

Circular sightglasses for welding into or onto vessel walls, in version PN 0 / PN 2,5 with a viewing diameter equal to DIN 28120



Circular sightglass, DN 150, PN 0, with glass disc in sodium silicate to DIN 8902 and wiper of the series W, wiper blade in silicone



Circular sightglass similar to DIN 28120, DN 150, PN 2,5, with glass disc in sodium silicate to DIN 8902

Application:

The circular sightglass fittings are used for the observation and illumination of the inside of unpressurised vessels, silos, tanks etc. or such of a nominal pressure (PN) of 2,5 bar.

They represent, especially for large nominal diameters, a **cost-saving alternative** to the sightglasses of the pressure rates 6, 10 and 16 bar.

Viewing diameter:

80–225 mm

Operating conditions:

Pressure: No pressure (PN 0) resp. PN 2,5
 Temperatures: Max. 150 °C with glass disc in sodium silicate to DIN 8902
 Max. 280 °C with glass disc in borosilicate to DIN 7080

Materials:

Base flange: 1.4404 (AISI 316 L) (standard)
 1.4541 (AISI 321), RSt 37-2, H II or other materials on demand
 Cover flange: 1.4541 (AISI 321) (standard)
 1.4404 (AISI 316 L), 1.4571 (AISI 316 Ti), RSt 37-2, H II or other materials on demand
 Sightglass disc: Sodium silicate glass to DIN 8902 (standard)
 Borosilicate glass to DIN 7080 on demand
 Gaskets: KLINGERSil C4400, PTFE, Perbunan, Silicon, Viton, Gylon or other materials on demand
 Screws / studs and nuts: A2-70 (standard)
 A4-70 or 5.6 zinked on demand

Possible combinations:

The sightglasses can be combined with our centrally operated window wipers of the series LUMIGLAS , with the spraying devices of the series LUMIGLAS (only version for PN 2,5) as well as with our sightglass light fittings of the series LUMIGLAS for use in hazardous or safe areas. In these cases, the cover flanges are drilled and tapped to suit the respective light fitting fixation.

Special versions:

- Special high vacuum-tight version with additional O-ring seal
- Glass disc in quartz and special gaskets for very high operating temperatures

Contents of delivery:

The complete delivery consists of base and cover flanges, glass disc, gaskets for product and cover side and hexagonal socket head screws (version for PN 0) resp. studs and nuts (version for PN 2,5).

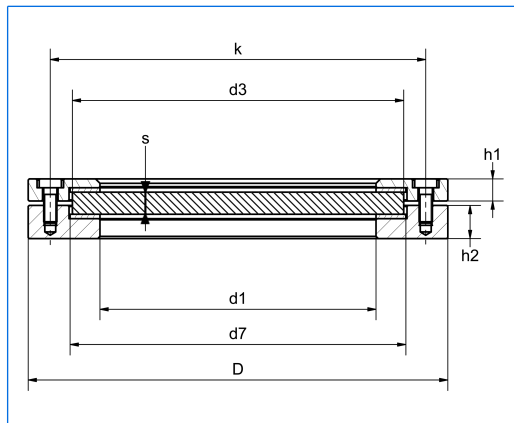
Certificates:

On request against extra charge, to DIN 50049, 3.1(B), alternatively 3.1A for the flanges, 2.2 or 3.1 for the glass discs.



Dimensions Mounting

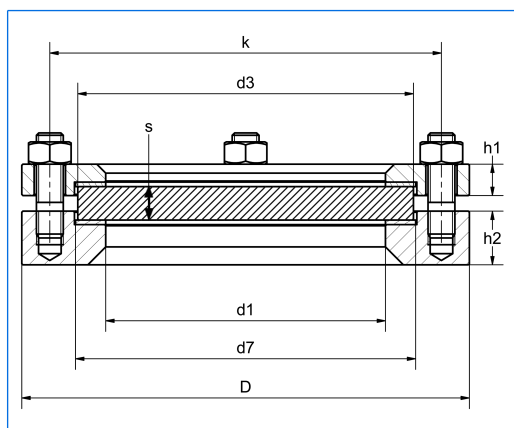
Unpressurised version (PN 0)



Nominal flange diameter (DN)	d1	d3	s	d7	D	k	h1	h2	Socket head screws
50 *	80	100	10	102	140	120	10	15	4 x M6
80 *	100	125	10	127	165	145	10	15	8 x M6
100 *	125	150	10	152	190	170	10	15	8 x M6
125 *	150	175	10	177	215	195	10	15	8 x M6
150	175	200	10	202	240	220	10	15	8 x M6
200	225	250	10	252	290	270	10	15	8 x M6

* Not in stock.

