Level indication Type 410 PN 40

Level indicator with end-face weld-on nozzles

Type 410

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

USAGE

The level indicator type 410 is used as a liquid indicator in the bypass for reliable level monitoring of boilers and tanks. The indicator features a square flange housing with two end-face Ø 20 mm weld-on stubs.

Operating conditions		
Temperature: (depending on glass and Gasket)	≤ 243 °C	Reflective glass DIN 7081 made of Borosilicate glass
	≤ 280 °C	Reflective glass DIN 7081 made of Borosilicate glass (without technically significant glass attack)
Pressure:	≤ 35/40[1] barg	

1) Depending on the medium, see the pressure note on the next page

Materials	
Base frame:	1.4571
Glass:	Borosilicate glass DIN 7081 Reflective glass
Gasket:	PTFE; C4400; Graphite
Screws:	A2-70 / A4-70
Special materials on request	

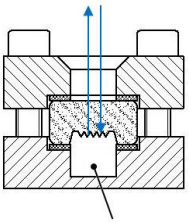
INSTALLATION NOTE

After welding the pipe stubs to the Pipeline, check whether the sealing faces on the Base frame have warped. If necessary, they must be reworked! Also observe the specified tightening torques for the bolted connection in accordance with the operating and maintenance manual!

REFLECTIVE AND TRANSPARENT GLASS

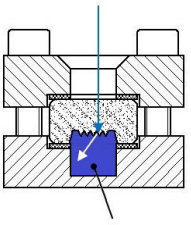
Closed level indicators are typically fitted with reflective glass. The prism structures incorporated into the glass cause targeted light refraction, making the liquid level in the housing easy to read with clear, high contrast.

Light rays



Reflection glass without liquid

Light rays



Reflection 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

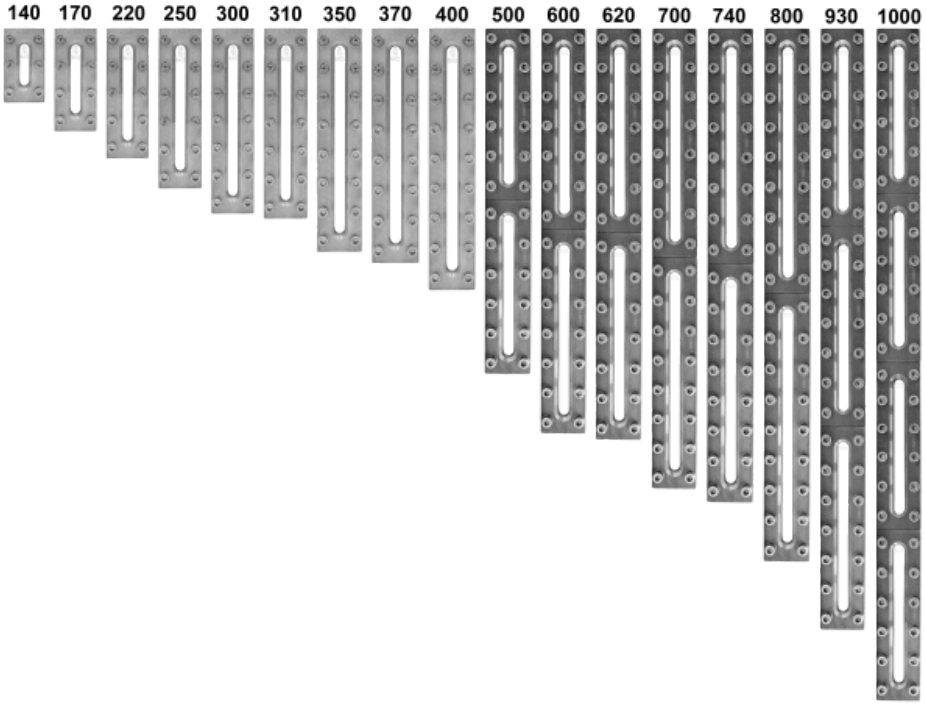
The working pressure of 40 barg is only achievable for liquid media, without technically significant glass attack. For applications involving the action of steam or aggressive media, the maximum working pressure PS = 35 barg at a maximum temperature of 243 °C.

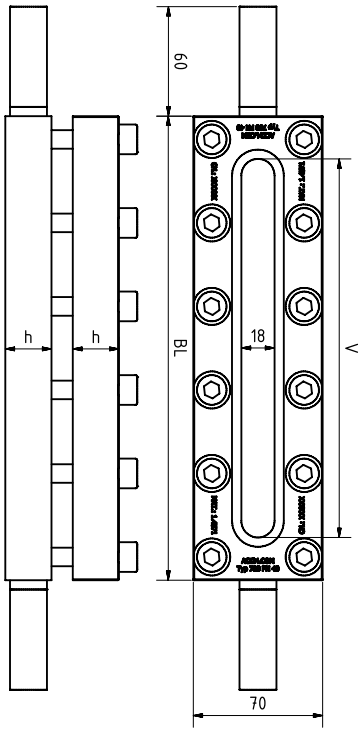
See also the data sheet for sight glass rods according to DIN 7081.

HIDDEN VIEW (HV)

With level indicators, a concealed view occurs for large overall lengths in the area between the individual longitudinal sight glasses. This is caused by the manufacturing length of the longitudinal sight glasses according to DIN 7081. From an overall length of 500 mm, a concealed view is therefore unavoidable. The configuration for sizes 140 mm to 1000 mm can be found in the adjacent illustrations.

Special sizes available on request.





PRODUCT CODE

Example for Explaining the Code Composition

11 - 410 - 400 - 2 - 2 - 3 - 7 - 000

GROUP	TYPE	TOTAL LENGTH	PN	BASE FRAME	GLASS	GASKET	VARIANT
11	410	140	2) 40	2) 1.4571	3) Borosilicate glass DIN 7081 Reflective glass	1) PTFE	000) Standard
		170		8) Special		4) C4400	
		220				7) Graphite	
		250				8) Special	
		300					
		310					
		350					
		370					
		400					
		500					
		600					
		620					
		700					
		740					
		800					
		930					
		1000					

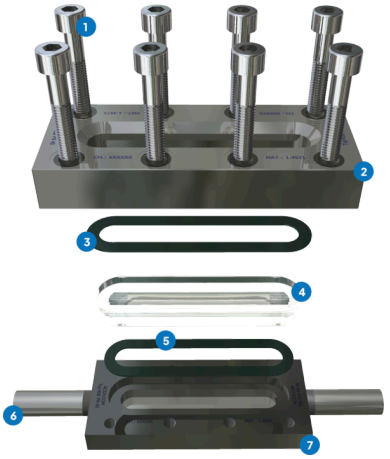
Unless otherwise specified, the highlighted factory standard will be supplied.

EXAMPLE

The product code 11-410-400-2-2-3-7-000 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
Reflective borosilicate glass DIN 7081
Gasket novaphit® MST-XP

STRUCTURE

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



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Type 410

QUICK OVERVIEW

max. 40 barg

heat-resistant up to 280 °C

for liquid media

for gaseous media

Overall lengths 140 - 1000 mm

Custom-made designs possible

OPERATING CONDITIONS

Operating conditions depend on the choice of glass and gaskets:

		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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