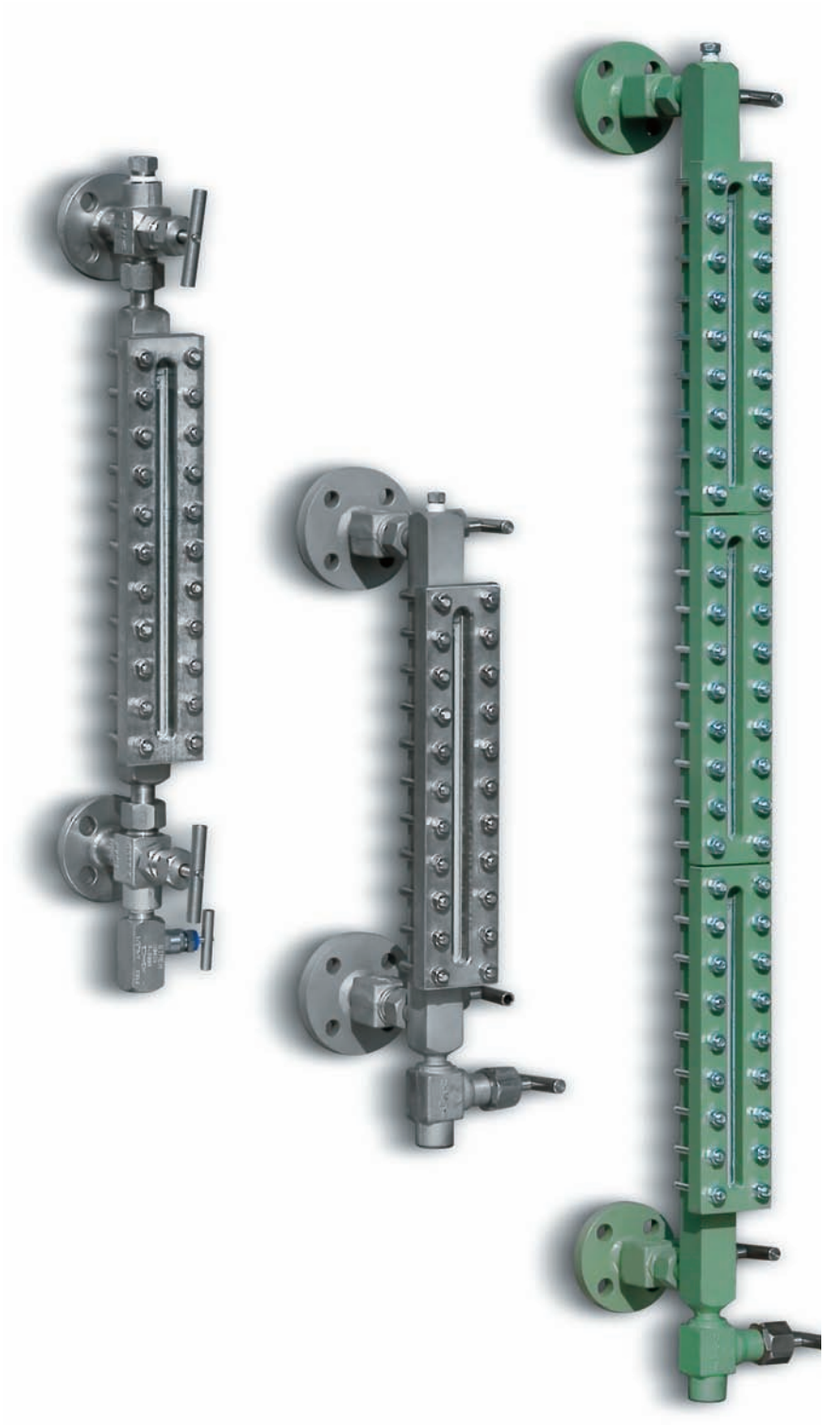
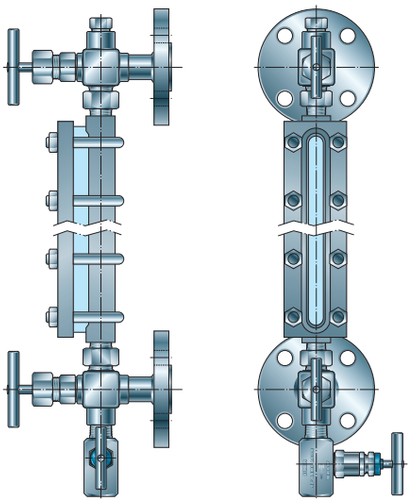
Simer