Version for PN 2,5



Nominal flange diameter (DN)	d1	d3	s	d7	D	k	h1	h2	Studs
50 *	80	100	10	102	150	125	12	24	4 x M12
80 *	100	125	15	127	175	150	14	24	4 x M12
100 *	125	150	15	152	200	175	14	24	4 x M12
125 *	150	175	15	177	220	195	16	24	8 x M12
150	175	200	15	202	250	220	16	24	8 x M12
200	225	250	15	252	300	275	16	24	8 x M12

* Not in stock.

Mounting:

After having correctly welded the base flange onto or into the vessel wall, the product side gasket, the glass disc, the cover side gasket and the cover flange are mounted one after the other and then the socket head screws tightened against the cover flange (version for PN 0) resp. the nuts against the studs (version for PN 2,5).

Attention: The base flange has to be welded into or onto the vessel wall without any distortion to ensure a plain and flat sealing surface to avoid the breakage of the glass disc. If necessary, rework the sealing surface after welding. The screws have to be tightened evenly and crosswise.

Office / exclusive agent:

Do you wish for more information about our wide range of light fittings for use in hazardous and safe areas, camera systems for hazardous areas about our range of circular sightglasses to DIN 28120/28121 screwed sightglasses similar to DIN 11851, rectangular or D-ended sightglasses sightglasses and light fittings for sterile application LUMIGLAS, pipeline flow indicators, centrally or sideways operated wipers, hinged sightglasses spraying devices or our complete sight and lightglass units?

Are you interested in other types, special versions or different protection degrees? If yes, please contact us, it is our business! You will find the necessary indications about our sales network on the Internet.

All dimensions in mm.

Subject to changes without preliminary notice.



Lumistar Special Glass Technology Co., Ltd.

Building 22, No. 8 Kangzheng Road, Longchi Street,
Luhe District, Nanjing, Jiangsu Province

Phone: 8618913039268

<https://i-lumistar.com>

E-Mail: alicali@js-lumiglas.com



Circular sightglass fittings to DIN 28120 or similar

Circular sightglass fittings to DIN 28121

Illuminated sightglass units



Complete assembly of sightglass fitting to DIN 28120, DN 100, PN 10, with glass disc of borosilicate to DIN 7080.



Complete assembly of sightglass fitting to DIN 28120, DN 125, PN 10, with glass disc of toughened sodium silicate to DIN 8902, fitted with LUMIGLAS sightglass light fitting, tilting hinge fixation

In addition to the well known programme of sightglass light fittings, LUMISTAR supplies complete sightglass fittings to or similar to DIN 28120 and to DIN 28121. These form, together with the reliable light fittings of the series CHEMLUX, EdelLUX, fibroLUX, miniLUX or metaLUX, complete illuminated sightglass units LUMIGLAS where both components are thoroughly determined and correctly chosen. The units are supplied as premounted sets, offering the following advantages:

- **Only one supplier**
- **Responsibility from one hand**
- **Components mutually adapted, avoiding therefore mounting problems or eventual expensive adjustments.**

With LUMISTAR, you have chosen the right and efficient partner, offering excellent service and high quality to very interesting prices. Ask the experts of LUMISTAR for advice and integrate LUMIGLAS units into your installations. Remember: Our product range has a background of more than 40 year's experience and development. Both you and your customers will benefit from this know-how.

Application:

In all cases where chemical or physical processes, reactions or e.g. fluid levels have to be observed, controlled or read off at the interior of stirred tanks, dryers, columns, silos, centrifuges, mixers, reactors, evaporators, separators, pipelines, pressure vessels or other closed containers.

