

# L21 S / SR / ST Glass level gauges replacement glasses

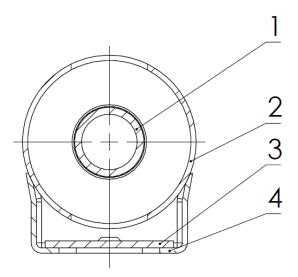
## EMKOMETER Solutions for your measurements

## **Type of Gauges**

### **Tubular Level Gauge**

These level gauges are for direct monitoring of the liquid level in pressure and non-pressure tanks. The level gauge must not be exposed to pressure surges, vibration and shock. It can be used below 16 bar and temperature range from  $-30^{\circ}$ C to  $+ 180^{\circ}$ C.

Schematic picture:



- 1) Glass body
- 2) Safety cover
- 3) Protective glass
- 4) Cover

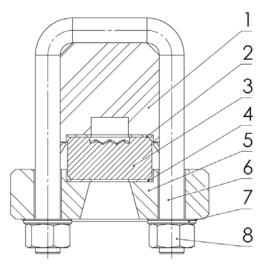
## **Reflex Glass Level Gauges**

Light is reflected by the prismatic grooves on glass and we can see, where the level of medium is. EMKOMETER supplies from 150 ANSI pressure class to 600 ANSI. These level gauges can be used for application with pressure below 35 bar.

Schematic picture:

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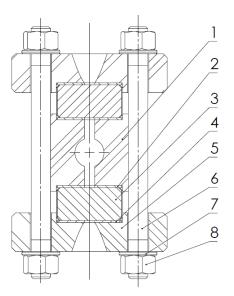
- 1) Body
- 2) Sealing gasket
- 3) Reflex glass
- 4) Cushion gasket
- 5) Pressure plate
- 6) Bolt
- 7) Washer
- 8) Nut



#### **Transparent Glass Level Gauges**

Medium is between two transparent glasses, pressed by two pressure plates. EMKOMETER supplies from 150 ANSI pressure class to 600 ANSI. These level gauges can be improved by mica shields for more types of medium and higher pressure and temperature. Another special improve can be light for better view of level in dark environment mounted on their rear side.

Schematic picture:



- 1) Body
- 2) Sealing gasket
- 3) Reflex glass
- 4) Cushion gasket
- 5) Pressure plate
- 6) Bolt
- 7) Washer
- 8) Nut

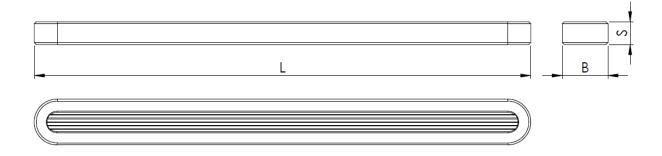
#### Level gauge glass economy range

Material of the glass is always borosilicate. There are several standard according to which the glasses are made.

Economy range glasses type are available in three types:

#### LRG3

Three tendons (four grooves)



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Size	L (mm)	B (mm)	S (mm)	Weight (g)
I	115	34(30)	17	132 (118)
П	140	34(30)	17	162 (146)
III	165	34(30)	17	195 (176)
IV	190	34(30)	17	228 (200)
V	218	34(30)	17	260 (233)
VI	250	34(30)	17	301 (265)
VII	280	34(30)	17	338 (303)
VIII	320	34(30)	17	387 (334)
IX	340	34(30)	17	410 (359)
Х	370	34(30)	17	460 (431)
XI	400	34(30)	17	508 (495)

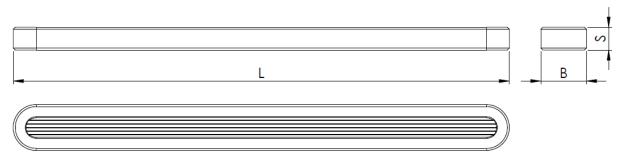
#### Dimensions:



Limits of use (water): 260°C, 4.0 MPa, in other applications without significant impact on glass (oils, carbohydrates) limits can be increased depending on working conditions. Please consult factory.

The other size is optional or according to the requirements of customers.

#### LRG2



Dimensions:

Size	L (mm)	B (mm)	S (mm)	Weight (g)
Ι	115	34(30)	17	132 (118)
П	140	34(30)	17	162 (146)
III	165	34(30)	17	195 (176)
IV	190	34(30)	17	228 (200)
V	218	34(30)	17	260 (233)
VI	250	34(30)	17	301 (265)
VII	280	34(30)	17	338 (303)
VIII	320	34(30)	17	387 (334)
IX	340	34(30)	17	410 (359)



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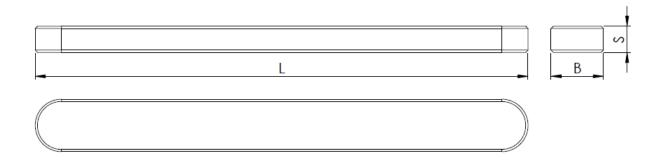
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Limits of use (water): 260°C, 4.4 MPa, in other applications without significant impact on glass (oils, carbohydrates) limits can be increased depending on working conditions. Please consult factory.

The other size is optional or according to the requirements of customers.

LTG



**Dimensions:** 

Size	L (mm)	B (mm)	S (mm)	Weight (g)	
I	115	34(30)	17	137 (122)	
П	140	34(30)	17	172 (152)	
	165	34(30)	17	204 (176)	
IV	190	34(30)	17	238 (211)	
V	218	34(30)	17	277 (248)	
VI	250	34(30)	17	317 (280)	
VII	280	34(30)	17	356 (314)	
VIII	320	34(30)	17	407 (360)	
IX	340	34(30)	17	430 (387)	

Limits of use (water): 260°C, 8.0 MPa, in other applications without significant impact on glass (oils, carbohydrates) limits can be increased depending on working conditions.

For steam service over 35 bar MICA shield is recommended.

Please consult factory.



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Level Gauge Glass Physical Property		
Testing Item	Standard Rules	
1. Appearance	1) Air bubble:	
	Diameter≤0.5mm,in the 10mm x 10mm area the quantity must be ≤3.	
	Diameter from 0.5mm to 1.5mm dispersive air bubble,there is less 2 on the sight plane and less 5 on the No-sight plane. Their distance must be >40mm.	
	The air bubble of Diameter from 1.5mm to 2mm ≤3 on the No- sight plane. Their distance must >40mm.	
	On the sight plane, The distance to the side in 7.5mm,the air bubble of the diameter <b>2)</b> The glass don't allow slag and scrap iron,etc. impurity.	
	<b>3) Stripe :</b> don't allow have palpable filaceous and pectinate stripe on the sight plane.	
	<b>4) Cockle:</b> In the side face, don't allow have the cockle of depth >1mm.	
	5) Crack: don't allow have crack.	
	<b>6) Scrape:</b> On the sight plane and in the 7.5mm to edge, the scrape of less than 10mm don't allow more 2 strips.	
	<b>7)</b> The sight plane must be polishing, and sealing side must be rubbing and polishing.	
2. Colour and Lustre	It should be no color and transparent, and with its self tine green is allowed.	
3. Water-resistance	Cooked in the water for 5 hours, then weigh up, then titration with 25ml 0~31 ug/g	
4. Alkali-resistance	Cooked in the 0.5N NaoH for 3 hours, then Weigh	
	up,weightlessness should be ≤75 mg/dm2	
5. Temperature-	Put it into electric cooker, keep for 7min under the temperature of	
resistance impacts capability	260°C±1°C,then,put into the water of 20±1°C,it should not crack	
6. Bend-resistance	≥80 MPa	