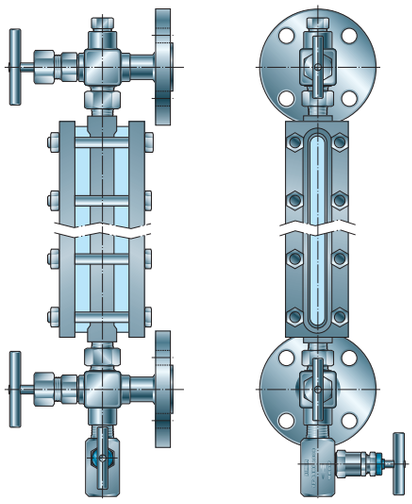
LEVEL INDICATOR - SECTION 5.1



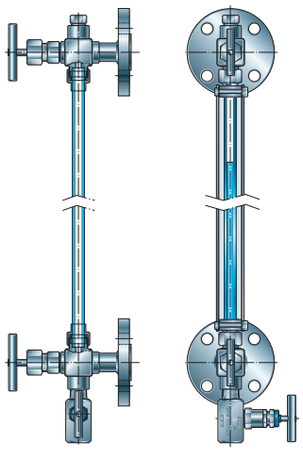
REFLEX



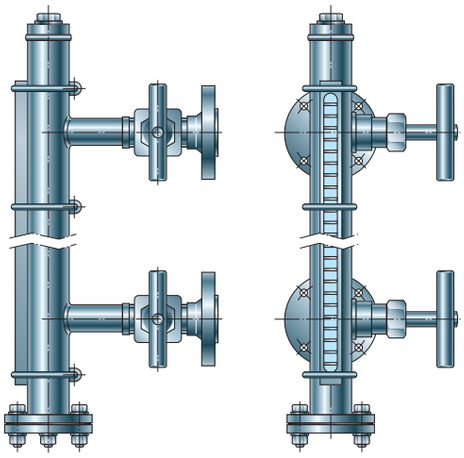
TRANSPARENT



GLASS TUBE



MAGNETIC



LEVEL GLASS

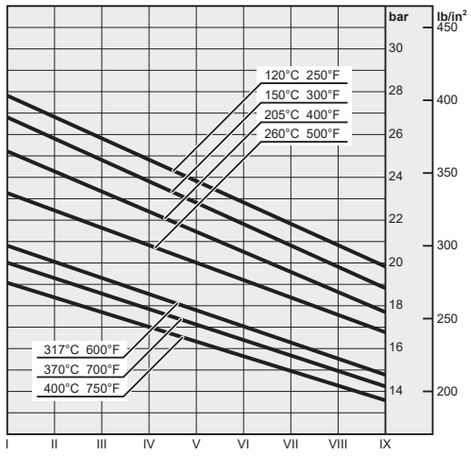
Type	Model	Service limitations		Level glass - valve connection type
REFLEX	LGR/BP	*Low pressure*	ANSI 150 - PN 20	**P** Steam **N** *Other fluids*
	LGR/MP	*Medium pressure*	ANSI 300 - PN 50	**P** Steam **N** *Other fluids*
	LGR/AP	*High pressure*	ANSI 600 - PN 100	**P** Steam **N** *Other fluids*
	LGR/CL	*Medium pressure*	ANSI 300 - PN 50	**N** *Low boiling point*
	LGR/S	*High pressure*	ANSI 600 - PN 100	**V** *Steam and other fluids*
TRANSPARENT	LG/V	*Low pressure*	ANSI 150 - PN 20	**P** *Not dangerous fluids*
	LGT/BP	*Low pressure*	ANSI 150 - PN 20	**P** Steam **N** *Other fluids*
	LGT/MP	*Medium pressure*	ANSI 300 - PN 50	**P** Steam **N** *Other fluids*
	LGT/AP	*High pressure*	ANSI 600 - PN 100	**P** Steam **N** *Other fluids*
	LGT/CL	*Medium pressure*	ANSI 300 - PN 50	**N** *Low boiling point*

Shut-off gauge cocks

Type	Model	Fluid type	Level glass - valve connection type
COCK	B	*Steam*	*pipe union connection*
	N	*Other fluids*	*nipples connection*
	TB	*Other fluids*	*stuffing-box connection*

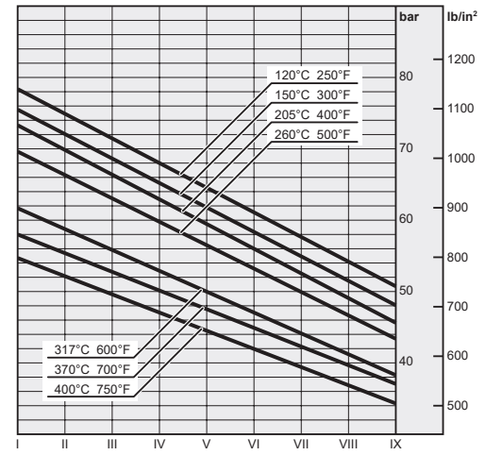
APPLICATION RANGE FOR LEVEL GLASS

Type **LGR/BP - LGT/BP**



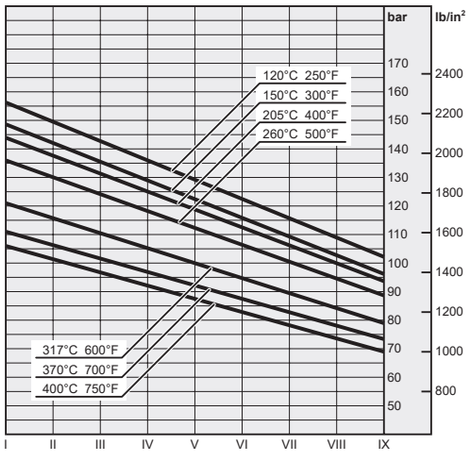
Glass type

Type **LGR/MP - LGT/MP**



Glass type

Type **LGR/AP - LGT/AP**



Glass type

REFLEX LEVEL GLASS INDICATOR

The working principle of this level glass type is based on the different light refractive index as passes from glass to a liquid or from glass to a gas.

The glasses used have, on the side in touch with fluid, many right angle grooves.

In this way when the inner side is filled with a liquid, the incident light beam is refracted inward and entirely absorbed.

On the contrary the light beam is totally reflected when meets a gas.

In this manner the observer can see:

- Blake zone corresponding to the liquid level.

- Silvery zone where level glass is not filled by liquid.

So the liquid level is clearly shown, independently of the liquid nature and color.

In view of this plain operation this type of level glasses are recommended by their low purchase and operating cost and by their easy reading in every environmental condition.

