

# In-line turbidity system TRUBOMAT GAB



TRUBOMAT GAB 20 or 1000, Stainless steel measuring cell

- **Continuous turbidity measurement according to ISO 7027:**
  - 90° Scattered light,
  - 180° Attenuated light
- **2 emitters, 1 receiver**
- **Measuring ranges:**
  - 0.01 ... 20 FNU
  - 0.1 ... 1000 FNU / FAU
- **Output signal: 4-20 mA (4-wire)**
- **Fitting: Flanges DIN 2633**

## APPLICATIONS

- Monitoring of drilled or well water, for drinking water production
- Monitoring of filtering or reverse osmosis units
- Control of sewage treatment plant outlets
- Cooling plant monitoring
- Filter clogging and cleaning monitoring

## PRINCIPLE

TRUBOMAT GAB measures the turbidity of a liquid using attenuated light beam (at 180°) and scattered light beam (at 90°) with a 860 nm wavelength light, according to european standard ISO 7027

## DESCRIPTION OF MEASURING CELL

The measurement cell, part of the assembly uses two IR transmitters and one IR receiver; Receiver integrates a microprocessor based analysis module. The 4-20 mA output signal corresponds to the selected scale in use.

### TRUBOMAT GAB 20:

5 scales to select through DIP switches from 0.01 ... 1 up to 0.01 ... 20 FNU

### TRUBOMAT GAB 1000:

5 scales to select through DIP switches from 0.1 ... 50 FNU up to 100 ... 1000 FAU

## TECHNICAL FEATURES

|                     |                                     |
|---------------------|-------------------------------------|
| Power supply        | 24 V DC stabilized (10 ... 30 V DC) |
| Consumption         | 0.5 W                               |
| Output signal       | 4-20 mA (for monitor BAMOPHAR 436)  |
| Ambient temperature | +5 ... +45 °C                       |
| Fluid temperature   | +5 ... +100 °C                      |
| Pressure limit      | 10 bar at 60 °C                     |

## MATERIALS

|                             |  |
|-----------------------------|--|
| Measuring cell              | AISI 316 L (1.4404)  |
| Electrical connections head | PBT housing, glass fiber reinforced; IP 65 according to EN 60529 |
| Optical windows             | Borosilicate glass, Cleanosil nanocoating                        |

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**446-01 /1**

## MEASURING SCALES

| TRUBOMAT GAB 1000 |                |                 |                 |                 |                  |
|-------------------|----------------|-----------------|-----------------|-----------------|------------------|
| ND 20 to ND 65    | 0.1 ... 50 FNU | 0.1 ... 100 FNU | 0.1 ... 200 FNU | 0.1 ... 500 FNU | 100 ... 1000 FAU |
| ND 80 to ND 100   | 0.1 ... 50 FNU | 0.1 ... 100 FNU | 0.1 ... 200 FNU | 0.1 ... 300 FNU | 100 ... 1000 FAU |

| TRUBOMAT GAB 20 |                |                |                |                 |                 |
|-----------------|----------------|----------------|----------------|-----------------|-----------------|
| ND 25 to ND 100 | 0.01 ... 1 FNU | 0.01 ... 2 FNU | 0.01 ... 5 FNU | 0.01 ... 10 FNU | 0.01 ... 20 FNU |

Accuracy  $\pm 5\%$  of reading,  $\pm 1\%$  of full scale in use  
 Resolution From 0.001 to 0.2 FNU according the scale in use

Fouling compensation Automatic fouling compensation  
 Only for TRUBOMAT GAB 20 up to ND 65

Set up With 6 DIP switches

Displayed information Operating: Green LED; Fault: Red LED

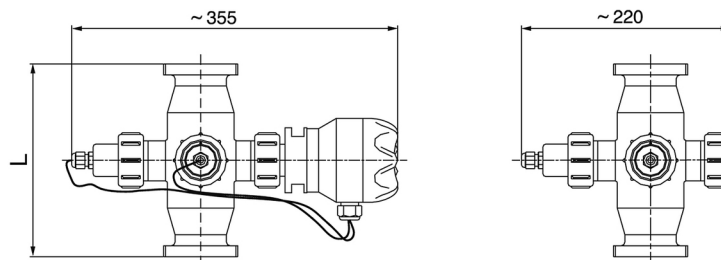
Fittings Flanges DIN 2633 - ND 25 to ND 100 / PN 10  
 On request: Triclamp DIN 32676 (specific) from ND 25 to ND 100

EC Conformity The instrument meets the legal requirements of the current European Directives

## ACCEPTED MOUNTINGS

Operating only on vertical full pipe, with ascending flow.  
 Straight sections lengths: 600 mm upstream (lower) and 400 mm upstream (upper)

## DIMENSIONS



| DN     | L $\pm 1$ mm / Flanges DIN 2633 | L $\pm 1$ mm / Triclamp DIN 32676 | Pathlength [ mm ] |
|--------|---------------------------------|-----------------------------------|-------------------|
| ND 25  | 274                             | 287                               | 65                |
| ND 32  | 252                             | 265                               |                   |
| ND 40  | 230                             | 243                               |                   |
| ND 50  | 190                             | 199                               |                   |
| ND 65  | 233                             | 255                               |                   |
| ND 80  | 208                             | 224                               | 100               |
| ND 100 | 240                             | 256                               |                   |

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## CODE NUMBERS AND REFERENCES

| Code    | Reference     | Description  |        |
|---------|---------------|--|--------|
| 446 123 | GAB FF 1000 3 | AISI 316 L; 0.1FNU ... 1000 FAU - Flanges DIN 2633 | ND 25  |
| 446 124 | GAB FF 1000 4 | -  | ND 32  |
| 446 125 | GAB FF 1000 5 | -  | ND 40  |
| 446 126 | GAB FF 1000 6 | -  | ND 50  |
| 446 127 | GAB FF 1000 7 | -  | ND 65  |
| 446 128 | GAB FF 1000 8 | -  | ND 80  |
| 446 129 | GAB FF 1000 9 | -  | ND 100 |
| 446 223 | GAB FF 20 3   | AISI 316 L; 0.01FNU ... 20 FNU - Flanges DIN 2633  | ND 25  |
| 446 224 | GAB FF 20 4   | -  | ND 32  |
| 446 225 | GAB FF 20 5   | -  | ND 40  |
| 446 226 | GAB FF 20 6   | -  | ND 50  |
| 446 227 | GAB FF 20 7   | -  | ND 65  |
| 446 228 | GAB FF 20 8   | -  | ND 80  |
| 446 229 | GAB FF 20 9   | -  | ND 100 |



*AISI 316 L measuring  
cell (no sanitary  
agreement)*



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