

Rectangular Sightglass Fittings - TÜV approved/tested

ISO 9001

DATA SHEET 02-0060 01/04

Application:

For viewing the internals of vessels, silos, reactors etc., mainly used as fluid level indicator.

General:

The base frame of rectangular sightglass fittings is welded onto or into the vessel wall. The sightglass plate, with two seals, is firmly bolted down by the cover frame and a set of fastening bolts.

Operating Conditions

It is strongly recommended to check the strength of reinforcement around the cutout in combination with the vessel wall according to current regulations.

Pressure: 235 psi, vacuum
Temperature: 243 °C with borosilicate glass DIN 7081

Temperatures refer to unprotected glass plates, i.e. without mica protective sheet.

Certificates / Testing:

Depending on customer's requirements, certification and testing can be provided to DIN 50 049 3.1 A/3.1 B (extra charge).

Parts and available materials:

(See exploded view at right)

Items	Parts name	Material options
1	base frame	carbon steel RSt 37-2, stainless steel 316L or alternative
2.1	seal	Non-Asbestos, PTFE, graphite or alternative
3	sightglass disc	borosilicate glass tempered, max. 243 °C
4	cover frame	carbon steel RSt 37-2, stainless steel 316 or alternative
5	securing bolts	carbon steel 5.6 or stainless steel

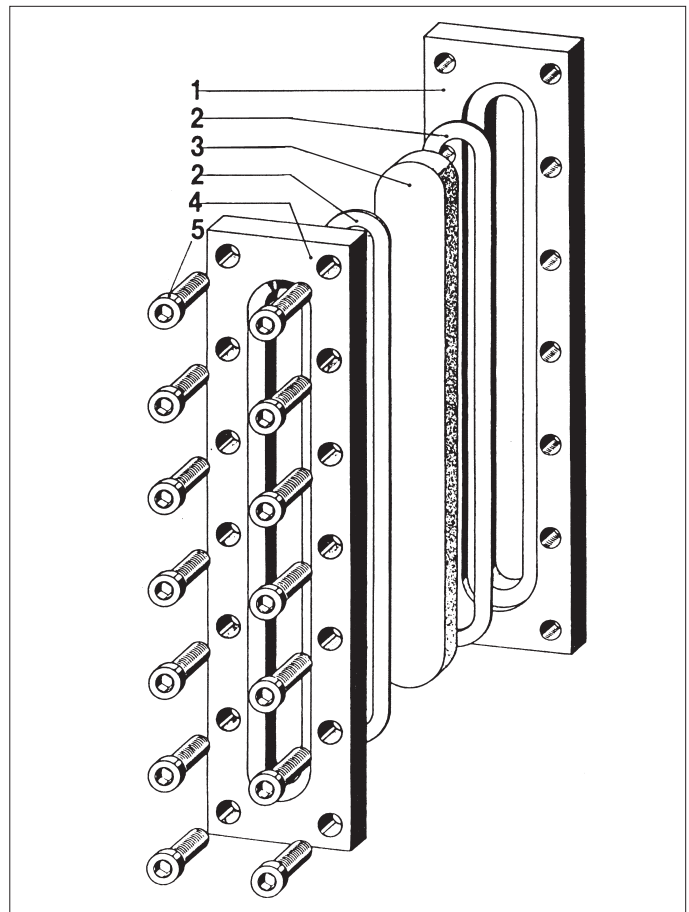
Assembly

Before inserting the glass plate, the base frame should be checked to ensure that the seating is flat and free of distortion. Any uneven surface or distortion (possibly caused by the welding into the vessel wall) might lead to leakage or even break the glass plate when the cover frame is tightened.

After the base frame is welded into or onto the vessel wall, fit the sightglass (3) with the two seals (2) and cover frame (4). Insert the securing bolts (5) to fasten the cover frame. Always ensure that the tightening follows progressively from one end along the length of the cover frame alternating between each pair of opposing bolts. Tighten each bolt only a little at a time, and then repeat the process.