Reflex level glasses are not suited when is necessary to visualize:

a). the liquid colored

b). the interface between liquids

c). the fluid level when the gaseous substance is high pressure steam

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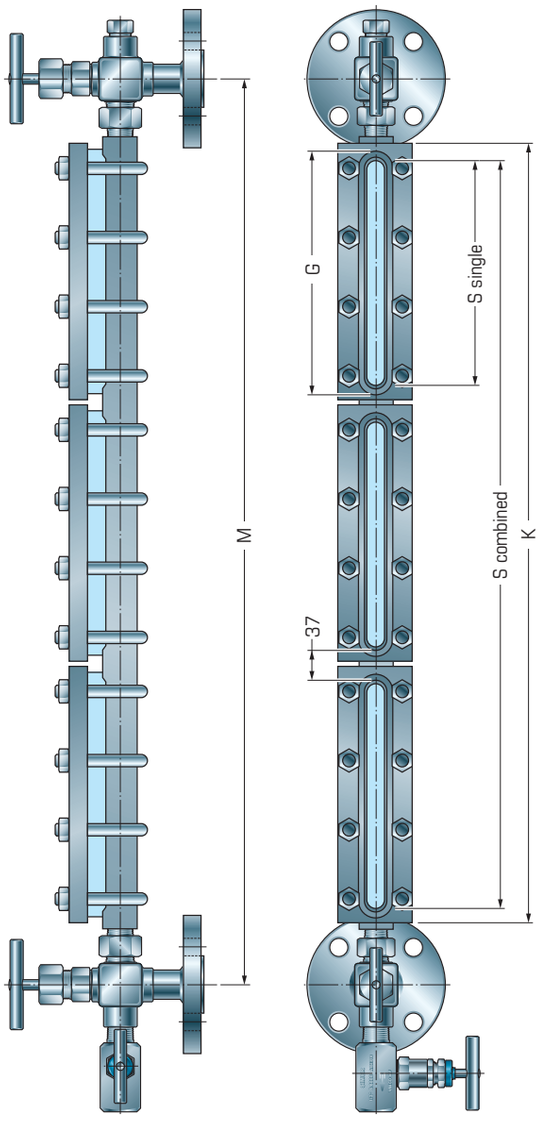
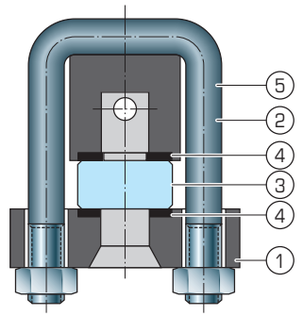
REFLEX LEVEL GLASS INDICATOR - MOD. LGR





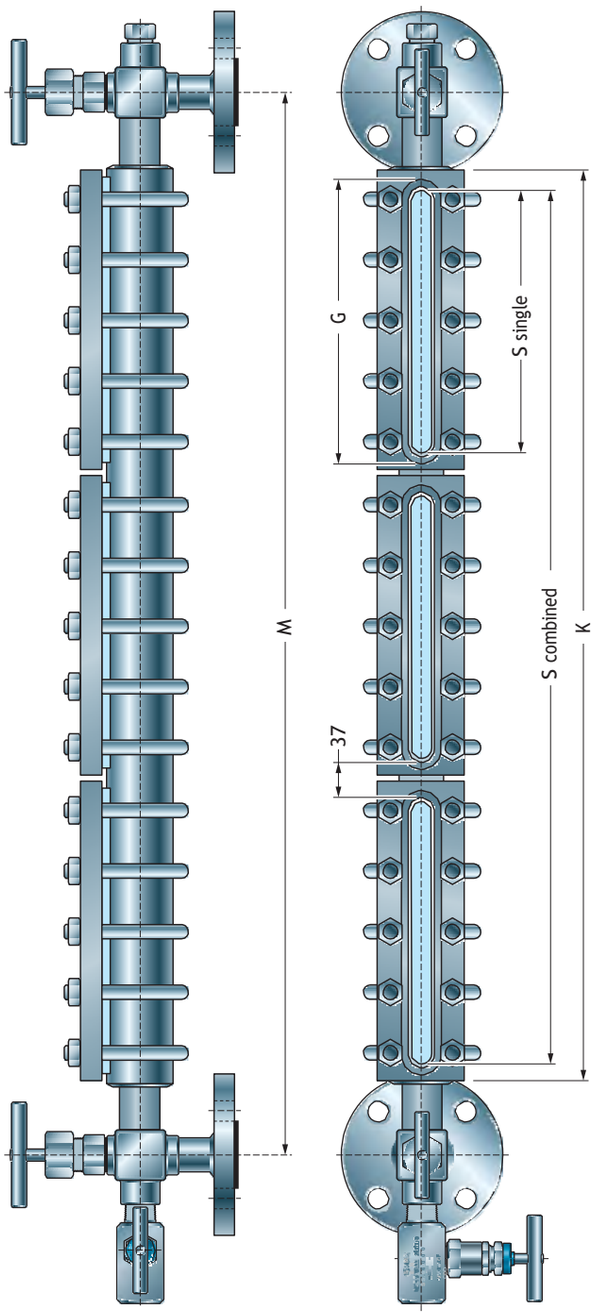
Pos.		Description
1		Plate
2		Level glass body
3		Glass
4		Gasket
5		Bolts

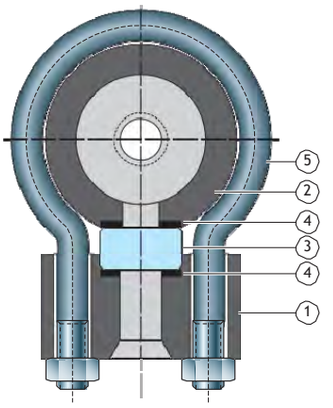
Model	Rating
LGR/BP	ANSI 150 - PN 20 *Low pressure*
LGR/MP	ANSI 300 - PN 50 *Medium pressure*
LGR/AP	ANSI 600 - PN 100 *High pressure*

