A float whose movement is nearly independent for viscosity is guided concentrically in a specially shaped cone. The position of the float is transmitted magnetically to an indicator. This can be equipped with limit contacts as well as with pneumatic or electric transmitters. The indicators are exchangeable without loss of accuracy. The Rotameter is installed in a vertical pipeline with flow direction upwards.

FEATURES

- Rotameter for measurement of gases and liquids
- Conically forged tube
- Different linings for special applications
- Flanges of stainless steel
- DIN and ANSI flanges standard
- Special process connections on request
- Pressure and temperature resistant
- High accuracy and reliability
- Independent of viscosity in a wide range
- Heatable (with steam or liquid heat carrier)
- Plastic or metal housing for the local indicator
- Local indicator without additional power supply
- Microprocessor transmitter or pneumatic transmitter available
- Intrinsically safe version (Ex)
- Electronic transmitter as standard with totalizer
- Limit switches can be fitted

STANDARD SPECIFICATIONS

Principle of measurement

- Rotameter with sturdy magnetic indication attachment (see fig. 1)
- Liquid or gas
- For gas applications the option /SD ("Damping") is recommended

Fluid to be measured

- Refer to tables 1 and 2
- 10:1
- according to VDI 3513
- Metal-cone : class 1,6
- PTFE-lining : class 2,5

Measurable flow rates

- flow units or percent

Measuring flow rates

- 10:1
- accuracy

Accuracy

- Process temperature
  - Metal : -180 °C to +400 °C
  - PTFE : -80 °C to +130 °C

Process connection:

- Flanges according to DIN 2501
  - DN15-DN 100/PN 40, DN 100/PN16
- Flanges according to ANSI B 16.5
  - 1/2" - 4"/150 lbs /300 lbs/RF
- Screwing
  - DIN 11851, DN25/DN100
- Internal thread
  - NPT-F 1/2" - 21/2", RP 1/2" - 21/2"
- Clamp
  - DN25/1" - DN100/4"

Materials

- Medium wetted parts are made of AISI 316 Ti, (1.4571), PTFE, other materials on request

Housing

- Material : Glass filled PA or cast aluminium painted both with security glass
- Colour : Deep sea moss green
- Protection : IP 65
- Installation position : Vertical
- Flow direction : Upwards
- Installation length : typically 250 mm
- Straight pipeline : DN 80/100 at least 5D, other sizes none
- Weight : Refer to table 3

Fig. 1.
LOCAL INDICATOR (CODE: T65/T66)

Ambient temperature
- T65: -25 °C up to 130 °C
- T66: -25 °C up to 100 °C

Options
- Limit switches

ELECTRONIC TRANSMITTER (CODE: E65/E66)

Digital display
- 8-digits 7-segments LCD-display
  character height 6 mm

Power supply
- 4-wire units with galvanic isolation:
  - 230 V AC +10 %/-15 %, 50/60 Hz,
  - miniature fuse 0,063 A, time lag, (5x20) mm
  - 115 V AC +10%/-15 %, 50/60 Hz,
  - miniature fuse 0,063 A, time lag, (5x20) mm
  - 24 V AC ±20 %, 50/60 Hz,
  - miniature fuse 0,25 A, time lag, (5x20) mm
  - 24 V DC ±20 %, miniature fuse 0,25 A, time lag, (5x20) mm
- 2/3-wire units without galvanic isolation:
  - 13,5 V... 30 V DC

Output signal
- 4-wire, 3-wire units
  - 0 - 20 mA, 4 - 20 mA
- 2-wire units
  - 4 - 20 mA

Load resistance
- 4-wire units
  - ≤ 500 Ω
- 2/3-wire units
  - (V=13,5 V)/20 mA

Process temperature
- For temperatures ≤ 0 °C or ≥ 100 °C, please specify the option /A2

Ambient temperature
- -25 °C up to +70 °C

Storage temperature
- -40 °C up to +70 °C

Linearity
- ≤ ± 0,2 % full scale

Hysteresis
- ≤ ± 0,1 % full scale

Repeatability
- ≤ ± 0,1 % full scale

Influence of power supply
- ≤ ± 0,1 % full scale

Temperature coefficient of output signal
- ≤ ± 0,5 %/10 K full scale

AC portion of output signal
- ≤ ± 0,1 % full scale

Long-time stability
- ≤ ± 0,2 % /year

Max. output signal
- 21,5 mA

Output signal in failure
- ≤ 3,6 mA (NAMUR NE 43)

