|----------|
| G 1/4"     | 100 | 32 | 45  | 10       | 10       | 10       |
| G 3/8"     | 100 | 32 | 45  | 10       | 10       | 10       |
| G 1/2"     | 100 | 32 | 45  | 10       | 10       | 10       |
| G 3/4"     | 120 | 48 | 63  | 10       | 12       | 15       |
| G 1"       | 120 | 48 | 63  | 10       | 12       | 15       |
| G 1 1/4"   | 160 | 65 | 80  | 12       | 15       | 20       |
| G 1 1/2"   | 160 | 65 | 80  | 12       | 15       | 20       |
| G 2"       | 230 | 80 | 100 | 15       | 20       | 25       |

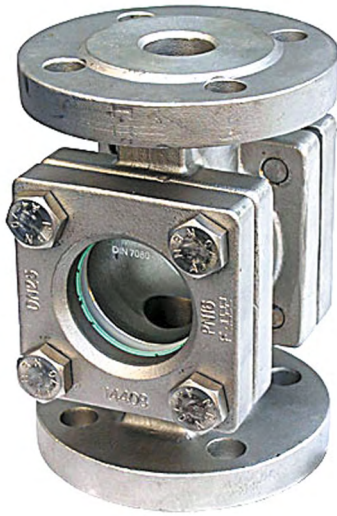
**Option:** SA-05 out of steel casting or stainless steel are available with NPT-thread on request

# Ordering Codes:

|   |               |           |           |           |            |           |
|---|---------------|-----------|-----------|-----------|------------|-----------|
| <b>Order number</b>                           | <b>SA-05.</b> | <b>1.</b> | <b>1.</b> | <b>1.</b> | <b>16.</b> | <b>08</b> |
| <b>SA-05 Flow Indicator</b>                   |               |           |           |           |            |           |
| <b>Optical display /</b>                      |               |           |           |           |            |           |
| 1 = smooth passage (from 3/4" with drip tube) |               |           |           |           |            |           |
| 2 = with flap                                 |               |           |           |           |            |           |
| 3 = with rotor made of POM (n.a. for G2")     |               |           |           |           |            |           |
| 4 = with rotor made of PTFE                   |               |           |           |           |            |           |
| <b>Housing material /</b>                     |               |           |           |           |            |           |
| 1 = gray cast iron (max. 16 bar)              |               |           |           |           |            |           |
| 2 = steel casting                             |               |           |           |           |            |           |
| 3 = stainless steel                           |               |           |           |           |            |           |
| <b>Glass material /</b>                       |               |           |           |           |            |           |
| 1 = NaCa glass (up to max. 150°C 6 max. PN16) |               |           |           |           |            |           |
| 2 = borosilicate glass (up to max. 280°C)     |               |           |           |           |            |           |
| <b>Pressure level /</b>                       |               |           |           |           |            |           |
| 16 = PN16 (standard)                          |               |           |           |           |            |           |
| 25 = PN25                                     |               |           |           |           |            |           |
| 40 = PN40                                     |               |           |           |           |            |           |
| <b>Process connection /</b>                   |               |           |           |           |            |           |
| 08 = G 1/4"-IG                                |               |           |           |           |            |           |
| 10 = G 3/8"-IG                                |               |           |           |           |            |           |
| 15 = G 1/2"-IG                                |               |           |           |           |            |           |
| 20 = G 3/4"-IG                                |               |           |           |           |            |           |
| 25 = G 1"-IG                                  |               |           |           |           |            |           |
| 32 = G 1 1/4"-IG                              |               |           |           |           |            |           |
| 40 = G 1 1/2"-IG                              |               |           |           |           |            |           |
| 50 = G 2"-IG                                  |               |           |           |           |            |           |



# SA-06



## Sight Flow Indicator with Flange Connection from Gray Cast Iron, Steel Casting or Stainless Steel

### Features

- / Temperature up to 280°C
- / Diameters DN15. . .DN200
- / PN16, PN25 or PN40
- / Display with flap, drip tube or rotor
- / Optionally with ANSI flanges

### Description:

Flow indicators are intended for visualization of flows in pipes. In the case of SA-06, a drip tube or a rotating plastic rotor or a movable flap are viewed through two glasses mounted in a robust flow armature for optical control of flow. Air bubbles and solid particles flowing along or the rotor's rotation speed and the position of the deflected flap enable the observer to quantitatively estimate the volume of flow.

### Application:

The SA-06 series of flow indicators possesses a flange connection of DIN or ANSI standards. They can be deployed for up to 40 bar of maximum pressure and 280°C maximum temperature. The range of materials available includes gray cast iron, steel casting or stainless steel with soda-lime or borosilicate glass. Due to these properties the SA-06 is mainly deployed in the entire manufacturing and processing industry.