B = *with Pipe union* **N** = *with Nipples*

	Wheelbase		Body lenght	Visibility	Glass lenght
	B	N			
Model	M (min.)	M (min.)	K	S	G
I	235	184	128	93	115
II	260	209	153	118	140
III	285	234	178	143	165
IV	310	259	203	168	190
V	340	289	233	198	220
VI	370	319	263	228	250
VII	400	349	293	258	280
VIII	440	389	333	298	320
IX	460	409	253	318	340
2 x IV	515	464	408	373	190
2 x V	575	524	468	433	220
2 x VI	635	584	528	493	250
2 x VII	695	644	588	553	280
2 x VIII	775	724	668	633	320
2 x IX	815	764	708	673	340
3 x VI	900	849	793	758	250
3 x VII	990	939	883	848	280
3 x VIII	1110	1059	1003	968	320
3 x IX	1170	1119	1063	1028	340
4 x VII	1285	1234	1178	1143	280
4 x VIII	1445	1394	1338	1303	320
4 x IX	1525	1474	1418	1383	340
5 x VII	1580	1529	1473	1438	280
5 x VIII	1780	1729	1673	1638	320
5 x IX	1880	1829	1773	1738	340
6 x VIII	2115	2064	2008	1973	320
6 x IX	2235	2184	2128	2093	340
7 x IX	2590	2539	2483	2448	340

REFLEX LEVEL GLASS INDICATOR - MOD. LGR/CL





Pos.	Description
1	Plate
2	Level glass body
3	Glass
4	Gasket
5	Bolts

LARGE CHAMBER

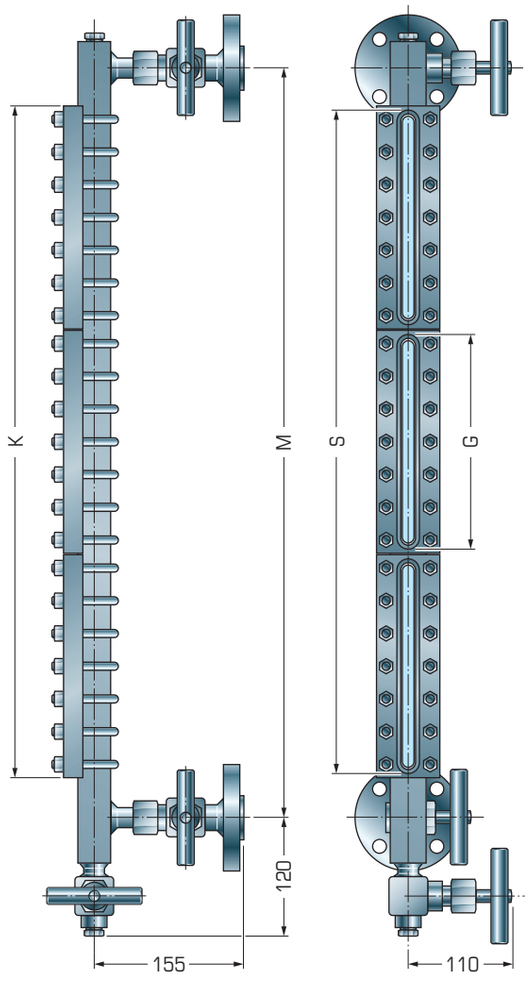
Model	Rating
LGR/CL	ANSI 300 - PN 50 Medium pressure

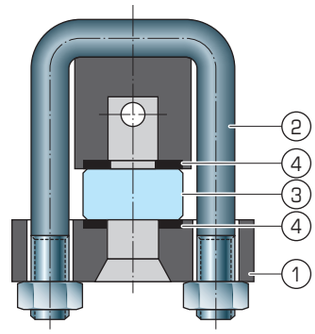
N = with Nipples

Model	Wheelbase N M *(min.)*	Body length K	Visibility S	Glass length G
I	216	16	93	115
II	252	18	118	140
III	266	21	143	165
IV	291	23	168	190
V	321	26	198	220
VI	351	29	228	250
VII	381	32	258	280
VIII	421	36	298	320
IX	441	38	318	340
2 x I V	496	44	373	190
2 x V	556	50	433	220
2 x VI	616	56	493	250
2 x VII	676	62	553	280
2 x VIII	756	70	633	320
2 x I X	796	74	673	340
3 x VI	881	82	758	250
3 x VII	971	91	848	280
3 x VIII	1091	103	968	320
3 x I X	1151	109	1028	340
4 x VII	1266	121	1143	280
4 x VIII	1426	137	1303	320
4 x I X	1506	145	1383	340
5 x VII	1561	150	1438	280
5 x VIII	1761	170	1638	320
5 x I X	1861	180	1738	340
6 x VIII	2096	204	1973	320
6 x I X	2216	216	2093	340
7 x IX	2571	251	2448	340

Simer

REFLEX LEVEL GLASS INDICATOR - MOD. LGR/S





Pos.		Description
1		Plate
2		Level glass body
3		Glass
4		Gasket
5		Bolts

Model	
LGR/S	ANSI 600 - PN 100 *High pressure*

	Level material		
Model	Wetted parts	Not wetted parts	Bolts
LGR/S-C/C	Acc. Carb.	Acc. Carb.	Acc. Carb. Zn.
LGR/S-1-4/C	AISI 304	Acc. Carb.	Acc. Carb. Zn.
LGR/S-1-4/4	AISI 304	AISI 304	AISI 304
LGR/S-1-6/C	AISI 316	AISI 304	Acc. Carb. Zn.
LGR/S-1-6/4	AISI 316	AISI 304	AISI 304
LGR/S-1-6/6	AISI 316	AISI 316	AISI 304

	Wheelbase	Body lenght	Visibility	Glass lenght
Model	M (min.)	K	S	G
I	184	128	93	115
II	209	153	118	140
III	234	178	143	165
IV	259	203	168	190
V	289	233	198	220
VI	319	263	228	250
VII	349	293	258	280
VIII	389	333	298	320
IX	409	253	318	340
2 x IV	464	408	373	190
2 x V	524	468	433	220
2 x VI	584	528	493	250
2 x VII	644	588	553	280
2 x VIII	724	668	633	320
2 x IX	764	708	673	340
3 x VI	849	793	758	250
3 x VII	939	883	848	280
3 x VIII	1059	1003	968	320
3 x IX	1119	1063	1028	340
4 x VII	1234	1178	1143	280
4 x VIII	1394	1338	1303	320
4 x IX	1474	1418	1383	340
5 x VII	1529	1473	1438	280
5 x VIII	1729	1673	1638	320
5 x IX	1829	1773	1738	340
6 x VIII	2064	2008	1973	320
6 x IX	2184	2128	2093	340
7 x IX	2539	2483	2448	340

TRANSPARENCY LEVEL GLASS

In this type of level glass the fluid is contained between two smooth and transparent glasses.