Response time (99%):
- ca. 1,5 s

Electrical connection:
- (siehe Anschaltbilder 2, 3 und 4)
  - cable gland: PG11 / 1/2" NPT
  - cable diameter: 6 - 9mm
  - Max. wire cross section:
  - Ø 1,5 mm²

Electromagnetic compatibility
- Emission according to DIN EN 50081-2 : 1994

<table>
<thead>
<tr>
<th>Test item</th>
<th>Specification</th>
<th>Basic standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>0,15 ... 1000 MHz</td>
<td>DIN VDE 0875: 1992; EN55011</td>
</tr>
<tr>
<td></td>
<td>class B, group 1</td>
<td></td>
</tr>
</tbody>
</table>

Emission according to DIN EN50082-2 : 1995

Test item | Specification | Basic standard | Performance criteria |
----------|---------------|----------------|----------------------|
Elektrostatic discharge (ESD) | 6 kV (contact) 8 kV (air) | DIN EN61000-4-2: 1995 | B |
Elektromagnetic fields | 26 MHz - 1GHz 10V/m (unmodulated) 80 % AM | ENV50140: 1993 | A' |
Conducted interference | 150 KHz - 80 MHz 10 V (unmodulated) 80 % AM source impedance 150 Ω | ENV50141: 1993 | A |
Fast transient (burst) | 2 kV (5/50 ns) 5 kHz | DIN EN61000-4-4: 1995 | A |

Performance criteria:
- A = no influence
- B = influence during test, after test normal operation
- * = 800 - 1000 MHz: error < 5 %

Unit safety according to DIN EN 61010 : 1994
- Units with 115V / 230V power supply: protection class I (with protective earth connection)
- Units with 24V power supply: protection class III (SEL V-E, safety extra low voltage with earth contact)
- Overvoltage category: II (acc. VDE 0110 bzw. IEC 664)

INTRINSICALLY SAFE TRANSMITTER (Code: X65/X66)

Output signal
- 4-20 mA

Ambient temperature
- -25 °C up to +70 °C

Caution:
The maximum ambient temperature of the transmitter (in the indicator) have not to be overcrossed by the heat-index of the measured fluid or gas.

Process temperature
- For temperatures < 0 °C or > 100 °C, please specify the option /A2

Explosion proof
- Certificate of conformity according to CENELEC: EEx ia IIC T6 (intrinsically safe)

Entity parameters
- Acc. certificate of conformity PTB 96 ATEX 2160X (see figure 5)

POWER SUPPLY UNIT FOR INTRINSICALLY SAFE TRANSMITTER (OPTION: /U2F AND /U3F)

Type
- Intrinsically safe power supply unit with galvanic isolation of in- and output (SINEAX B811)

Power supply
- 24 V up to 230 V AC (Option /U2F)
- 13,5 V... 30 V DC

Max. load resistance
- ≤ 750 Ω

Output signal
- 4-wire, 3-wire units: 0 - 20 mA, 4 - 20 mA
- 2-wire units: 4 - 20 mA

Load resistance
- 4-wire units: ≤ 500 Ω
- 2/3-wire units: (VP-13,5 V)/20 mA

Process temperature
- For temperatures < 0 °C or > 100 °C, please specify the option /A2

Ambient temperature
- -25 °C up to +70 °C

Storage temperature
- -40 °C up to +70 °C

Linearity
- ≤ ± 0,2 % full scale

Hysteresis
- ≤ ± 0,1 % full scale

Repeatability
- ≤ ± 0,1 % full scale

Influence of power supply
- ≤ ± 0,1 % full scale

Temperature coefficient of output signal
- ≤ ± 0,5 %/10 K full scale

AC portion of output signal
- ≤ ± 0,1 % full scale

Long-time stability
- ≤ ± 0,2 % /year

Max. output signal
- 21,5 mA

Output signal in failure
- ≤ 3,6 mA (NAMUR NE 43)

Response time (99%):
- ca. 1,5 s

Electrical connection:
- (siehe Anschaltbilder 2, 3 und 4)
  - cable gland: PG11 / 1/2" NPT
  - cable diameter: 6 - 9mm
  - Max. wire cross section:
  - Ø 1,5 mm²