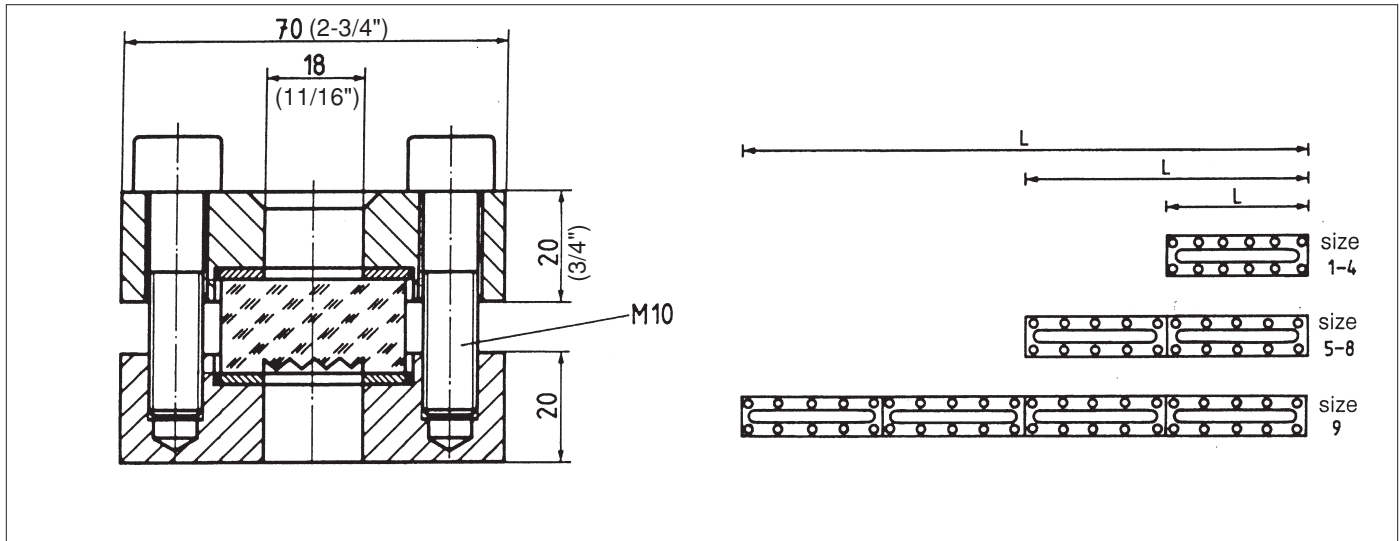


Complete assembly of a rectangular sightglass unit



Exploded view of a rectangular sightglass assembly

Dimensions of Rectangular Sightglass Fittings



Size	1	2	3	4	5	6	7	8	9
Overall Length (L)	250(9.84")	300(11.81")	350(13.77")	400(15.75")	500(19.68")	600(23.62")	700(27.35")	800(31.50")	1000(39.37")
Visible Length	205(8.07")	255(10.04")	305(12.01")	355(13.98")	455(17.91")	555(21.85")	655(25.79")	755(29.72")	955(37.60")
Gage Glass Size*	#5	#7	#8	#10	#5	#7	#8	#10	#5
# Sections	1	1	1	1	2	2	2	2	4
#Cap Screws (M10 x 40)	10	14	16	18	20	28	32	36	40

*Standard is reflex glass. Please specify in your order if you wish the optional transparent type glass (see below).

The lengths shown under L are the available standard sizes
250 mm = 9.84"

Reflex glass, with its prismatic grooves, uses light refraction to better differentiate level without internal lighting.

Alternative versions in shape, size and material are available on request. Radiused base frame (weld pad) is available at extra cost.

Lumiglas rectangular sightglasses are also available with closed base frame (see sketch on right) for use as external liquid level indicator. For this type the unit is fed via pipes through holes in the base frame plate. The unit comes with such holes suitably drilled or tapped.

Ordering Information:

Please specify the selected item as follows:

Rectangular sightglass fitting

Length

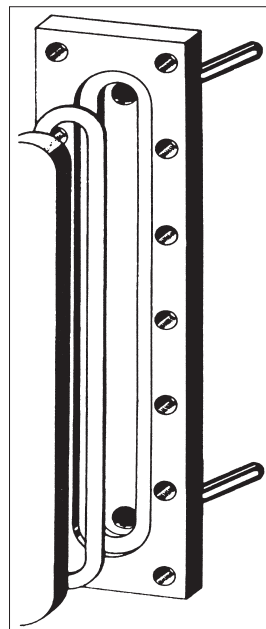
Material: Base frame; open or closed (plate)

Cover frame:

Glass plate: reflex or transparent

Seals:

Test certificate type: 3.1A (TÜV) or 3.1B (optional)



ISO 9001 QA CERTIFICATE
GERMAN MANUFACTURER:
F.H. PAPANMEIER AWARDED QA APPROVAL CERTIFICATE

All dimensions in mm unless stated otherwise
Subject to change without prior notice