The liquid level is shown by the different transparency of two phases.

This difference may be improved by adding a light source on the rear side of the level glass.

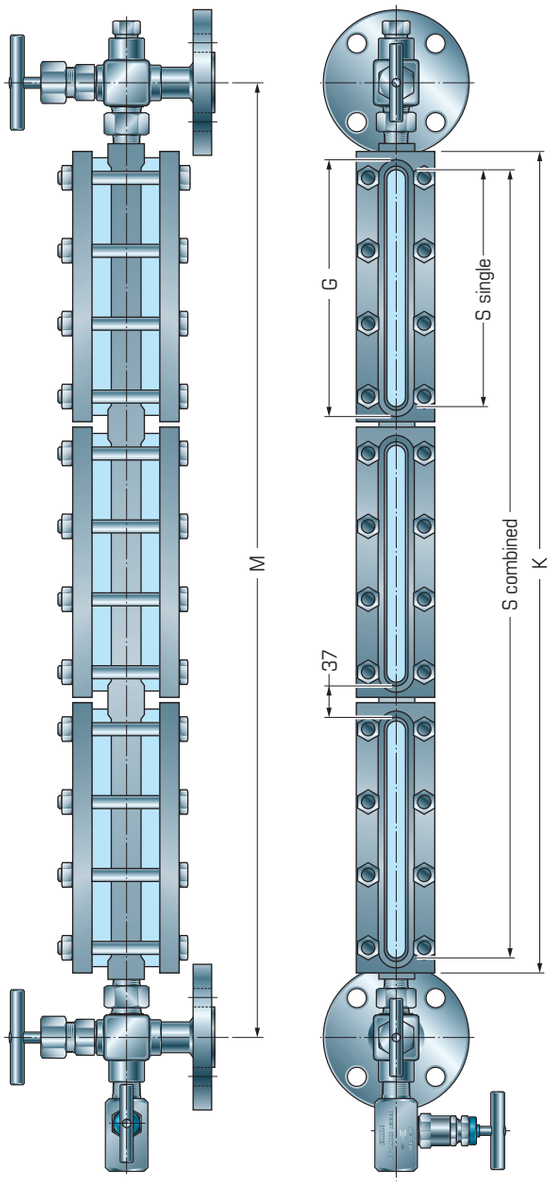
This type of transparency level glass can be employed in nearly ali installation, also when are required:

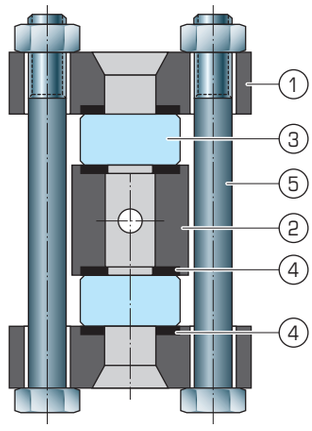
a) the interface observation

b) the liquid color observation

c) the glasses inner surface protection from corrosive liquid by Mica or Kel-F.

TRANSPARENCY LEVEL GLASS INDICATOR - MOD. LGT





Pos.	Description
1	Plate
2	Level glass body
3	Glass
4	Gasket
5	Bolts

Model	Rating
LGT/BP	ANSI 150 - PN 20 *Low pressure*
LGT/MP	ANSI 300 - PN 50 *Medium pressure*
LGT/AP	ANSI 600 - PN 100 *High pressure*

B = *with Pipe union* **N** = *with Nipples*

	Wheelbase		Body lenght	Visibility	Glass lenght
	B	N			
Model	M (min.)	M (min.)	K	S	G
I	235	184	128	93	115
II	260	209	153	118	140
III	285	234	178	143	165
IV	310	259	203	168	190
V	340	289	233	198	220
VI	370	319	263	228	250
VII	400	349	293	258	280
VIII	440	389	333	298	320
IX	460	409	253	318	340
2 x IV	515	464	408	373	190
2 x V	575	524	468	433	220
2 x VI	635	584	528	493	250
2 x VII	695	644	588	553	280
2 x VIII	775	724	668	633	320
2 x IX	815	764	708	673	340
3 x VI	900	849	793	758	250
3 x VII	990	939	883	848	280
3 x VIII	1110	1059	1003	968	320
3 x IX	1170	1119	1063	1028	340
4 x VII	1285	1234	1178	1143	280
4 x VIII	1445	1394	1338	1303	320
4 x IX	1525	1474	1418	1383	340
5 x VII	1580	1529	1473	1438	280
5 x VIII	1780	1729	1673	1638	320
5 x IX	1880	1829	1773	1738	340
6 x VIII	2115	2064	2008	1973	320
6 x IX	2235	2184	2128	2093	340
7 x IX	2590	2539	2483	2448	340