Electromagnetic compatibility
- Emission according to DIN EN 50081-2 : 1994

<table>
<thead>
<tr>
<th>Test item</th>
<th>Specification</th>
<th>Basic standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
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<td>DIN VDE 0875: 1992; EN55011</td>
</tr>
<tr>
<td></td>
<td>class B, group 1</td>
<td></td>
</tr>
</tbody>
</table>

Emission according to DIN EN50082-2 : 1995

Test item | Specification | Basic standard | Performance criteria |
----------|---------------|----------------|----------------------|
Elektrostatic discharge (ESD) | 6 kV (contact) 8 kV (air) | DIN EN61000-4-2: 1995 | B |
Elektromagnetic fields | 26 MHz - 1GHz 10V/m (unmodulated) 80 % AM | ENV50140: 1993 | A' |
Conducted interference | 150 KHz - 80 MHz 10 V (unmodulated) 80 % AM source impedance 150 Ω | ENV50141: 1993 | A |
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Performance criteria:
- A = no influence
- B = influence during test, after test normal operation
- * = 800 - 1000 MHz: error < 5 %

Unit safety according to DIN EN 61010 : 1994
- Units with 115V / 230V power supply: protection class I (with protective earth connection)
- Units with 24V power supply: protection class III (SEL V-E, safety extra low voltage with earth contact)
- Overvoltage category: II (acc. VDE 0110 bzw. IEC 664)

INTRINSICALLY SAFE TRANSMITTER (Code: X65/X66)

Output signal
- 4-20 mA

Ambient temperature
- -25 °C up to +70 °C

Caution:
The maximum ambient temperature of the transmitter (in the indicator) have not to be overcrossed by the heat-index of the measured fluid or gas.

Process temperature
- For temperatures < 0 °C or > 100 °C, please specify the option /A2

Explosion proof
- Certificate of conformity according to CENELEC: EEx ia IIC T6 (intrinsically safe)

Entity parameters
- Acc. certificate of conformity PTB 96 ATEX 2160X (see figure 5)
LIMIT SWITCHES (OPTION: /K1 ... /K3)

<table>
<thead>
<tr>
<th>Type</th>
<th>inductive approximity switch SJ 3.5-N acc. DIN 19234 (NAMUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>-25 °C up to +100 °C</td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>8 V DC (Ri = 1 kΩ)</td>
</tr>
<tr>
<td>Output signal</td>
<td>≤ 1 mA = 0, ≥ 3 mA = 1</td>
</tr>
<tr>
<td>Explosion protection</td>
<td>EEx ia IIC T1 - T6</td>
</tr>
<tr>
<td>Entity parameters</td>
<td>acc. certificate of conformity PTB Nr. Ex-95.D.2198X</td>
</tr>
</tbody>
</table>

(See figure 5)

LIMIT SWITCHES IN FAIL SAFE VERSION
(OPTION /K6 ... /K10)

| Type                                      | inductive approximity switch SJ 3.5-SIN acc. DIN 19234 (NAMUR) in fail safe version |

Technical data on demand

FOR LIMIT SWITCHES (OPTION: /WNN)

<table>
<thead>
<tr>
<th>Type</th>
<th>transmitter relay acc. DIN 19234 (NAMUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230 V AC ±10%/-15%, 50/60Hz</td>
</tr>
<tr>
<td>Relay output</td>
<td>1 potential-free changeover contact</td>
</tr>
<tr>
<td>Switching capacity</td>
<td>max. 250 V AC, max. 2 A</td>
</tr>
<tr>
<td>Control circuit</td>
<td>intrinsically safe [EEx ia] IIC</td>
</tr>
<tr>
<td>Entity parameters</td>
<td>acc. certificate of conformity PTB Nr. Ex-94.C2086</td>
</tr>
</tbody>
</table>

(See figure 5)
Fig. 2. RAMC 2-wire unit with limit switches

Fig. 3. RAMC 3-wire unit with limit switches
Fig. 4. RAMC 4-wire unit with limit switches

