

## Circular Sightglass Fittings Series to DIN 28120 or similar

DATA SHEET 01.01

### Application:

Weld-on sightglass fittings for the observation of the internals of pressure vessels, silos, gear-trains, separators, pipelines, etc.

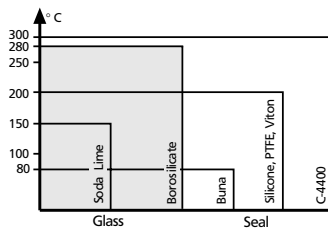
### General:

Sightglass fittings to DIN 28120 are circular flanged sets suitable for welding into or onto vessel walls, complete with relevant matching seals and sight glass disc set between the flange rings. They correspond in construction and assembly to the dimensions and constructional guidelines of the above DIN spec. No. 28120 covering sizes DN 50 to DN 200.

Based upon these standard thicknesses, distortion free location of the sightglass is guaranteed provided of course that the welding flange has been correctly welded into or onto the vessel wall.

### Operating conditions:

These fittings are available for pressure up to 16 bar (depending on size, higher pressure rating on request). For temperature rating (depending on material selection) see the following diagram.



### Combinations:

These sightglass units can be combined with Lumiglas luminaires for use in explosion hazardous areas as well as under all normal working conditions (See data sheet series 06 and 07). The cover flanges can be drilled and tapped to take these luminaires.

### Certificates / Testing:

Depending on customer's requirements certification and testing can be provided to DIN 50049 3.1A / 3.1B (extra charge).

### Parts and available materials:

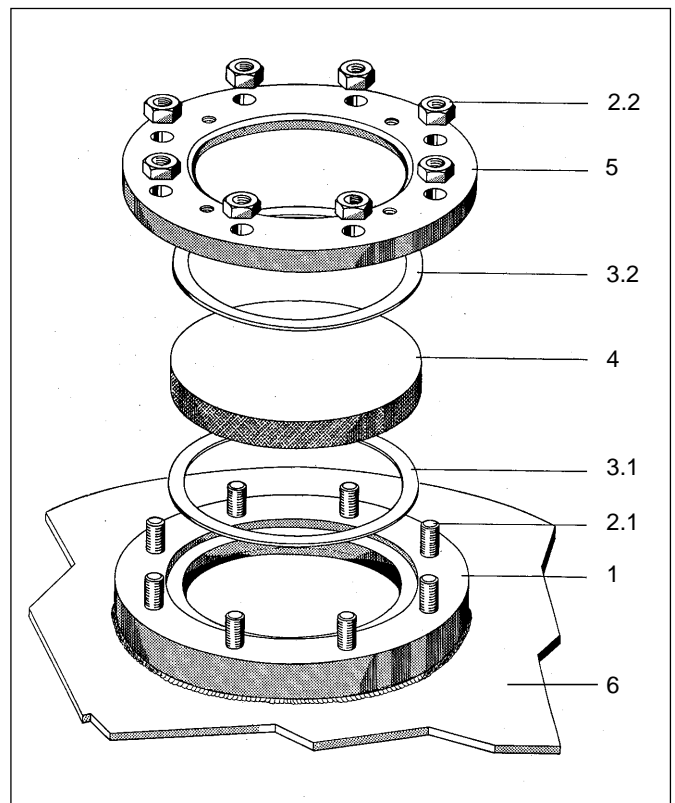
Item	Past name	Material options
1	base flange (welding flange)	carbon steel RSt 37-2, stainless steel 1.4571 or alternative
2.1, 2.2	bolts, studs & nuts	carbon steel 5.6/5 or stainless steel A2
3.1, 3.2	seal	KLINGERsil C-4400; silicone, PTFE or alternative
4	sightglass disc	- soda lime glass, toughened (tempered) to DIN 8902, max. temp 150° C. - toughened (tempered) borosilicate to DIN 7080 max. temp 280° C.
5	cover flange	carb. steel RSt 37-2, stainless steel 1.4541 or alternative
6	vessel wall	

### Assembly:

After welding baseflange (1) onto or into vessel wall, seals (3.1 & 3.2), glass disc (4) and cover flange (5) are placed together in the order shown. Then the nuts (2.2) (in case of studded base flange) and washers are progressively tightened, always working on diametrically opposed pairs of nuts at time. Tightening torque values are given in table on overleaf. Other information can be taken from DIN 28120.