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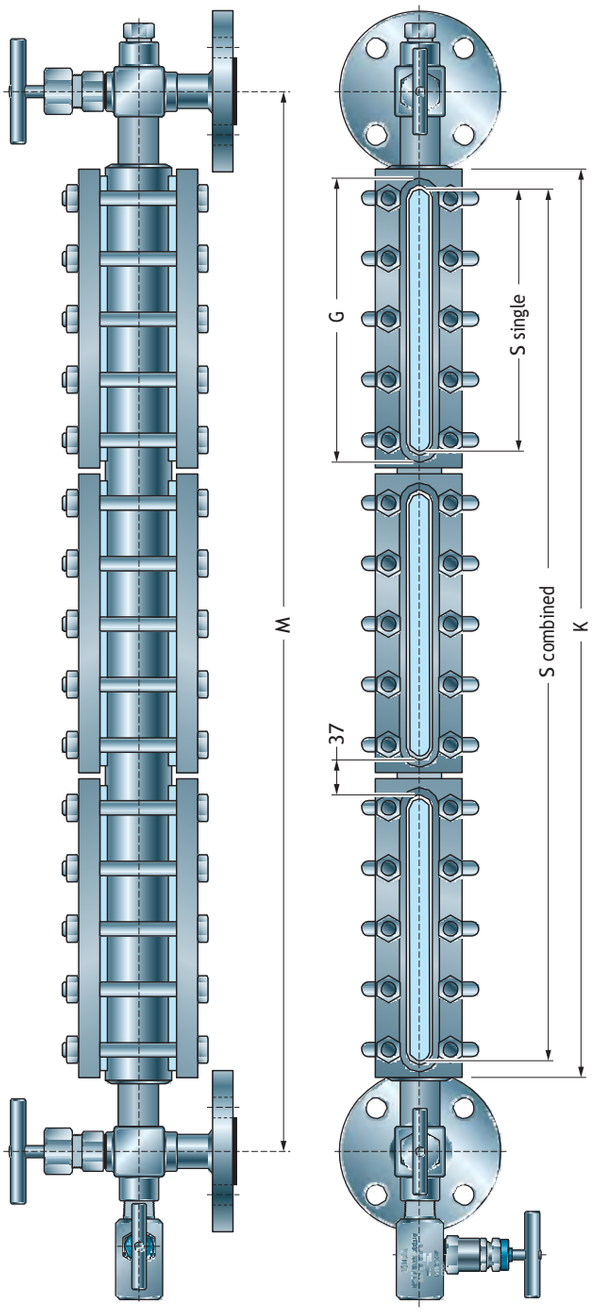
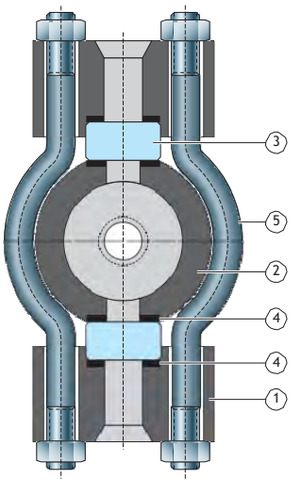
TRANSPARENCY LEVEL GLASS INDICATOR - MOD. LGT/CL





Pos.	Description
1	Plate
2	Level glass body
3	Glass
4	Gasket
5	Bolts

LARGE CHAMBER

Model	Rating
LGT/CL	ANSI 300 - PN 50 Medium pressure

N = *with Nipples*

	Wheelbase N	Body length	Visibility	Glass length
Model	M (min.)	K	S	G
I	216	160	93	115
II	252	185	118	140
III	266	210	143	165
IV	291	235	168	190
V	321	265	198	220
VI	351	295	228	250
VII	381	325	258	280
VIII	421	365	298	320
IX	441	385	318	340
2 x I V	496	440	373	190
2 x V	556	500	433	220
2 x VI	616	560	493	250
2 x VII	676	620	553	280
2 x VIII	756	700	633	320
2 x I X	796	740	673	340
3 x VI	881	825	758	250
3 x VII	971	915	848	280
3 x VIII	1091	1035	968	320
3 x I X	1151	1095	1028	340
4 x VII	1266	1210	1143	280
4 x VIII	1426	1370	1303	320
4 x I X	1506	1450	1383	340
5 x VII	1561	1505	1438	280
5 x VIII	1761	1705	1638	320
5 x I X	1861	1805	1738	340
6 x VIII	2096	2040	1973	320
6 x I X	2216	2160	2093	340
7 x IX	2571	2515	2448	340

TRASPARENCY LEVEL GLASS TUBE

In this type of level glass the fluid is contained in a glass tube.

The liquid level is shown by the different transparency of two phases.

The level glass is suitable for low pressure because the glass tube fragility.

The level glass is supplied with a light metallic protection for protect the glass tube from crash.

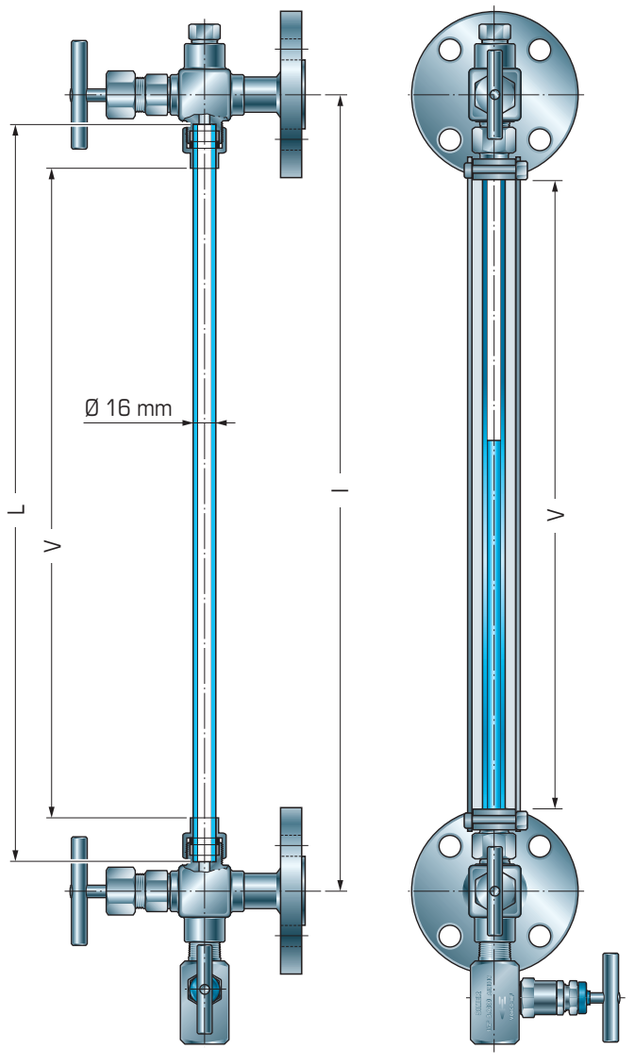
This type of transparency level glass can be employed in nearly all installation, also when are required:

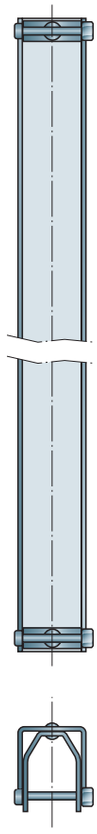
a). the interface observation;

b). the liquid color observation.

