



Level indicators with rear holes for operating pressures up to 40 barg

USAGE

The level indicator type 400 serves as a liquid indicator in the bypass for reliable level control in boilers and tanks. The indicator has a square flange body with two rear \varnothing 18 mm holes intended for welding to pipe fittings. Alternatively, the level indicator can be welded directly into the container wall - in this case, the closed rear side serves as a calming section to minimize level fluctuations in the container.

Operating condition

Temperature: (dependent 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 impact)
Pressure:	$\leq 35/40^1$ barg	

1) Dependent 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
Bolts:	A2-70 / A4-70
Special materials upon request	

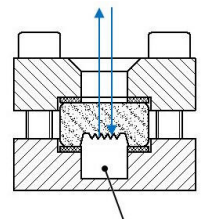
INSTALLATION NOTE

After welding ends the pipe nipples to the base frame, it must be checked whether the sealing surface has warped. If necessary, reworking must be done! Also, pay attention to the specified torques for the bolting according to the working and maintenance manual!

REFLECTIVE AND TRANSPARENT GLASS

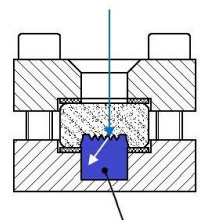
Closed level indicators are standardly equipped with reflective glass. The prism structures integrated into the glass cause a targeted refraction of light, allowing the liquid level in the housing to be read clearly and with contrast.

Light rays



Reflective glass
without liquid

Light rays



Reflective glass
with liquid

BL	V	S	Concealed view	h	kg
140	79	60	0	25	3,4
170	124	100	0	25	4,0
220	174	150	0	25	5,0
250	204	180	0	25	5,7
300	264	240	0	25	6,7
310	264	240	0	25	7,0
350	304	280	0	25	7,8
370	324	300	0	25	8,2
400	354	330	0	25	8,9
500	454	430	1x46	25	11,4
600	564	540	1x46	25	13,4
620	574	550	1x46	25	13,9
700	654	630	1x46	25	15,7
740	694	670	1x46	25	16,5
800	754	730	1x46	25	17,8
930	884	860	2x46	25	20,9
1000	954	930	3x46	25	22,8

PRESSURE NOTE

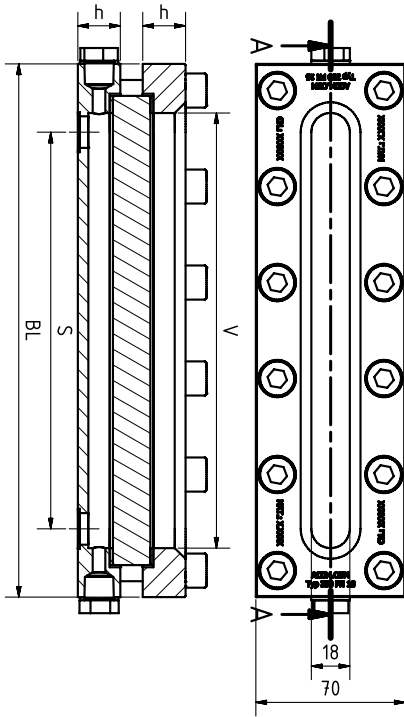
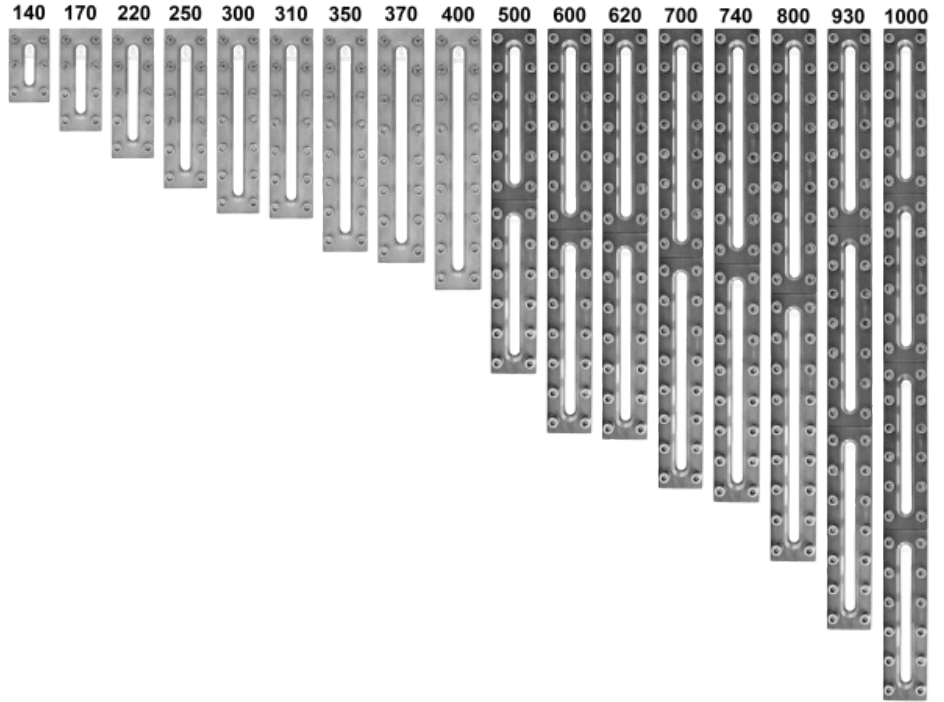
The operating pressure of 40 barg is only achievable with liquid media, without technically significant glass attack. In applications involving steam or aggressive media, the maximum operating pressure PS = 35 barg at a maximum of 243 °C.

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

HIDDEN VIEW (HV)

For level indicators, a concealed view arises in the area between the individual longitudinal sight glasses with large total lengths. This is due to the manufacturing length of the longitudinal sight 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 on request.



PRODUCT CODE

Example for Explaining the Code Composition

11 - 400 - 400 - 2 - 3 - 7 - 2 - 0

GROUP	TYPE	LENGTH	BASE FRAME	GLASS	GASKET	PN	VARIANT
11	400	140	2) 1.4571	3) Borosilicate glass DIN 7081 reflective glass	1) PTFE	2) 40	0) 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					



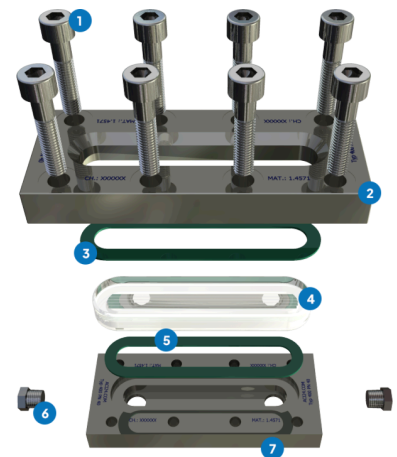
Unless otherwise specified, the highlighted factory standard will be delivered.

EXAMPLE

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

STRUCTURE

1. Screws
2. Cover frame
3. Glass cushion
4. Sight glass
5. Gasket
6. Plug screw
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 designs
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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