Nominal diameters:

PN 10, 16: DN 50 - 200 (DIN 28120)
 PN 6: DN 50 - 200 (similar to DIN 28120)
 PN 10, 25: DN 40 - 200 (DIN 28121)

Operating conditions:

Max. pressure: DIN 28120: 10, 16, (6) bar
 DIN 28121: 10, 25 bar
 Higher pressures on demand

Vacuum

Possible combinations:

Sightglass fittings to DIN 28120 or to DIN 28121 **may be combined with our sightglass light fittings of the series LUMIGLAS for use in hazardous or in safe areas.** The cover flanges are drilled and tapped to be fitted with the respective light fitting in case of ordering the complete unit.

Sightglass fittings to DIN 28120 or similar **may further be equipped with window wipers** (attention to the pressure limits!) **as well as with spraying devices** for the occasional or continuous cleaning of the sightglass disc. (See separate leaflets).

Certificates:

To be supplied against extra charge to DIN EN 10204.



Lumistar Special Glass Technology Co., Ltd.

**Your reliable and efficient partner in sightglasses.
 Perfect, thoroughly engineered solutions from one hand!
 Always an interesting, technically advanced idea ahead!**



Circular sightglass fittings to DIN 28120 (PN 10, 16) Circular sightglass fittings similar to DIN 28120 (PN6)

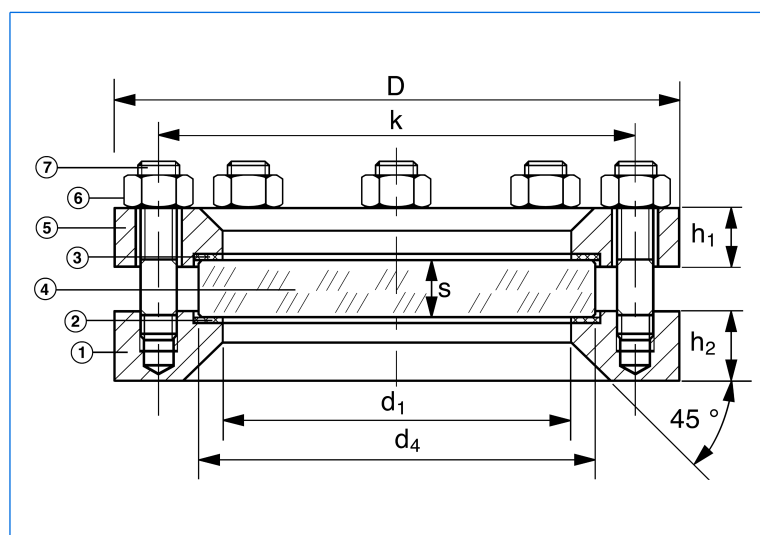
Dimensions

Assembly and construction materials

Mounting

Our circular sightglass fittings to be welded into or onto vessel walls correspond in their construction and assembly to the dimensions and constructional guidelines of the DIN specification 28120. The respect of the DIN prescriptions for the flange thicknesses guarantees a distortion free location of the sightglass disc. The pressure resistance of the sightglass disc is, of course, dependent on the care with which the bolts and nuts are tightened (always working on diametrically opposed pairs). For lubricated bolts, $\mu = 0.1$, the recommended tightening torque values (in Nm) are indicated in the table below. The maximum operating temperature is limited to 150 °C when using sightglass discs of sodium silicate to DIN 8902 and to 280 °C when using sightglass discs of borosilicate to DIN 7080. This temperature is also function of the quality of the used gaskets. For operating temperatures lower than -10 °C, please consult the descriptive sheet.

Nominal diameter (DN)	Nominal pressure (PN) (bar)	Viewing diameter d_1	Glass disc		Base flange and cover flange				Bolts or studs and nuts		
			d_4	s	D	k	h_1	h_2	Number	Size	Tightening torque (Nm)
50	6	80	100	10	165	125	16	30	4	M 16	
	10			15							28
	16			15							32
80	6	100	125	15	200	160	20	30	8	M 16	
	10			15							20
	16			20							23
100	6	125	150	15	220	180	18	30	8	M 16	
	10			20			22				26
	16			25			22				30
125	6	150	175	20	250	210	18	30	8	M 16	
	10			20			25				32
	16			25			25				34
150	6	175	200	20	285	240	18	36	8	M 20	
	10			25			30				47
	16			30			30				54
200	6	225	250	25	340	295	20	36	8	M 20	
	10			30			35				63



A special high vacuum-tight version with additional O-ring seal in different materials may be delivered on demand.