Fig. 5. RAMC EEx 2-wire unit with limit switches
MODEL AND SUFFIX CODES

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffixcode</th>
<th>Optioncode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAMC01</td>
<td>.................................................................</td>
<td>Size DN 15 (5/8 inch), for: D4, A1, A2, T4, R4</td>
<td></td>
</tr>
<tr>
<td>RAMC03</td>
<td>.................................................................</td>
<td>Size DN 25 (1 inch), for: D4, A1, A2, T4, S2, S4, R4</td>
<td></td>
</tr>
<tr>
<td>RAMC04</td>
<td>.................................................................</td>
<td>Size DN 32 (1½ inch), for: D4, A1, A2, T4, S4, R4</td>
<td></td>
</tr>
<tr>
<td>RAMC05</td>
<td>.................................................................</td>
<td>Size DN 40 (1½ inch), for: D4, A1, A2, S4</td>
<td></td>
</tr>
<tr>
<td>RAMC06</td>
<td>.................................................................</td>
<td>Size DN 50 (2 inch), for: D4, A1, A2, T4, S2, S4, R4</td>
<td></td>
</tr>
<tr>
<td>RAMC07</td>
<td>.................................................................</td>
<td>Size DN 65 (2½ inch), for: D4, A1, A2, T4, S2, R4</td>
<td></td>
</tr>
<tr>
<td>RAMC08</td>
<td>.................................................................</td>
<td>3½ inch, for: A1, A2</td>
<td></td>
</tr>
<tr>
<td>RAMC09</td>
<td>.................................................................</td>
<td>Size DN 100 (4 inch), for: D2, D4, A1, A2, S2, S4</td>
<td></td>
</tr>
</tbody>
</table>

Process-connection:
- D2 ................................................................. DIN flange PN 16 (only for DN100)
- D4 ................................................................. DIN flange PN40
- A1 ................................................................. ANSI flange 150 lbs
- A2 ................................................................. ANSI flange 300 lbs
- T4 ................................................................. NPT-F, PN40
- R4 ................................................................. RP, PN40
- S2 ................................................................. External thread DIN 11851 PN25/PN40
- S4 ................................................................. Tri clamp PN40

Material wetted parts:
- SS ................................................................. 1.4571, AISI 316 Ti
- PF ................................................................. Teflon (PTFE)

Cone/float:
- nnnn................................................................. Refer to table 1 and 2

Indicator/transmitter:
- T ................................................................. Local indicator (without power supply)
- E ................................................................. Electronic transmitter (non-Ex version)
- X ................................................................. Electronic transmitter (Ex version)
- P ................................................................. Pneumatic transmitter

Housing type:
- 61 ................................................................. Aluminium (only for transmitter -P), specifications on demand
- 65 ................................................................. Aluminium (not for transmitter -P)
- 66 ................................................................. Polyamid (not for transmitter -P), max. temperature 100 °C

Power supply:
- Output
  - 24n................................................................. 230 V AC - 4-wire
  - 14n................................................................. 115 V AC - 4-wire
  - 34n................................................................. 24 V AC - 4-wire
  - 44n................................................................. 24 V DC - 4-wire
  - 43o................................................................. 24 V DC - 3-wire
  - 424................................................................. 24 V DC - 2-wire (also for Ex version)
  - BAR ................................................................. Pneumatic output 0.2 - 1 bar
  - PSI ................................................................. pneumatical output 3 - 15 psi

Style:
- *B................................................................. ROTA YOKOGAWA version (yellow)
- *C................................................................. Yokogawa version (green)

ORDERING INSTRUCTIONS

Specify the following when ordering:
1. Model, suffix codes and option codes
2. a. Fluid name
   b. Temperature
   c. Pressure
   d. Viscosity
   e. Density
3. For gases
   Condition of the scale (st. or actual)
4. Options
   a. Tag No.
   b. Customer specification notes

