

## Rectangular Sightglass Fittings – TÜV approved/tested

DATA SHEET 01.20

### 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. Then the sightglass plate together 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 the regulations 'AD Merkblätter' TÜV data sheet B9.

Pressure: 16 bar, vacuum

### Temperature:

100° C with soda lime glass, DIN 8903

243° C with borosilicate glass, DIN 7081

Those 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 50049 3.1A/3.1B, (extra charge).

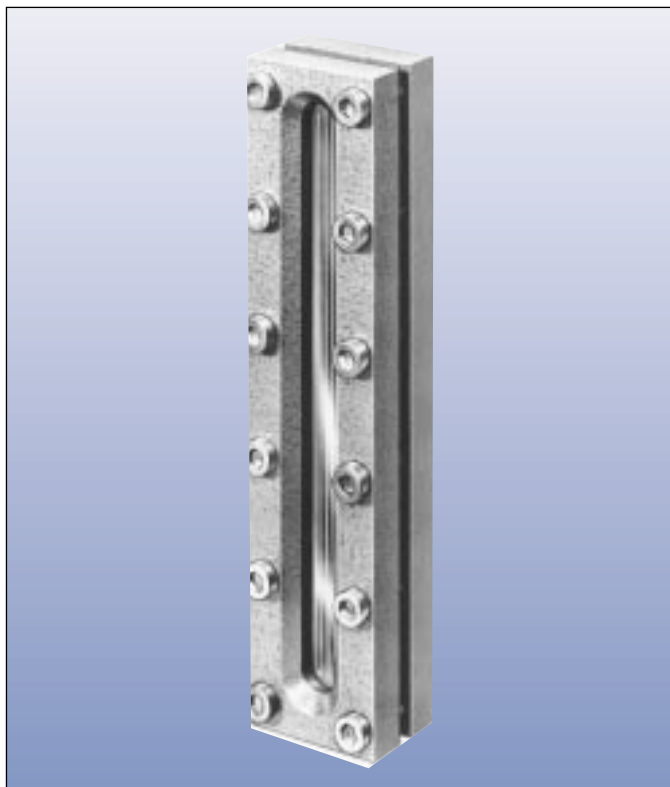
### Parts and available materials (in explosion drawing on the right):

Items	Parts name	Material options
1	base frame	carbon steel RSt 37-2; stainless steel 1.4571, 316 Ti or alternative
2	seal	KLINGERsil C-4400; Neoprene; PTFE or alternative
3	sightglass plate	- soda lime glass: thermally prestressed, DIN 8903, max 100° C - borosilicate glass: thermally prestressed, DIN 7081, max 243° C
4	cover frame	carbon steel RSt 37-2; stainless steel 1.4571, 316 Ti or alternative
5	securing bolts	carbon steel 5.6 or stainless steel