Simer

TRASPARENCY LEVEL GLASS TUBE MOD. LG





- Glass Protections

Model	
LG/V	ANSI 150 - PN 20 *Low pressure*

Pos.		Description
I		*Center to center*
L		*Glass tube dimension*
V		*Visibility*

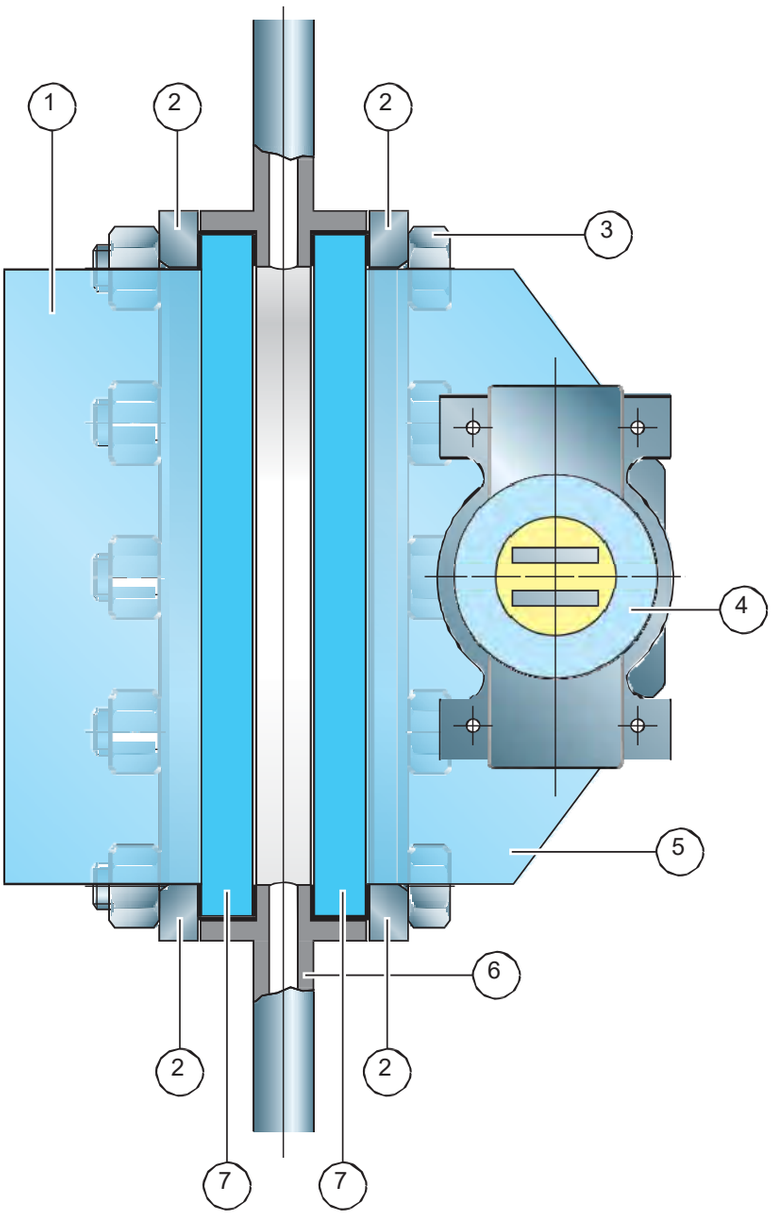
Pos.	Description
I	*On request* I - 25 mm
L	1-126 mm
V	

LEVEL GLASS ACCESSORIES

Shut-off gauge cocks

Type	Model	*Accessories*
REFLEX	LGR / BP LGR / MP LGR / AP LGR / CL LGR / S	1) Anti-frost device in acrylic resin plates 2) Break glass safety device 3) External heating tube 4) Heating jacket 5) Graduated scale
TUBE	LG / V	1) Break glass safety 2) Glass tube metallic protection
TRANSPARENT	LGT / BP LGT / MP LGT / AP LGS / CL	1) Anti-frost device in acrylic resin plate 2) Break glass safety 3) External heating tube 4) Heating jacket 5) Graduated scale 6) Waterproof illuminator 7) Explosion-proof illuminator EExd IIB Cl. T4-T5

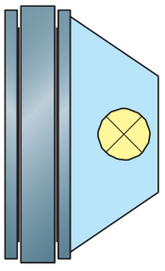
LIGHT DIFFUSER FOR TRANSPARENT LEVEL GLASS



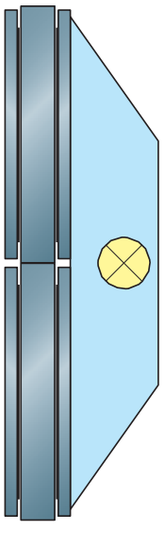
Pos.	Description
1	Not-frosting device
2	Cover plates
3	Stud-bolts
4	Illuminator
5	Light diffuser
6	Body
7	Glasses