GS 1R1B2-E-H
OPTIONS

<table>
<thead>
<tr>
<th>Options</th>
<th>Optioncode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation</td>
<td>/A2</td>
<td>Isolation distance 60 mm between tube and indicator (recommended for medium temperatures &gt; 100°C) only for metal type 65, see table 1. US engineering units, only for electronic transmitter (see instruction manual)</td>
</tr>
<tr>
<td></td>
<td>/A12</td>
<td></td>
</tr>
<tr>
<td>Mark</td>
<td>/B1</td>
<td>Stainless steel tag plate</td>
</tr>
<tr>
<td></td>
<td>/BG</td>
<td>Customer specification notes, please specify</td>
</tr>
<tr>
<td>Limit switches</td>
<td>/K1</td>
<td>MIN-contact</td>
</tr>
<tr>
<td></td>
<td>/K2</td>
<td>MAX-contact</td>
</tr>
<tr>
<td></td>
<td>/K3</td>
<td>MIN-MAX-contact</td>
</tr>
<tr>
<td></td>
<td>/K4</td>
<td>MIN-MIN-contact</td>
</tr>
<tr>
<td></td>
<td>/K5</td>
<td>MAX-MAX-contact</td>
</tr>
<tr>
<td></td>
<td>/KS1</td>
<td>Limit switch in FAIL SAFE version (-40 up to +100 °C), only in combination with options /K1 and /K2</td>
</tr>
<tr>
<td></td>
<td>/KS2</td>
<td>For Options /K3 up to /K5</td>
</tr>
<tr>
<td>Tests</td>
<td>/H1</td>
<td>Certificate of degrease</td>
</tr>
<tr>
<td></td>
<td>/PT</td>
<td>With floatable for recalculation</td>
</tr>
<tr>
<td></td>
<td>/P2</td>
<td>Test certificate &quot;2.1&quot; acc. EN 10204 (DIN 50049)</td>
</tr>
<tr>
<td></td>
<td>/P3</td>
<td>Test certificate &quot;2.2&quot; acc. EN 10204 (DIN 50049)</td>
</tr>
<tr>
<td></td>
<td>/P6</td>
<td>Inspection certificate 3.1.B acc. EN 10204 (DIN 50049) for pressurised parts</td>
</tr>
<tr>
<td></td>
<td>/PP</td>
<td>Burst test as per DIN 3230 with certification</td>
</tr>
<tr>
<td>Damping</td>
<td>/SD</td>
<td>For gas applications a damping unit is recommended below the following abs. pressure</td>
</tr>
<tr>
<td>only for stainless steel</td>
<td></td>
<td>(See “sizing programm”)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Float type L: 1 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Float type M: 5 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Float type S: 10 bar</td>
</tr>
<tr>
<td>Heating</td>
<td>/T1</td>
<td>Heating with process connection R1/4*</td>
</tr>
<tr>
<td></td>
<td>/T2</td>
<td>Heating with DIN flange DN 15/PN40</td>
</tr>
<tr>
<td></td>
<td>/T3</td>
<td>Heating with DIN flange DN 25/PN40</td>
</tr>
<tr>
<td>Additional parts</td>
<td>/Y2F</td>
<td>Transmitter power supply, SINEAX B811-14, 230 V AC, with galvanic isolation, output 0/4-20 mA, for Ex version</td>
</tr>
<tr>
<td></td>
<td>/Y3F</td>
<td>Transmitter power supply, SINEAX B811-13, 24 V AC/DC, with galvanic isolation, output 0/4-20 mA, for Ex version</td>
</tr>
<tr>
<td></td>
<td>/W2A</td>
<td>Transmitter relay KFAS-SR2-Ex1.W / 230 V AC, 1 channel, 1 changeover contact</td>
</tr>
<tr>
<td></td>
<td>/W2B</td>
<td>Transmitter relay KFAS-SR2-Ex2.W / 230 V AC, 2 channel, 2 changeover contacts</td>
</tr>
<tr>
<td></td>
<td>/W4A</td>
<td>Transmitter relay KFD2-SR2-Ex1.W / 24 V DC, 1 channel, 1 changeover contact</td>
</tr>
<tr>
<td></td>
<td>/W4B</td>
<td>Transmitter relay KFD2-SR2-Ex2.W / 24 V DC, 2 channel, 2 changeover contacts</td>
</tr>
<tr>
<td>Instruction manuals</td>
<td>/IDn</td>
<td>Quantity of instruction manuals in German (possible 1 to 9) standard 0</td>
</tr>
<tr>
<td>n = 1-9</td>
<td>/IEn</td>
<td>Quantity of instruction manuals in English (possible 1 to 9) standard 0</td>
</tr>
<tr>
<td></td>
<td>/IFn</td>
<td>Quantity of instruction manuals in French (possible 1 to 9) standard 0</td>
</tr>
</tbody>
</table>

Please add the options one after another to the model code.

