

Tubular sight glass



DISC
Inconel Steel (1.4462)
Seal Glass (DIN 7080)

1.446 (1.4462)
7080N 7080

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LUMIGLAS - Tubular sight glass

Description

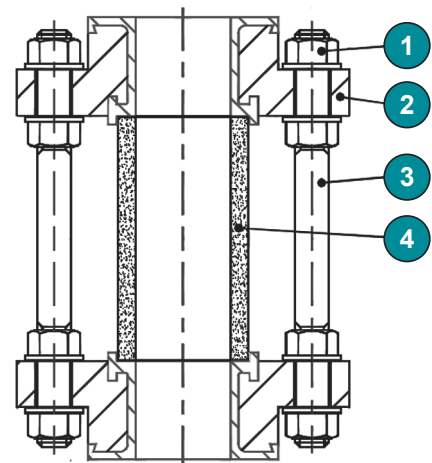
The LUMIGLAS Sight glasses unique construction provides full 360° process viewing. Manufactured from heavy wall borosilicate glass tube and PFA moulded flanges for use in the most demanding corrosive and toxic applications. The product is available for both standard DIN PN 10/16 and ANSI 150.

Product features

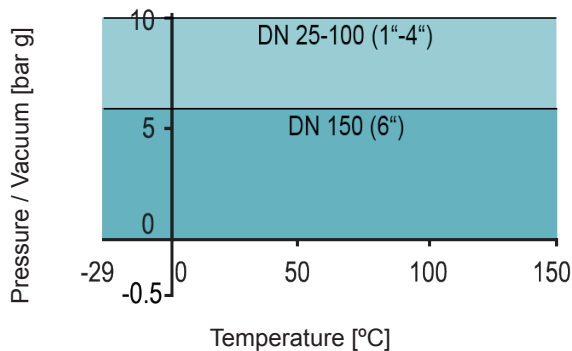
- Heat treated heavy wall borosilicate glass for managing high line pressures
- Parallel full port flow path prevents liquid retention or bug traps
- Stainless steel tie rods provide protection against side loads and mechanical damage
- Proven design offering safety and security
- PFA lined for the most corrosive duties

Material specification

Item	Qty	Description	Materials	Specification	DIN equivalent material
1	16/32/48	Nut + Washers	Stainless steel	ASTM F594 Gr 304	DIN A2
2	2	Flange	Carbon Steel / PFA	BS 1501-161-430A /PFA	1.0486 / PFA
3	4/8/12	Tie Rods	Stainless steel	BS970 Pt.1 Gr 303S42	1.4305
4	1	Glass Tube	Borosilicate Glass 3.3	ISO 3585	ISO 3585
		Paint finish	75µ, RAL 5021	Epoxy coating	-
		PFA lining	ASTM D 3307		



Pressure- / temperature diagram



PFA lined Tubular Sight Glass rated to 150 psi CRPUS

LUMIGLAS's PFA lined tubular sight glasses offer the highest levels of process viewing, with a 360 degree view through a clear Borosilicate glass tube. With a 0.35" thickness, the glass has a heavy wall construction, and can be used in corrosive processes up to 145 PSI and 302°F, depending on nominal bore. There are HiPerFlon PFA linings at the flange ends of the sight glasses, which are made from carbon steel finished in a blue epoxy primer. Flanges can be supplied for LUMIGLAS 150 or DIN PN10 and PN16.

The choice of materials enable the sight glass to provide a long service life, conveying highly corrosive media such as acids. We can supply the sight glass with an internal lining of an FEP sleeve, helping to protect the glass from attack corrosive materials such as hydrofluoric acid or caustic soda.

We recommend that all of our sight glasses should be supplied with an outer acrylic shield, to help prevent any mechanical damage of the glass from external elements.

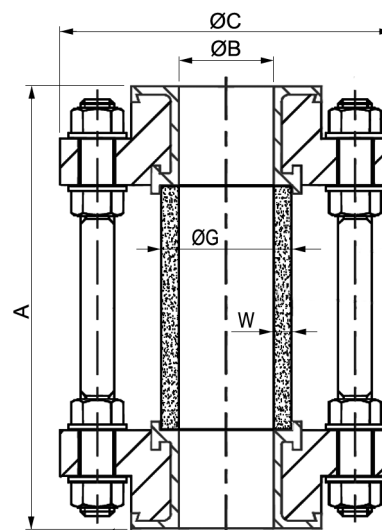
The standard length of our sight glass is equivalent to the Atomac AKH2, and is known as our Tubular Sight Glass. However, we can supply all sizes of sight glasses, whether shorter or longer, up to 59".

Dimensions below are for the standard Tubular Sight Glass available to suit both ASME 150 and DIN PN10/16 flanges to EN558-1 basic series 1.