LEVEL GLASS ACCESSORIES

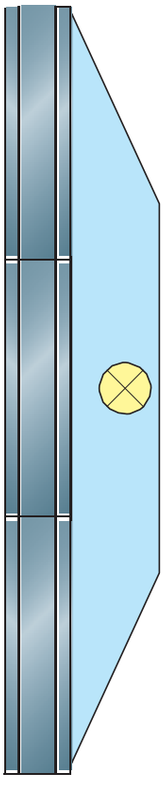
Example:
Illuminator for transparent level glass indicator



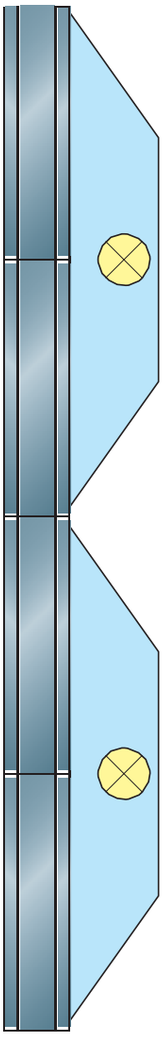
1. Level



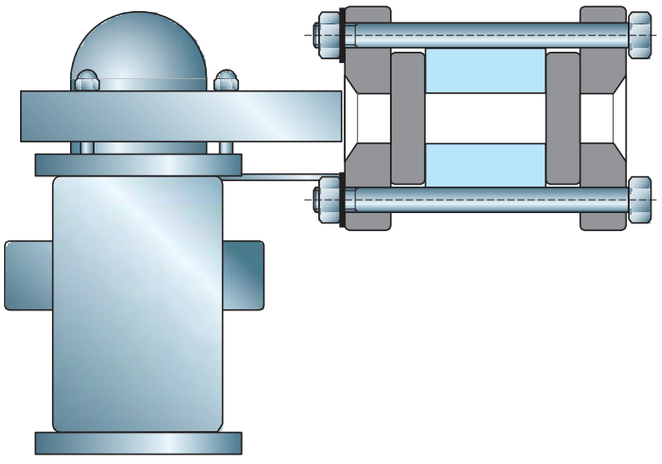
2. Levels



3. Levels

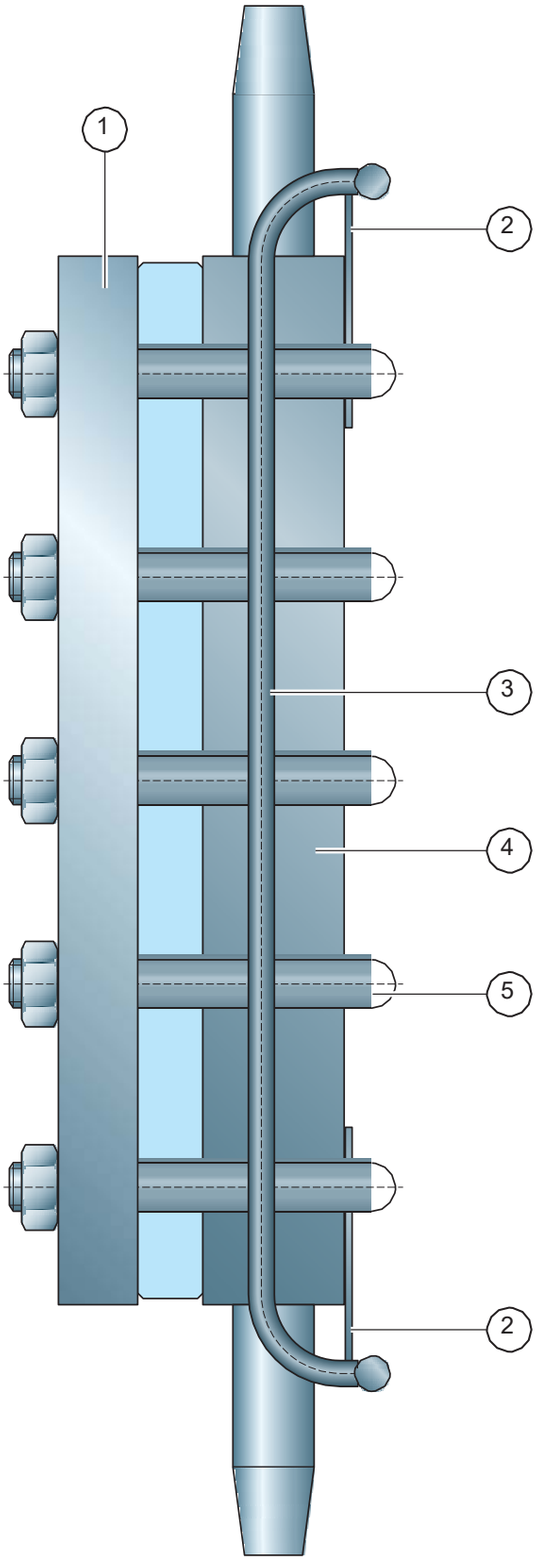


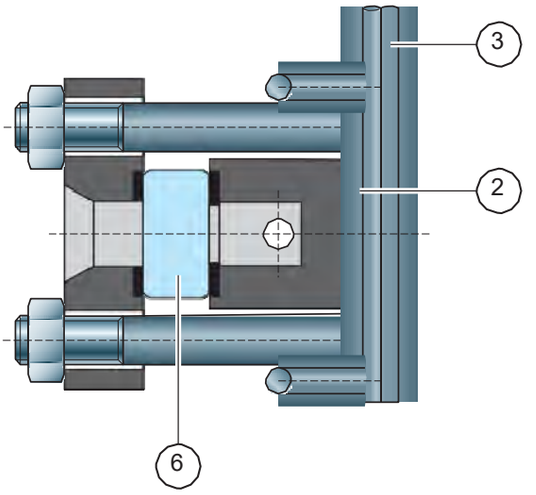
4. Levels



Transparent level glass indicator with Explosion-proof illuminator EExd IIB cl.T4 or T5.

LEVEL GLASS ACCESSORIES





Pos.	Description
1	Plate
2	Bracket
3	Heating device
4	Level body
5	Stud
6	Glass