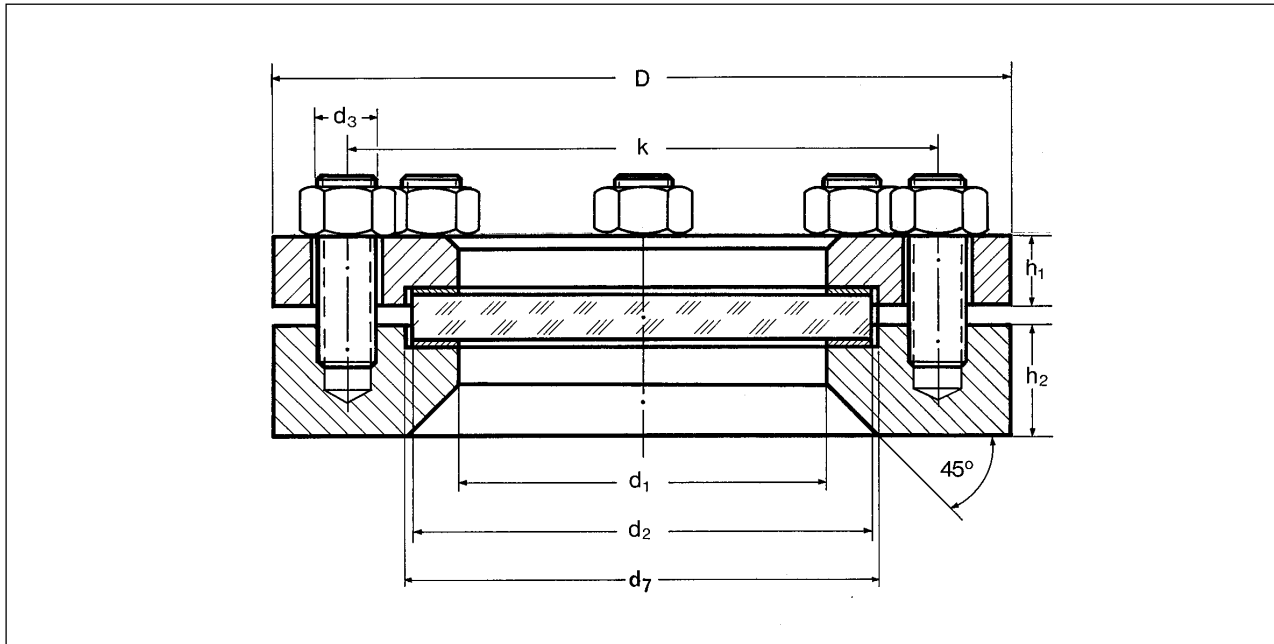


Complete assembly of sight glass unit to DIN 28120.



Exploded view of sightglass assembly to DIN 28120.

## Dimensions for Circular Sightglasses to DIN 28120 PN 10/16 or similar to DIN 28120 PN 6



Size		1	2	3	4	5	6
Normal bore	DN	50	80	100	125	150	200
Pressure rating (bar)	PN	10/16	10/16	(6) 10/16	(6) 10/16	(6) 10/16	(6) 10
Viewing diameter	d1	80	100	125	150	175	225
Sightglass disc	d2	100	125	150	175	200	250
	s	15/15	15/20	20/20/25	20/20/25	20/25/30	25/30
Flanges	D	165	200	220	250	285	340
	k	125	160	180	210	240	295
	h1	16/16	20/20	18/22/22	18/25/25	18/30/30	20/35
	h2	30	30	30	30	36	36
Bolts or studs and nuts	No.	4	8	8	8	8	8
	Size	M 16	M 16	M 16	M 16	M 20	M 20
	d3	18	18	18	18	22	22
Seals	d1	80	100	125	150	175	225
	d7	102	127	152	177	202	252
Tightening torque for bolts or nuts, lubricant factor/μ 0.1	Nm	28/32	20/23	( ) 26/30	( ) 32/34	( ) 47/54	( ) 63

### Ordering information:

Please specify the selected items as follows:  
 Fittings: nominal bore (DN) and nominal pressure (PN).  
 Material: welding flange, bolts, cover flange, glass disc, seals.  
 Test certificate type: 3.1 A (TÜV) or 3.1 B (extra, optional).

### Pressure rating conversion:

10 bar = 150 psi  
 16 bar = 235 psi