



Level indicators with weld-on spigot on the front side
for operating pressures up to 40 barg

USAGE

The level indicator type 410 serves as a liquid indicator in the bypass for reliable level control on boilers and tanks. The indicator features a rectangular flange fitting with two end-face Ø20mm welding ends.

Operating condition

| | | |
|--|---------------------------|--|
| Temperature: (depending on glass and gasket) | ≤ 243 °C | Reflection glass DIN 7081 made of borosilicate glass |
| | ≤ 280 °C | Reflection glass DIN 7081 made of borosilicate glass (without technically significant glass attack) |
| Pressure: | ≤ 35/40 ¹ barg | |

1) Depending on the medium and ssee pressure note
on the next page

Materials

| | |
|------------------------------|--|
| Base frame: | 1.4571 |
| Glass: | Borosilicate glass DIN 7081 reflective glass |
| Seal: | PTFE; C4400; Graphite |
| Screws: | A2-70 V A4-70 |
| Special materials on request | |

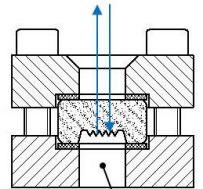
INSTALLATION NOTE

After welding ends the pipe fittings to the pipeline, it must be checked whether the sealing surfaces on the base frame have been deformed. If necessary, reworking must be done! Please also observe the specified torque values for the fastening according to the working and maintenance instructions!

REFLECTIVE AND TRANSPARENT GLASS

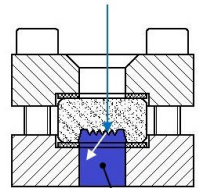
Closed level indicators are equipped with reflective glass by default. The prism structures integrated into the glass create a targeted light refraction, allowing the fluid level in the body to be read clearly and with high contrast.

Light rays



Reflective glass
without liquid

Light rays



Reflective glass
with liquid

| BL | V | Concealed view | h | kg |
|------|-----|----------------|----|------|
| 140 | 79 | 0 | 25 | 3.4 |
| 170 | 124 | 0 | 25 | 4.0 |
| 220 | 174 | 0 | 25 | 5.0 |
| 250 | 204 | 0 | 25 | 5.7 |
| 300 | 264 | 0 | 25 | 6.7 |
| 310 | 264 | 0 | 25 | 7.0 |
| 350 | 304 | 0 | 25 | 7.8 |
| 370 | 324 | 0 | 25 | 8.2 |
| 400 | 354 | 0 | 25 | 8.9 |
| 500 | 454 | 1x46 | 25 | 11.4 |
| 600 | 564 | 1x46 | 25 | 13.4 |
| 620 | 574 | 1x46 | 25 | 13.9 |
| 700 | 654 | 1x46 | 25 | 15.7 |
| 740 | 694 | 1x46 | 25 | 16.5 |
| 800 | 754 | 1x46 | 25 | 17.8 |
| 930 | 884 | 2x46 | 25 | 20.9 |
| 1000 | 954 | 3x46 | 25 | 22.8 |

PRESSURE NOTE

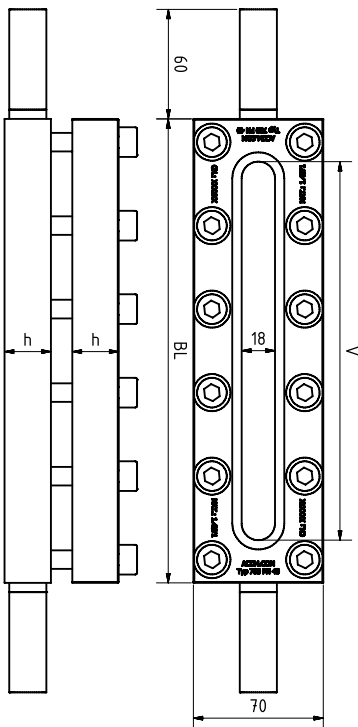
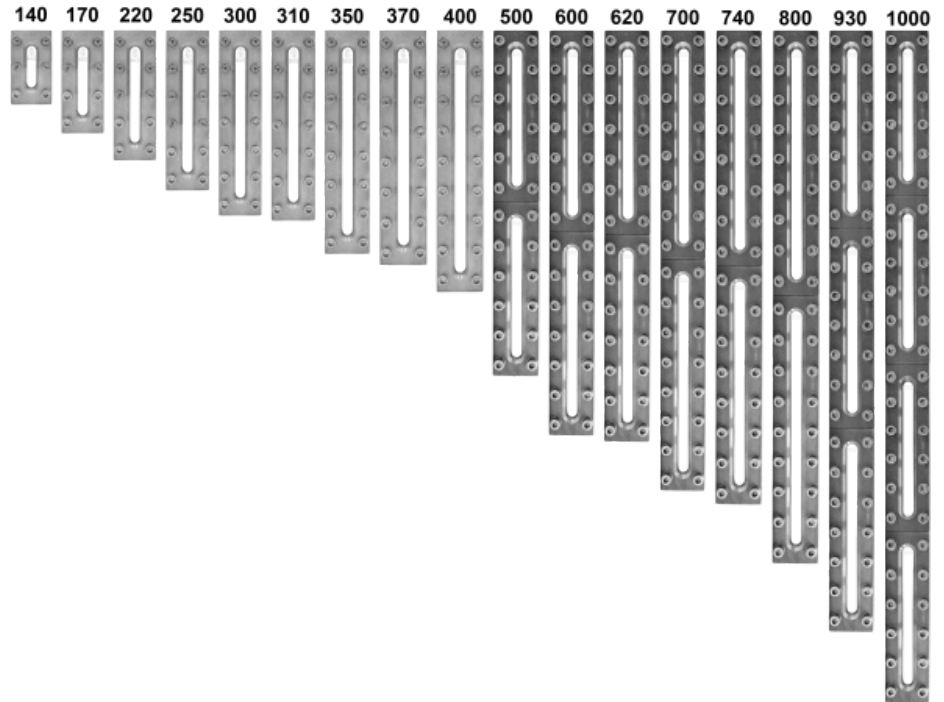
The operating pressure of 40 barg is only achievable with liquid media, without technically significant glass impact. In applications involving steam or aggressive media, the maximum operating pressure PS = 35 barg at a maximum of 243 °C.