Table 1. Medium temperatures

<table>
<thead>
<tr>
<th>Display</th>
<th>Pure display from aluminium (T65)</th>
<th>Electrical output contacts, pneumatical output, aluminium (E/X65, P61, /K1-/K10)</th>
<th>Polyamyd housing T/E/X66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>&lt;40°C</td>
<td>40-70°C</td>
<td>&lt;40°C</td>
</tr>
<tr>
<td>Max. Medium temperature</td>
<td>350°C</td>
<td>310°C</td>
<td>150°C</td>
</tr>
<tr>
<td>without distance, without isolation*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Medium temperature</td>
<td>400°C</td>
<td>400°C</td>
<td>380°C</td>
</tr>
<tr>
<td>with distance, (A2), without isolation*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Medium temperature</td>
<td>400°C</td>
<td>380°C</td>
<td>200°C</td>
</tr>
<tr>
<td>with distance (A2), with isolation*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*) The customer will isolate the measuring tube and fill the distance between tube and display with isolation material. For more precise temperature ranges, e.g. to allow higher temperatures, please contact the nearest Yokogawa sales office.
## FLOWTABLE FOR METAL TUBES

**Flow range**: 10:1  
**Reference conditions**: Water at 20 °C  
Air at 20 °C, 1 bar abs.

### Table 2.

<table>
<thead>
<tr>
<th>Process connection</th>
<th>Flange</th>
<th>Inner thread</th>
<th>Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pos.</td>
<td>Pos.</td>
<td>Flange</td>
<td>Inner thread</td>
</tr>
<tr>
<td>DIN D2, PN16</td>
<td>DIN D4, PN40</td>
<td>ANSI A1, 150 lbs</td>
<td>ANSI A2, 300 lbs</td>
</tr>
<tr>
<td>1</td>
<td>DN15</td>
<td>1/&quot;</td>
<td>1/&quot;</td>
</tr>
<tr>
<td>DN20</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>DN25</td>
</tr>
<tr>
<td>DN26</td>
<td>1&quot;</td>
<td>1&quot;</td>
<td>DN32*</td>
</tr>
<tr>
<td>DN32*</td>
<td>1 1/4&quot;</td>
<td>1 1/4&quot;</td>
<td>DN40/1/2&quot;</td>
</tr>
<tr>
<td>2</td>
<td>DN15</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>DN20</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>DN25*</td>
</tr>
<tr>
<td>DN26</td>
<td>1&quot;</td>
<td>1&quot;</td>
<td>DN32*</td>
</tr>
<tr>
<td>DN32*</td>
<td>1 1/4&quot;</td>
<td>1 1/4&quot;</td>
<td>DN40/1/2&quot;</td>
</tr>
<tr>
<td>3</td>
<td>DN25</td>
<td>1&quot;</td>
<td>1&quot;</td>
</tr>
<tr>
<td>DN32*</td>
<td>1 1/4&quot;</td>
<td>1 1/4&quot;</td>
<td>DN32*</td>
</tr>
<tr>
<td>DN40</td>
<td>1 1/2&quot;</td>
<td>1 1/2&quot;</td>
<td>DN50*</td>
</tr>
<tr>
<td>DN50*</td>
<td>2&quot;</td>
<td>2&quot;</td>
<td>DN50/2&quot;</td>
</tr>
<tr>
<td>4</td>
<td>DN50</td>
<td>2&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>5</td>
<td>DN80</td>
<td>3&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>6</td>
<td>DN100</td>
<td>4&quot;</td>
<td>4&quot;</td>
</tr>
</tbody>
</table>

### NOTES
- *Pos.* refer to table 3 “Dimensions” on page 12.
- The recommended combinations should be preferred. However if a lower pressure drop is necessary the alternative combination can be selected.
- Pressure drop for water and air at flow.
- For higher viscosity than the given values, non-linear scale
- *Asterisked process connections are not available with heating.
- Standard length L = 250 mm, all different lengths are separately indicated.

