



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

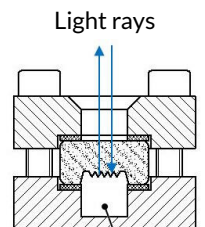
Base frame:	1.4571
Glass:	Borosilicate glass DIN 7081 reflective glass
Seal:	PTFE; C4400; Graphite
Screws:	A2-70 V A4-70
Special materials on request	

INSTALLATION NOTE

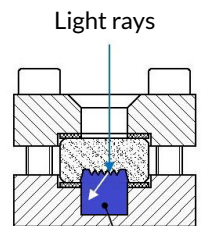
After welding ends the pipe fittings to the pipeline, it must be checked whether the sealing surfaces on the base frame have been deformed. If necessary, reworking must be done! Please also observe the specified torque values for the fastening according to the working and maintenance instructions!

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.



Reflective glass
without liquid



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

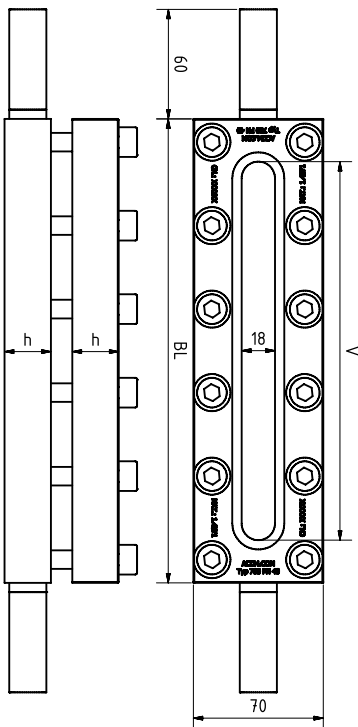
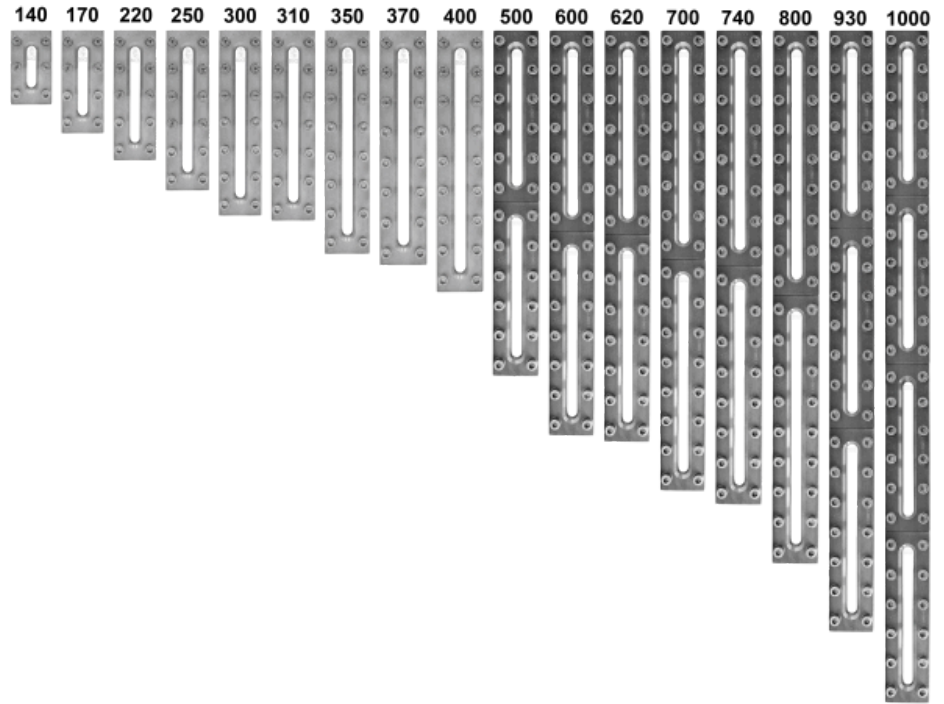
The operating pressure of 40 barg is only achievable with liquid media, without technically significant glass impact. In applications involving steam or aggressive media, the maximum operating pressure PS = 35 barg at a maximum of 243 °C.

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					



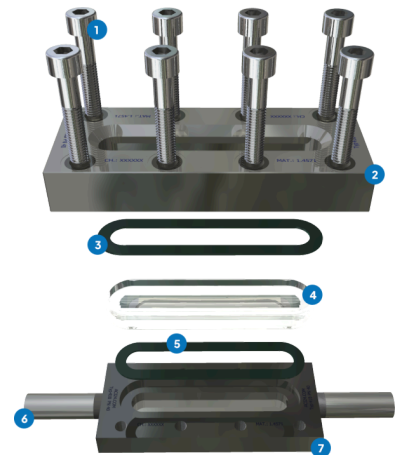
Unless otherwise specified, the highlighted factory standard will be delivered.

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