## Ordering Codes:

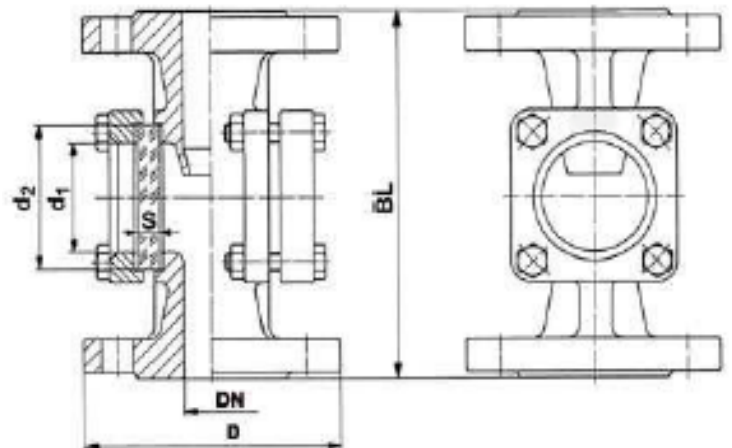
|  |               |           |           |           |            |            |          |
|--|---------------|-----------|-----------|-----------|------------|------------|----------|
| <b>Order number</b>  | <b>SA-06.</b> | <b>1.</b> | <b>1.</b> | <b>1.</b> | <b>16.</b> | <b>15.</b> | <b>0</b> |
| <b>SA-06 Flow Indicator</b>  |               |           |           |           |            |            |          |
| <b>Visual display /</b>  |               |           |           |           |            |            |          |
| 1 = with drip tube   |               |           |           |           |            |            |          |
| 2 = with flap  |               |           |           |           |            |            |          |
| 3 = with rotor from POM  |               |           |           |           |            |            |          |
| 4 = with rotor from PTFE   |               |           |           |           |            |            |          |
| <b>Housing material /</b>  |               |           |           |           |            |            |          |
| 1 = gray cast iron (max. 16 bar / 150 lbs)   |               |           |           |           |            |            |          |
| 2 = steel casting  |               |           |           |           |            |            |          |
| 3 = stainless steel  |               |           |           |           |            |            |          |
| <b>Glass material /</b>  |               |           |           |           |            |            |          |
| 1 = NaCa glass (up to max. 150°C)  |               |           |           |           |            |            |          |
| 2 = borosilicate glass (up to max. 280°C)  |               |           |           |           |            |            |          |
| <b>Connecting flanges /</b>  |               |           |           |           |            |            |          |
| 16 = DIN PN16 (standard)   |               |           |           |           |            |            |          |
| 25 = DIN PN25 (not for gray cast iron)   |               |           |           |           |            |            |          |
| 40 = DIN PN40 (not for gray cast iron)   |               |           |           |           |            |            |          |
| 150 = ANSI 150 lbs   |               |           |           |           |            |            |          |
| 300 = ANSI 300 lbs (not for gray cast iron)  |               |           |           |           |            |            |          |
| <b>Nominal diameter /</b>  |               |           |           |           |            |            |          |
| 15 = DN15 / ½"   |               |           |           |           |            |            |          |
| 20 = DN20 / ¾"   |               |           |           |           |            |            |          |
| 25 = DN25 / 1"   |               |           |           |           |            |            |          |
| 32 = DN32 / 1¼"  |               |           |           |           |            |            |          |
| 40 = DN40 / 1½"  |               |           |           |           |            |            |          |
| 50 = DN50 / 2"   |               |           |           |           |            |            |          |
| 65 = DN65 / 2½" (starting here and bigger sizes: rounded dome version)               |               |           |           |           |            |            |          |
| 80 = DN80 / 3"   |               |           |           |           |            |            |          |
| 100 = DN100 / 4" (not with ANSI flanges in grey cast iron)                           |               |           |           |           |            |            |          |
| 125 = DN125 / 5" (not with ANSI flanges in grey cast iron)                           |               |           |           |           |            |            |          |
| 150 = DN150 / 6" (with borosilicate glass only)                                      |               |           |           |           |            |            |          |
| 200 = DN200 / 8" (not w. ANSI flanges in grey cast iron, w. borosilicate glass only) |               |           |           |           |            |            |          |
| 999 = Nominal diameter > DN200 on request only (special design)                      |               |           |           |           |            |            |          |
| <b>Special design /</b>  |               |           |           |           |            |            |          |
| 0 = none   |               |           |           |           |            |            |          |
| 1 = please specify in detail   |               |           |           |           |            |            |          |

