

APPLICATION:

Observation and illumination of the liquid level inside closed vessels (boilers, tanks, silos, etc.).

These sightglasses are angular flange sockets for welding in or on, each completed with a firmly screwed sightglass plate inserted between the seals.

INSTALLATION NOTE:

After the base frame has been welded in, check whether the sealing surfaces have warped! If necessary, rework must be performed! Please also observe the specified torques for the screw connection! The operating pressure does not apply to the base frame, which must be checked together with the pressure device according to AD data sheet B9!

Rectangular sight glass with
Lloyd's design appraisal
($\Delta P \leq -1^1$ bis 16 / 40² bar)



Operating conditions:

Temperature:	243 °C Boro Reflex 300 °C Boro transparent 320 °C Boro transparent with mica protection
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Pressure:	$\leq -1^1$ to 16 / 40 ² Bar
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¹ depends on environmental variables

² see pressure remark on next page

IMPORTANT:

The design appraisal by Lloyd's Register does not replace the final approval of the entire system! A new final approval of the system or the tank is required after welding in the base frame.

Materials:

Flange:	1.4571, 1.4404, 1.4541, 1.4539, P265GH
Glass:	Borosilicate glass DIN 7081 Reflex or transparent glass
Gasket:	PTFE; FKM; NBR; C4400; Silicone; EPDM; Graphite
Screws:	A4-70
Special materials on request	

REFLEX AND TRANSPARENT GLASS:

A reflex sight glass is recommended for dark media, dark or non-illuminated vessels. (see adjacent picture) Due to the refraction of light in the integrated prisms, the fill level may be better visible. However, if the vessel is illuminated, the medium is very bright or the colour of the medium must be visible, a transparent glass should be used. We are happy to help you with the selection.

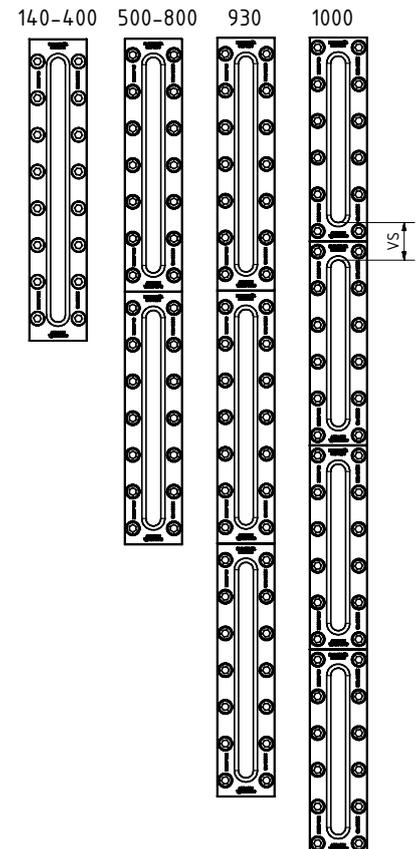
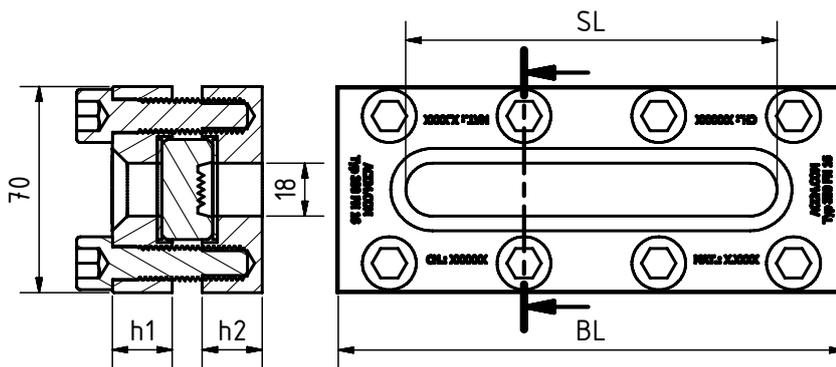


²PRESSURE REMARK:

The operating pressure of 40 bar is only possible with transparent glass for liquid media without technically significant glass attack. For transparent glasses exposed to steam or aggressive media, the maximum operating pressure is PS = 35 bar. More detailed information can be found in our info sheet DIN 7081.

CONCEALED VIEW (VS):

Concealed visibility is formed in the area between the individual longitudinal glasses for level indicators of long sizes. Because of the manufacturing length of the longitudinal glasses in accordance with DIN 7080, a concealed view cannot be avoided from an overall length of 500 mm onward. The layout of the sizes 140 mm to 1000 mm can be seen in the following illustration.



BL	SL	Concealed view (VS)	h1/ h2 (PN16)	h1/ h2 (PN40)	Kg (PN16)	Kg (PN40)	tightening torque ³ (Nm)
140	79	0	20	25	2,8	3,4	13...34
170	124	0	20	25	3,2	4,0	13...34
220	174	0	20	25	4,0	5,0	13...34
250	204	0	20	25	4,6	5,7	13...34
300	264	0	20	25	5,3	6,7	13...34
310	264	0	20	25	5,6	7,0	13...34
350	304	0	20	25	6,3	7,8	13...34
370	324	0	20	25	6,6	8,2	13...34
400	354	0	20	25	7,1	8,9	13...34
500	454	1x46	20	25	9,1	11,4	13...34
600	564	1x46	20	25	10,7	13,4	13...34
620	574	1x46	20	25	11,1	13,9	13...34
700	654	1x46	20	25	12,5	15,7	13...34
740	694	1x46	20	25	13,2	16,5	13...34
800	754	1x46	20	25	14,2	17,8	13...34
930	884	2x46	20	25	16,7	20,9	13...34
1000	954	3x46	20	25	18,2	22,8	13...34

³ graphite gasket



Rectangular sight glass PN 16 / 40

Level indicator with Lloyd's design appraisal

Type 330

PRODUCTCODE:

Group	TYPE	ovr. length	Base frame*	Glass	Gasket	PN	Variant
11	330	140 170 220 250 300 310 350 370 400 500 600 620 700 740 800 930 1000	1: P265GH 2: 1.4571 3: S355... ⁴ 4: 1.4404 5: 1.4462 8: Special	1: Borosilicate glass (Boro) DIN 7081 transparent glass 3: Borosilicate glass (Boro) DIN 7081 reflex glass 5: untempered borosilicate glass ⁵ transparent glass	1: PTFE 2: FKM 3: NBR 4: C4400 5: Silicone 6: EPDM 7: Graphite 8: Special	1: 16 2: 40	Assigned by ACI if required

INFO: Unless otherwise stated, the factory standard highlighted is supplied.

*Cover frame according to quotation / order confirmation. ⁴ Material certificate 3.1 possible, without AD2000 W1

SPECIAL DESIGNS/OPTIONS:

- a) High temperature version on request⁵
- b) LED or halogen lights, ATEX-certified, EX
- c) Other options on request

⁵ without Lloyds Register design appraisal

EXAMPLE:

11-330-400-2-1-7-1-0 equals the product code:

ACI Type 330
400 mm long
Base frame 1.4571
Borosilicate glass Transparent
gasket graphite
PN16
standard version

RECOMMENDATION:

For aggressive media or steam, mica discs should be used to protect the glass.

(Not possible with reflex sight glasses as they would lose their function.)

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