Dimensions

Nominal size		Face to face [mm]	Bore [mm]	Flange diameter [mm]	Glass [mm]		Weight
ANSI 150 Piping systems							
Inches	mm	A	ØB	ØC	G	W	kg
1	25	152	20	110	30	4.5	3.7
1½	40	178	36	125	50	7.0	5.1
2	50	203	42	150	60	9.0	7.5
3	80	241	72	190	90	9.0	13.2
4	100	292	103	230	120	9.0	18.5
6	150	356	152	280	170	9.0	25.6
8	200	300		345	215	9.0	40.1
10	250	300		405	300	9.0	48.2
12	300	300		485	325	9.0	76.7
DIN PN 10/16 Piping systems							
Inches	mm	A	ØB	ØC	G	W	kg
1	25	160	20	115	30	4.5	3.8
1½	40	200	36	150	50	7.0	5.5
2	50	230	42	165	60	9.0	8.3
3	80	310	72	200	90	9.0	12.0
4	100	350	103	220	120	9.0	18.5
6	150	480	152	285	170	9.0	29.3
8	200	300		340	215	9.0	40.1
10	250	300		395/405	300	9.0	48.2
12	300	300		445/460	325	9.0	



Options

Component	Description
Flanges	Stainless steel
Shield	Perspex safety shield
Glass	Internally lined with FEP for caustic processes
Body	Flow disturbers and indicators, back lighting

Type code

CTSG	050	.	2	3	-	3PT	-	xx
①	②		③	④		⑤		⑥

①	Type	CTSG	Tubular Pipeline Sight glass	
②	Nominal diameter	100 - 300	mm	
③	Working pressure	1	6 bar	DN 150 (6")
		2	10 bar	DN 25-100 (1" - 4")
④	Rating	3	PN 10/16	
		A	ANSI 150	
⑤	Flanges	3PT	Carbon Steel / PFA (standard)	
		4MT	Stainless steel / PFA	
⑥	Options	xx	Perspex safety shield Glass internally lined with FEP Flow disturbers and indicators, back lighting	

The technical data are noncommittal and do not assure you of any properties. Please refer to our general sales conditions. Modifications without notice.



I Application

A tubular sight-glass is made of a stainless steel frame and a glass of the same section as the pipe. It allows an easy inspection of the product flow in the food-processing, cosmetics, pharmaceutical and fine chemicals industries.

I Design and features

Attachment by self-locking nuts.

Full bore design.

360° viewing angle.

Vertical or horizontal assembly.

Interchangeable side parts.

Connections: Weld DIN 11850
Weld OD ASME BPE
Clamp DIN 32676
Clamp OD ASME BPE
Male DIN 11851

I Materials

Side AISI 316L (1.4404)
Stud AISI 304L (1.4301)
Glass Borosilicate according to ISO 3585 and ASTM E438 Type I, Class A
Gaskets EPDM in compliance with
FDA 21CFR 177.2600 and Regulation (EC) No 1935/2004
Surface finish Sanitary polish, $Ra \leq 0,8 \mu m$

Glass protection



I Options

Gaskets: VMQ or FPM in compliance with
FDA 21CFR 177.2600 and Regulation (EC) No 1935/2004.
Connections: DIN, FIL-IDF, BS-RJT, SMS, Clamp, Flanges, Macon, etc.
Glass protection.



I Technical specifications

Available sizes	DN 25 - DN 150	DN 1" - DN 6"
Max. working temperature		
EPDM gasket	-10°C to +120°C	14°F to 248°F
	+140°C (SIP, max. 30 min)	284°F

DN	25 - 1"	32	40 - 1½"	50 - 2"	65 - 2½"	80 - 3"	100 - 4"	125	150 - 6"
Sight glass with borosilicate glass	10	10	10	8	7	6	5	4	3

(Temperatures and pressures are approximate and depend on the product and gasket type.)

I Dimensions

Weld connections, metric pipe according to DIN 11850

DN	ød1	ød2	Ød7	L1	Weight [kg]
25	26	31	87	90	0,9
32	32	37	92	102	1
40	38	43	97	110	1,1
50	50	55	110	125	1,4
65	66	72	127	142	1,8
80	81	87	142	142	2,2
100	100	106	162	180	2,8
125	125	131	190	190	5,3
150	150	157	240	218	7,7

(Dimensions in mm)

Weld connections, OD pipe according to ASME BPE

DN	ød1	ød2	Ød7	L1	Weight [kg]
1"	22,1	28	87	90	1
1½"	34,8	40	97	110	1,2
2"	47,5	53	110	125	1,5
2½"	60,2	66,3	118	142	1,7
3"	72,9	78,9	131	142	1,9
4"	97,4	106	162	180	3,1
6"	146,8	154	240	218	7,9

(Dimensions in mm)