Also see the data sheet for sight glasses according to DIN 7081.

HIDDEN VIEW (HV)

In level indicators, large total length result in a concealed view in the area between the individual length glasses. This is due to the manufacturing length of the length glasses according to DIN 7081. From a total length of 500 mm, a concealed view is therefore unavoidable. The configuration of the size 140 mm to 1000 mm can be taken from the adjacent representations.

Special sizes upon request.



PRODUCT CODE

Example for Explaining the Code Composition

11 - **410** - **400** - **2** - **2** - **3** - **7** - **0**

| GROUP | TYPE | LENGTH | PN | BASE FRAME | GLASS | GASKET | VARIANT |
|-------|------|--------|-------|------------|--------------------------------|-------------|-------------|
| 11 | 410 | 140 | 2) 40 | 2) 1.4571 | 3) Borosilicate glass DIN 7081 | 1) PTFE | 0) Standard |
| | | 170 | | 8) Special | reflective glass | 4) C4400 | |
| | | 220 | | | | 7) Graphite | |
| | | 250 | | | | 8) Special | |
| | | 300 | | | | | |
| | | 310 | | | | | |
| | | 350 | | | | | |
| | | 370 | | | | | |
| | | 400 | | | | | |
| | | 500 | | | | | |
| | | 600 | | | | | |
| | | 620 | | | | | |
| | | 700 | | | | | |
| | | 740 | | | | | |
| | | 800 | | | | | |
| | | 930 | | | | | |
| | | 1000 | | | | | |



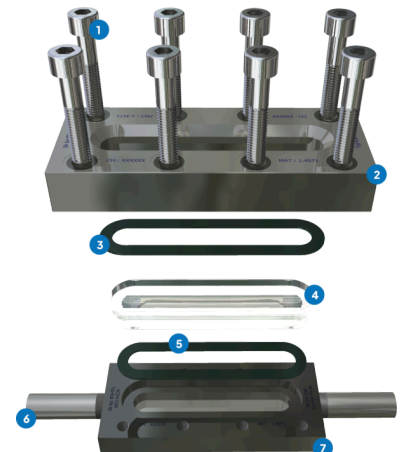
Unless otherwise specified, the highlighted factory standard will be delivered.

EXAMPLE

The product code **11-410-400-2-2-3-7-0** corresponds to the standard version:
 ACI type 410
 400 mm long
 PN 40
 Base frame made of 1.4571
 Cover frame made of 1.4571
 Borosilicate glass DIN 7081 reflective
 Gasket novaphit® MST-XP

STRUCTURE

1. Screws
2. Cover frame
3. Glass cushion
4. Sight glass
5. Gasket
6. Pipe sockets
7. Base frame



QUICK OVERVIEW



max. 40 barg



heat resistant up to 280 °C



for liquid media



for gaseous media



Total length
140 - 1000 mm



Custom-made solutions
possible

OPERATING CONDITIONS

Operating conditions depend on the choice of glass and seals:

| | | SIGHT GLASS | | GASKETS | |
|-------------|-------------------------|--|---------------------|----------------------|----------------------|
| | | Borosilicate glass (DIN 7081) reflective glass | PTFE max. 200 °C | C4400 max. 175 °C | Graphite > 400 °C |
| TEMPERATURE | up to 175 °C | ✓ | ✓ | ✓ | ✓ |
| | up to 200 °C | ✓ | ✓ | ✗ | ✓ |
| | up to 243 °C | ✓ | ✗ | ✗ | ✓ |
| | up to 280 °C | ✓ | ✗ | ✗ | ✓ |
| PRESSURE | 35/40 ² barg | ✓ | ✓ | ✓ | ✓ |

2) Depending on the medium

✓ suitable ✗ unsuitable

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