GS 1R1B2-E-H
### Water/Liquids

<table>
<thead>
<tr>
<th>Max. flow rate [m³/h]</th>
<th>Cone/Float Code</th>
<th>Press. drop [mbar]</th>
<th>Max. Cone/Float</th>
<th>Press. drop [mbar]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.025</td>
<td>43 S0</td>
<td>40</td>
<td>2.9</td>
<td>43 S0</td>
</tr>
<tr>
<td>0.04</td>
<td>44 S0</td>
<td>40</td>
<td>4.5</td>
<td>44 S0</td>
</tr>
<tr>
<td>0.063</td>
<td>47 S0</td>
<td>40</td>
<td>6.4</td>
<td>47 S0</td>
</tr>
<tr>
<td>0.1</td>
<td>51 S0</td>
<td>40</td>
<td>9.2</td>
<td>51 S0</td>
</tr>
</tbody>
</table>

### Air/Gases

<table>
<thead>
<tr>
<th>Max. flow rate [m³/h]</th>
<th>Cone/Float Code</th>
<th>Press. drop [mbar]</th>
<th>Max. flow rate [m³/h]</th>
<th>Press. drop [mbar]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>43 S0</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>44 S0</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.8</td>
<td>47 S0</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) In case of V-floats the scale for liquids will never be linear.

Please use the sizing program DUREP_V for dimensioning of the Rotameter for other media/process conditions.
FLOW TABLE FOR PTFE

Flow range: 10:1
Reference conditions:
- Water at 20 °C
- Air at 20 °C, 1 bar abs.

Table 3.

<table>
<thead>
<tr>
<th>Process connection</th>
<th>Water/Liquids</th>
<th>Air/Gases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max. Flow rate [m³/h]</td>
<td>Cone/Float drop [mbar]</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>2</td>
<td>DN 15 * ½&quot; *</td>
<td>0,1</td>
</tr>
<tr>
<td></td>
<td>DN 25 1&quot;</td>
<td>0,16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0,25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0,4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0,63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,0</td>
</tr>
<tr>
<td>3</td>
<td>DN 25 * 1/½ *</td>
<td>1,6</td>
</tr>
<tr>
<td></td>
<td>DN 40 1/1½ *</td>
<td>2,5</td>
</tr>
<tr>
<td></td>
<td>DN 50 * 1/1½</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>DN 50 * 2/½ *</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>DN 65 3&quot;</td>
<td>6,3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
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<tr>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>DN 100 * 3/½ *</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>DN 80 * 4&quot;</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>DN 100 * 4&quot;</td>
<td>63</td>
</tr>
</tbody>
</table>

1) In case of V-floats the scale for liquids will never be linear.

NOTES
- Pos: refer to Table 3 “Dimensions” on page 12.
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DIMENSIONS AND WEIGHT

Fig. 6. Front view

GS 1R1B2-E-H
DIMENSIONS AND WEIGHT

Fig. 7. Metal version

Fig. 8. Metal version with lining

Fig. 9. Option /T1 with /A2

Fig. 10. With connection T4/R4
Table 4.

<table>
<thead>
<tr>
<th>Pos.</th>
<th>H1</th>
<th>H2</th>
<th>Cone</th>
<th>D2</th>
<th>D4</th>
<th>A1</th>
<th>A2</th>
<th>S2</th>
<th>S4</th>
<th>T4, R4</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1+2</td>
<td>122</td>
<td>123</td>
<td></td>
<td>43-62</td>
<td>L=250</td>
<td>L=250</td>
<td>L=250</td>
<td>L=275</td>
<td>L=275</td>
<td>L=295</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>131</td>
<td>136</td>
<td>63, 64</td>
<td>L=250</td>
<td>L=250</td>
<td>L=250</td>
<td>L=275</td>
<td>L=275</td>
<td>L=301</td>
<td>L=310</td>
<td>6.5</td>
</tr>
<tr>
<td>4</td>
<td>147</td>
<td>152</td>
<td>67-72</td>
<td>L=250</td>
<td>L=250</td>
<td>2&quot;</td>
<td>2&quot;</td>
<td>L=250</td>
<td>L=275</td>
<td>L=300</td>
<td>L=325</td>
</tr>
<tr>
<td>5</td>
<td>161</td>
<td>168</td>
<td></td>
<td>73-77</td>
<td>L=250</td>
<td>L=250</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>L=260</td>
<td>L=270</td>
<td>L=300</td>
</tr>
<tr>
<td>6</td>
<td>170</td>
<td>176</td>
<td>81</td>
<td>L=250</td>
<td>L=250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L=250</td>
<td>20</td>
</tr>
</tbody>
</table>

Fig. 11. With connection S2

Fig. 12. With connection S4

**Table 4.**

<table>
<thead>
<tr>
<th>Installation length + weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type</td>
</tr>
<tr>
<td>Pos.</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1+2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>