

PHARMA-LED Sight Glass Lights

Composition and Design

The Sight Glass comprise two flanges, one featuring a shoulder for butt welding, with a glass pane and two gaskets positioned between them, secured by studs and blind nuts. The lower flanges are flush to ensure optimal aseptic quality and minimize retention areas.

Applications

Examination of the interiors of tanks, bioreactors, and similar vessels.

Terms of Service

Pressure: -1/10 bar Temperature: 280°C with borosilicate glass DIN 7080; 150°C with sodium silicate glass DIN 8902.

Options and Potential Combinations

These Sight Glass can be outfitted with ATEX projectors or standard non-ATEX projectors. The counter flanges may be equipped with threaded holes for securing projectors or grilles. The Sight Glass are designed to accommodate a windshield wiper. Machining the counter flange for the integration of a series of LEDs enables the creation of a unit that combines visibility and surface illumination within the same porthole, featuring a Pharma design. A 24V DC power supply is required (LED power supply necessary).

Certificates

For the complete porthole: certificate 2.2 For the flanges: certificate 3.1, roughness assessment For the glass: hydraulic examination For the seals: FDA/USP certification in accordance with quality standards

Component Materials

Welding flange and counter flange: Stainless steel 1.4404, 1.4307, 1.4435, 1.4539, or others. - Gaskets: Klingersil C-4400, EPDM, silicone, PTFE. - Glass: soda-lime glass, borosilicate. - Assembly components: screws, studs, and blind nuts.



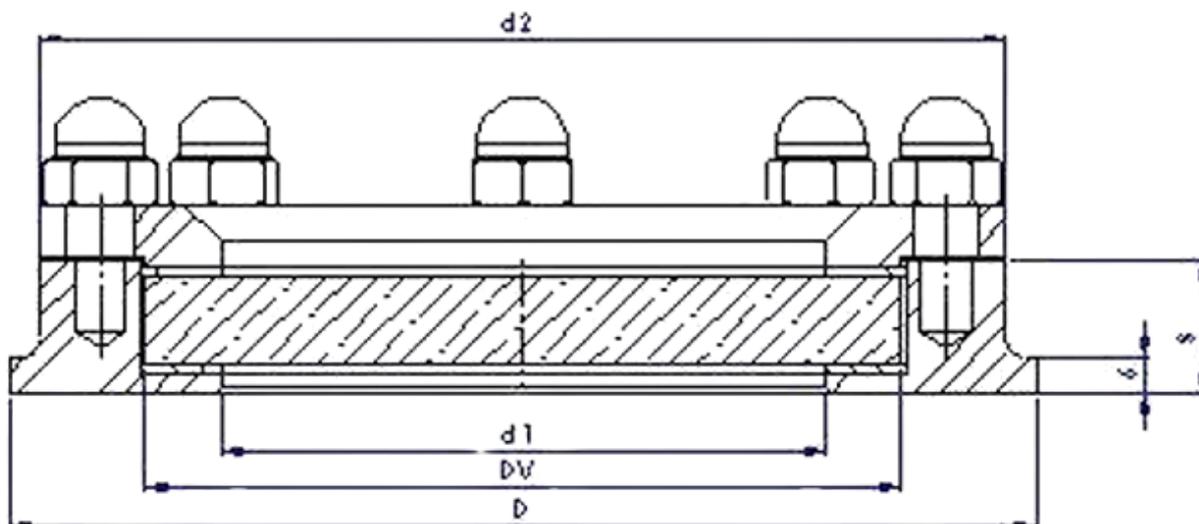
Montage:

After welding the lower flange with a butt weld on or within the tank wall, proceed to install the gaskets, the glass, and the counter flange, which will be secured by screws. The bolts should be tightened gradually in a cross pattern.

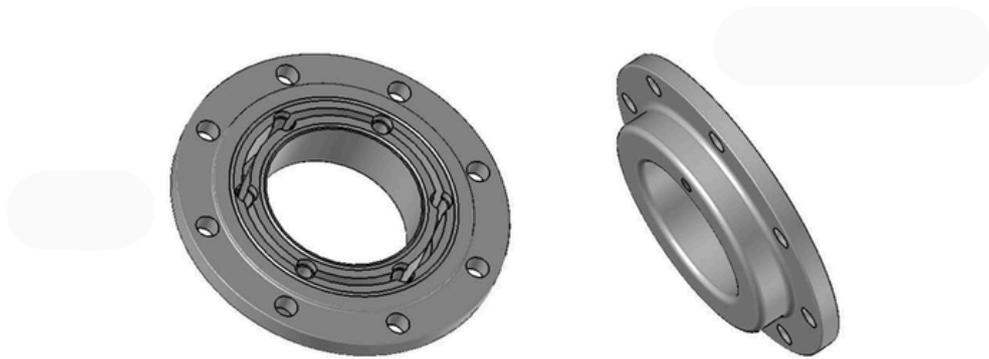
Bespoke machining:

Machining a radius on the welding flange for attachment to the tank shell is feasible. Thicknesses of the lower flanges are available upon request. Custom machining of special flanges can be performed according to provided drawings.

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Nominal	DN	50	65	80	100	125	150
Visibility	d1	50	65	80	100	125	150
Øvisi. LED /nb led	d1	/	40mm/4	50mm/4	75mm/6	100mm/8	118mm/8
PN		10	10	10	10	10	10
Glass	dv	63	80	100	125	150	175
	s	10	12	15	15	20	20
Flange	D	96	116	142	168	198	230
	d2	90	110	136	160	190	220
	s	16	19	22	22	29	33
Fastening screws		6 all mates	8 all mates	8 all mates	8 show m10	8 show m10	12 show m10
Gaskets		65	82	102	127	152	177
		50	65	80	100	125	150
TIGHTENING TORQUE		1.3NM	1.6NM	2.5NM	5NM	5.7NM	6.3NM



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FLAT GASKETS	CE 1935 - 2004	FDA	USP VI	87/88	USP 121°	THIS IS BSE	T°
EPDM	Option	Yes	Yes	Yes	Yes	Yes	-40/150°C
VITON	Option	Yes	/	/	/	/	200°C
PTFE	Option	Yes	Yes	/	Option	Yes	250°C
KLINGER SCREEN	/	/	/	/	/	/	250°C
TOP CHEM	Yes	Yes	/	/	/	/	260°C
GYLON	/	Yes	Yes	/	Option	Option	260°C
PGAC	Yes	Yes	/	/	/	/	-220/240°C
SILICONE	Option	Yes	Yes	/	/	/	200°C
GRAPHITE PSM	/	/	/	/	/	/	500°C

O-RING	CE 1935 - 2004	FDA	USP VI	87/88	USP 121°	THIS IS BSE	T°
EPDM	Yes	Yes	Yes	option	option	Yes	-40/150°C
VITON	Yes	Yes	Yes	/	/	/	200°C
VITON FEP	Yes	Yes	Yes	88	/	Yes	-20/200°C
SILICONE	Yes	Yes	Yes	Option	option	Yes	200°C
KALREZ	/	Yes	Yes	88	Yes	/	330°C

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