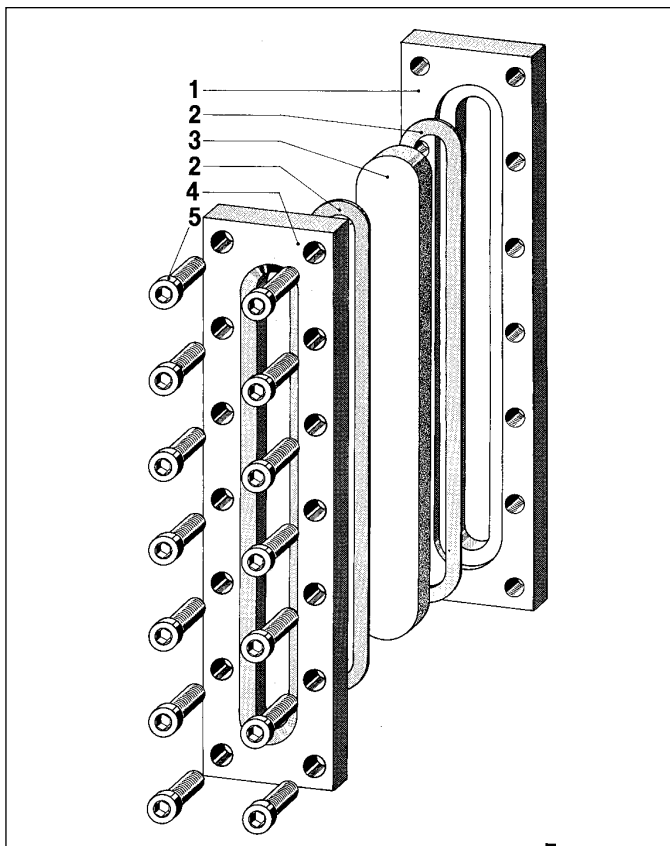
### Assembly

Before inserting the glass plate, the base frame should be checked to ensure that the seating is flat and free of distortion. Any uneven spot 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 was 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.

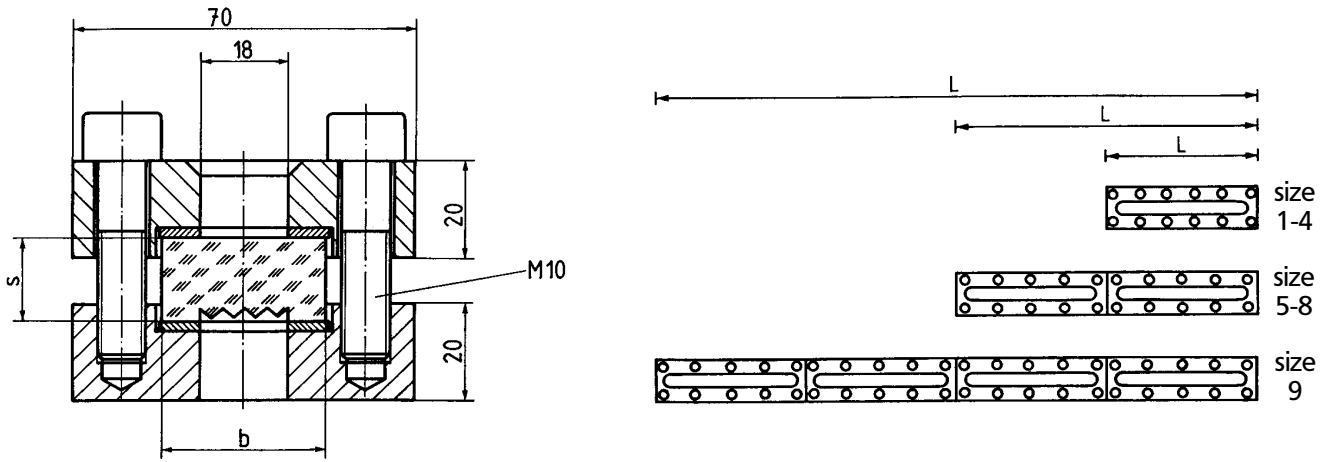


Complete assembly of a rectangular sightglass unit.



Exploded view of a rectangular sightglass assembly

## Dimensions of Rectangular Sightglass Fittings



Size		1	2	3	4	5	6	7	8	9
Fitting	L	250	300	350	400	500	600	700	800	1000
Sightglass Plate *)	Quantity	1	1	1	1	2	2	2	2	4
	l	220	280	320	370	220	280	320	370	220
	b	34	34	34	34	34	34	34	34	34
	s	17	17	17	17	17	17	17	17	17

\*) Standard is reflex glass. Please specify in your order if you wish the optionally available transparent type glass.

The lengths shown under L are the available standard sizes.

Alternative versions in shape, size and material are available on request. External radiusing of the flanges (2 x R) is available at extra cost.

Lumiglas rectangular sightglasses are also available with closed base frame (see sketch on the right) for use as external liquid level indicator. In that case the unit is fed via pipes through holes in the base frame plate. The unit comes with such holes suitable 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

Seals

Test certificate type: 3,1 A(TÜV) or 3.1 B (extra, optional)