## Dimensions in mm:

| Con-<br>nection | D                |                 |                 | BL  | d1  | d2  | S 16<br>bar | S 25<br>bar | S 40<br>bar |
|-----------------|------------------|-----------------|-----------------|-----|-----|-----|-------------|-------------|-------------|
|                 | DW               | ANSI<br>150 lbs | ANSI<br>300 lbs |     |     |     |             |             |             |
| 15 / ½"         | 95               | 89              | 95,2            | 130 | 32  | 45  | 10          | 10          | 10          |
| 20 / ¾"         | 105              | 98              | 117,3           | 150 | 32  | 45  | 10          | 10          | 10          |
| 25 / 1"         | 115              | 108             | 123,8           | 160 | 48  | 63  | 10          | 12          | 15          |
| 32 / 1¼"        | 140              | 118             | 133,4           | 180 | 48  | 63  | 10          | 12          | 15          |
| 40 / 1½"        | 150              | 127             | 155,6           | 200 | 65  | 80  | 12          | 15          | 20          |
| 50 / 2"         | 165              | 152             | 165,1           | 230 | 80  | 100 | 15          | 20          | 25          |
| 65 / 2½"        | 185              | 178             | 190,5           | 290 | 80  | 100 | 15          | 20          | 25          |
| 80 / 3"         | 200              | 191             | 209,6           | 310 | 100 | 125 | 20          | 25          | 30          |
| 100 / 4"        | 220 <sup>1</sup> | 228*            | 254,0           | 350 | 125 | 150 | 25          | 30          | 35/32       |
| 125 / 5"        | 250 <sup>2</sup> | 254*            | 279,4           | 400 | 150 | 175 | 25          | 30          | on request  |
| 150 / 6"        | 285 <sup>3</sup> | 279             | 317,5           | 480 | 175 | 200 | 30**        | 35          | on request  |
| 200 / 8"        | 340 <sup>4</sup> | 343*            | 381,0           | 600 | 175 | 200 | 30**        | 35          | on request  |

## Technical Specifications:

|                              |  |
|------------------------------|--|
| <b>Materials /</b>           | gray cast iron GG 25 or steel casting GS-C 25 or stainless steel 1.4408  |
| <b>Cover /</b>               | GG 25 for gray cast iron version<br>GS-C 25 for steel casting version<br>1.4408 / 1.4301 for stainless steel version     |
| <b>Cover shape /</b>         | DN15 to DN50 square<br>DN65 to DN200 round   |
| <b>Screws /</b>              | 4.6 / 5.6 vz for gray cast iron and steel casting A4-70 for stainless steel version                                      |
| <b>Optical display /</b>     | drip tube for display of least volumes or flap made of stainless steel 1.4571 or rotor made of POM or rotor made of PTFE |
| <b>Glass material /</b>      | NaCa (soda-lime) glass DIN 8902 up to max. 150°C or borosilicate glass DIN 7080 up to max. 280°C                         |
| <b>Seals /</b>               | Graphite (others on request)   |
| <b>Process connections /</b> | DN15 to DN200 flange as per DIN or ANSI  |
| <b>Pressure /</b>            | PN16, PN25 or PN40 and<br>150 lbs./300 lbs. for ANSI standard  |
| <b>Media temp. /</b>         | SA-06. (1 or 2) max. 150°C for NaCa glass,<br>280°C for borosilicate glass<br>SA-06.3 max. 120°C<br>SA-06.4 max. 260°C   |
| <b>Mounting /</b>            | horizontally or vertically,<br>for attention to flow direction   |

<sup>1</sup> 235 for PN25/40

\* in GG 25 not available

<sup>2</sup> 270 for PN25/40

\*\* 16 bar only available with borosilicate glass

<sup>3</sup> 300 for PN25/40

&gt; DN 100 &amp; PN 40 in accordance with DIN 3237

<sup>4</sup> 360/375 for PN25/40





# SA-10

## Flow Indicator from Stainless Steel or Bronze



## Features

/ Reasonable pricing

/ Up to 16 bar

/ Up to 200°C

/ Low pressure drop

/ Wide flow range

/ Nominal widths from DN8. . .DN40

## Description:

Profimess' flow indicators SA-10 offer a cost-effective solution wherever it is important to recognize flow condition in pipes of nominal widths from 8. . .40 mm at a glance. The ratio between maximum and minimum flow is exceptional and the pressure drop is low even at the end of the recommended flow range. The sight flow indicators SA-10 work both horizontally and vertically and inverted flow can pass through them.