Assembly and construction materials:

		Standard	On demand*
① ⑤	Base flange Cover flange	Steel RSt 37-2 1.4571 (= AISI 316 Ti) or 1.4541 (= AISI 321)	1.4404 (= AISI 316 L) Aluminium Titan Inconel Steel zinked
② ③	Gaskets	KLINGERSil C 4400	PTFE Silicone Viton Gylon
④	Glass disc	Sodium silicate to DIN 8902 (max. 150 °C)	Borosilicate to DIN 7080 (max. 280 °C) Quartz
⑥ ⑦	Nuts Bolts or studs	5.6 / 5.2	A2 / A4

* Other materials not mentioned in the above table may also be delivered.

Mounting:

After having correctly welded the base flange ① onto or into the vessel wall, the gasket ②, the glass disc ④, the gasket ③ and the cover flange ⑤ are mounted one after the other and then the nuts ⑥ (in case of studed base flange ①) progressively crosswise tightened against the studs ⑦. The above indicated tightening torque values have to be strictly respected. Additional information may be taken from the DIN specification 28120.

Circular sightglass fittings to DIN 28121 (PN 10, 25)

Dimensions

Assembly and construction materials

Mounting

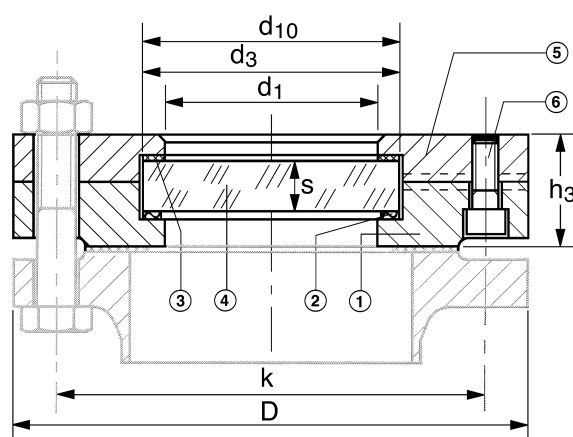


Our circular sightglass fittings to be mounted directly onto a welding flange, pad or similar correspond in their construction and assembly to the dimensions and constructional guidelines of the DIN specification 28121. The sightglass fittings are completely premounted at manufacturer's works to form an integral, sealed, finished unit. The maximum operating temperature is limited to 200 °C. For higher operating temperatures, versions similar to DIN 28121 can be delivered on request, these with other seal and/or glass qualities.

The units may be used until –1 bar. For operating temperatures lower than –10 °C, please consult the descriptive sheet.

Nominal diameter (DN)	Nominal pressure (PN) (bar)	Viewing diameter		Glass disc		Flanges			Fixation bolts		Gaskets	
		d ₁	d ₂	d ₃	s	D	k	h ₃	Number	Size	d ₁	d ₁₀
40	10	48	43	63	10	150	110	36	4	M 16	48	65
	25				12	150	110	38	4	M 16		
50	10	65	60	80	12	165	125	38	4	M 16	65	82
	25				15	165	125	41	4	M 16		
80	10	80	75	100	15	200	160	46	8	M 16	80	102
	25				20	200	160	50	8	M 16		
100	10	100	95	125	15	220	180	46	8	M 16	100	127
	25				25	235	190	59	8	M 20		
125	10	125	120	150	20	250	210	54	8	M 16	125	152
	25				30	270	220	66	8	M 24		
150	10	125	120	150	20	285	240	54	8	M 20	125	152
	25				30	300	250	66	8	M 24		
200	10	150	145	175	20	340	295	54	8	M 20	150	177
	25				30	360	310	66	12	M 24		

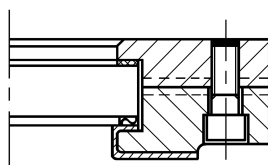
Version A Without protective coating of sealing face



The design shows the sealing face of form B1

Version B

With protective coating of sealing face



Assembly and construction materials:

①	Base flange (Version A) Form B1: Raised faced to DIN EN 1092-1 (standard) Form C: Tongue to DIN EN 1092-1 Form E: Male socket to DIN EN 1092-1 Base flange (Version B) (only deliverable with sealing face of form B and E)	Boilerplate H II to DIN 17155 Stainless steel 1.4571 (= AISI 316 Ti) to DIN 17440 Other materials on demand
②	Gasket product side	PTFE-covered ring gasket with internal support ring
③	Gasket cover side	KLINGERSil C 4400
④	Glass disc	Borosilicate to DIN 7080 (max. 280 °C)
⑤	Cover flange	Boilerplate H II to DIN 17155 Stainless steel 1.4541 (= AISI 321) Stainless steel 1.4571 (= AISI 316 L) Other materials on demand
⑥	Security tightening bolts	A2 or A4 or 8.8

Mounting:

By using the fixation bolts of which the number and size are indicated in the above table, the complete, premounted, tightened and sealed unit is fixed onto a welding flange, pad or similar.

LUMIGLAS light fittings with sightglass units to DIN 28120 / 28121



illuminated sightglass unit, consisting of sightglass to DIN 28120, DN 150, PN 10, with mounted LUMIGLAS light fitting, 30 V, 20 W, 2Ex d e IIC T4 Gb, Ex t IIIC T130°C Db IP67, Ex II 2 G + D, with anti-dazzle shield "B", in version "view **and** light through **one** assembly"



LUMISTAR illuminated sightglass unit, consisting of sightglass to DIN 28120, DN 80, PN 10, with mounted LUMIGLAS light fitting, 24 V, 20 W, Ex d IIC T5 Gb, Ex t IIIC T95°C Db IP 67, Ex II 2 G + D

The table below indicates the possible standard combinations of our light fitting series with the respective nominal diameters of sightglasses to DIN 28120 / 28121:

Nominal diameter (DN)		40		50		80		100		125		150		200	
Sightglass to DIN 28120 (A)		A	B	A	B	A	B	A	B	A	B	A	B	A	B
Sightglass to DIN 28121 (B)		A	B	A	B	A	B	A	B	A	B	A	B	A	B
Series / Type	Fixation														
F 20 dH / L 20 deH / R 50 deH / R 100 deH	... N			•	•	•	•	•	•						
	... Z							•	•	•	•				
	... Sch							•	•	•	•	•	•		
100 deH	... N					•	•	•	•	•	•	•	•		•
	... Z										•	•	•		
	... Sch									•	•	•	•		
KVLR / BKVLR	... W/Sch	•	•	•	•	•	•	•	•	•	•	•	•	•	•
KLR	... Sch	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MVLR	... Sch	•	•	•	•	•	•	•	•	•	•	•	•	•	•
HL 50 H				•		•									
HL 80 H					•			•							
HL 100 H								•		•		•			
HL 125 H									•						•
HL 150 H											•				
HL 200 H														•	
(F)HEL / FHL	... W					•	•	•	•	•	•	•	•	•	•
	... Sch	•	•	•	•	•	•	•	•	•	•	•	•		•
F(L)KEL / (L)KEL / KL	... W					•	•	•	•	•	•	•	•	•	•
	... Sch	•	•	•	•	•	•	•	•	•	•	•	•		•
PEL / PL	... Sch									•	•	•	•	•	•
	... X1			•	•	•	•	•	•	•	•	•	•		•
	... X2									•	•	•	•		
EdelEx 5 dH / 10 dH / 20 dH / PowerLED	... Sch	•	•	•	•	•	•	•	•	•	•	•	•	•	•
EdelEx G 20 dH / 50 dH	... Sch					•	•	•	•	•	•	•	•	•	•
fibroLUX	... W2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	... W3	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Office / exclusive agent:

Do you wish for more information about our wide range of light fittings for use in hazardous and safe areas, camera systems for hazardous areas about our range of circular sightglasses to DIN 28120/28121 screwed sightglasses similar to DIN 11851, rectangular or D-ended sightglasses sightglasses and light fittings for sterile application LUMIGLAS, pipeline flow indicators, centrally or sideways operated wipers, hinged sightglasses spraying devices or our complete sight and lightglass units?

Are you interested in other types, special versions or different protection degrees? If yes, please contact us, it is our business! You will find the necessary indications about our sales network on the Internet.

All dimensions in mm.

Subject to changes without preliminary notice.