## Application:

The selectable material combinations stainless steel and bronze predetermine the flow indicators SA-10 for 'aggressive media applications'. Even the indication of a marine water flow or the operation within a saline environment is easily possible, because bronze, as against stainless steel, aluminium or brass, is one of the rare metals resistant against salt water and oceanic climate. The units serve of course also water, oil, lubricants, coolants and many more fluids. A further benefit of using sight flow indicators of SA-10 series is, that the user can not only estimate the flow velocity in the pipe, but also get an impression of fluid condition. This enables him to recognize at an early stage, if e.g. overheating or a leak cause a color change or a pollution of the flowing liquid.



# Technical Specifications:

## Materials /

- Body: stainless steel 316  
ASTM-A-351-2000 GR CF8M  
or  
bronze BS EN1982  
CuSn5Zn5PB5-C-GS (formerly LG2)
- Clamp ring: stainless steel or bronze
- Glass dome: hardened borosilicate glass
- Rotor: PPS plastic, canary yellow
- Gasket: Klingersil® (C-4400) or equivalent
- O-ring: Viton®
- Clamps: stainless steel
- Connections: thread female BSP (parallel)  
or NPT (taper)

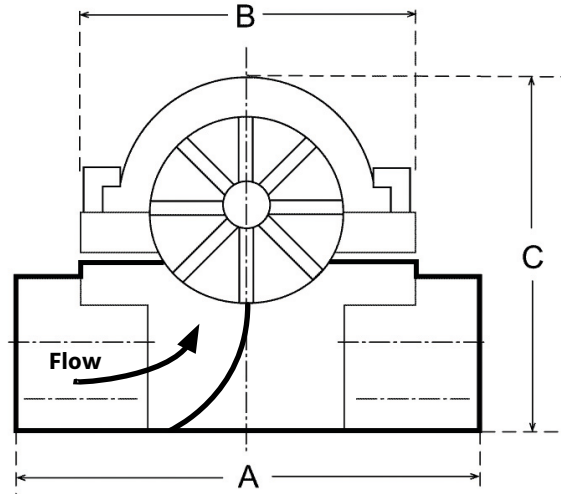
max. Pressure / 16 bar

max. Temp. / 200°C

# Ordering Codes:

|                               |               |           |           |          |
|-------------------------------|---------------|-----------|-----------|----------|
| <b>Order number</b>           | <b>SA-10.</b> | <b>1.</b> | <b>1.</b> | <b>1</b> |
| <b>SA-10 Flow Indicator</b>   |               |           |           |          |
| <b>Size /</b>                 |               |           |           |          |
| 1 = DN8                       |               |           |           |          |
| 2 = DN10                      |               |           |           |          |
| 3 = DN15                      |               |           |           |          |
| 4 = DN20                      |               |           |           |          |
| 5 = DN25                      |               |           |           |          |
| 6 = DN32                      |               |           |           |          |
| 7 = DN40                      |               |           |           |          |
| <b>Material /</b>             |               |           |           |          |
| 1 = bronze                    |               |           |           |          |
| 2 = stainless steel           |               |           |           |          |
| <b>Thread /</b>               |               |           |           |          |
| 1 = BSP (cylindrical), female |               |           |           |          |
| 2 = NPT (conical), female     |               |           |           |          |

# Dimensions in mm:



**Attention:** Mounting in direction of flow, as indicated with an arrow on the device.

| Connection<br>BSP o. NPT | A<br>(mm) | B<br>(mm) | C<br>(mm) | weight<br>(kg) |
|--------------------------|-----------|-----------|-----------|----------------|
| 1/4" IG                  | 76        | 63        | 65        | 0.68           |
| 3/8" IG                  | 76        | 63        | 65        | 0.65           |
| 1/2" IG                  | 76        | 63        | 65        | 0.62           |
| 3/4" IG                  | 89        | 63        | 83        | 1.25           |
| 1" IG                    | 89        | 63        | 83        | 1.20           |
| 1 1/4" IG                | 115       | 75        | 100       | 2.40           |
| 1 1/2" IG                | 115       | 75        | 100       | 2.40           |

## Flow range and Pressure drop

| Connection<br>BSP o. NPT | min.<br>(l/min) | max.<br>(l/min) | P. drop at 2 m/s<br>(bar) |
|--------------------------|-----------------|-----------------|---------------------------|
| 1/4" IG                  | 0.7             | 30              | 0.14                      |
| 3/8" IG                  | 0.8             | 40              | 0.16                      |
| 1/2" IG                  | 1.0             | 55              | 0.22                      |
| 3/4" IG                  | 1.2             | 90              | 0.19                      |
| 1" IG                    | 1.5             | 140             | 0.50                      |
| 1 1/4" IG                | 4.0             | 180             | 0.80                      |
| 1 1/2" IG                | 4.0             | 200             | 0.90                      |