

**Circular Sightglass Fittings Model DIN 28120 (Weld-Type)**

**ISO 9001**

DATA SHEET 02-0030 08/02

**Application:**

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

**General:**

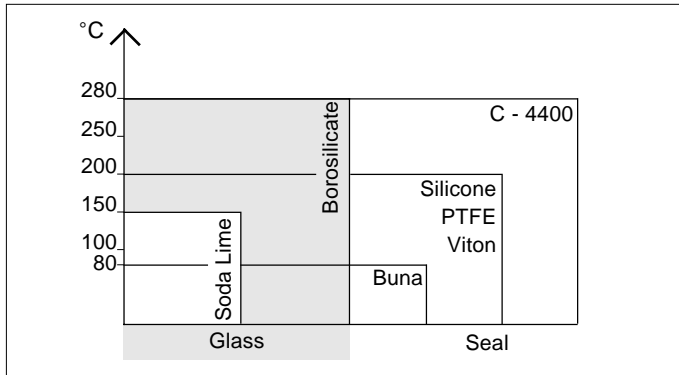
Sight glass fittings DIN 28120 are circular flanged sets suitable for welding into or onto vessel walls, complete with relevant matching seals and sight glass disc set between the weld pad and cover flange.

They correspond in construction and assembly to the dimensions and constructional guidelines of DIN spec No. 28120 covering sizes DN 50 to DN 200.

Based upon these standard thicknesses, distortion free location of the sightglass is assured providing that the welding pad has been correctly welded into or onto the vessel wall.

**Operating Conditions**

Standard fittings are available for pressure up to 235 psi (depending on size, higher pressure rating on request). For temperature ratings (depending on material selection) see the following diagram.



**Combinations:**

These sightglass units can be combined with Lumiglas luminaires for use in hazardous areas as well as under all normal working conditions (See Lumiglas Luminaire data sheets). The cover flanges can be drilled and tapped for luminaires.

**Parts and available materials:**

Item	Part name	Material options
1	Weld Pad (Welding Flange)	316L SS (ASME Code Grade) 304L SS (ASME Code Grade) Steel (ASME Code Grade) 316 Ti SS (Commercial Grade) Steel - RST 37.2 (Commercial Grade)
1.1	Studs/Nuts	Steel - 5.6 or 304 SS - A2
2	Gaskets	PTFE (Solid Teflon), Klinger C®-4400 Non-Asbestos, Silicone, Graphite or Gylon®.
3	Sight Glass Disc	Tempered Borosilicate (280°C max) Soda Lime Glass (150°C max) Quartz Metaglas®
4	Cover Flange	Steel - RST 37.2 or 321 SS

Optional materials are available upon request. Please contact the factory.

**Certifications / Testing:**

Chemical and Physical Test Reports will be supplied for the Weld Pad only at No Charge for ASME Code Materials.

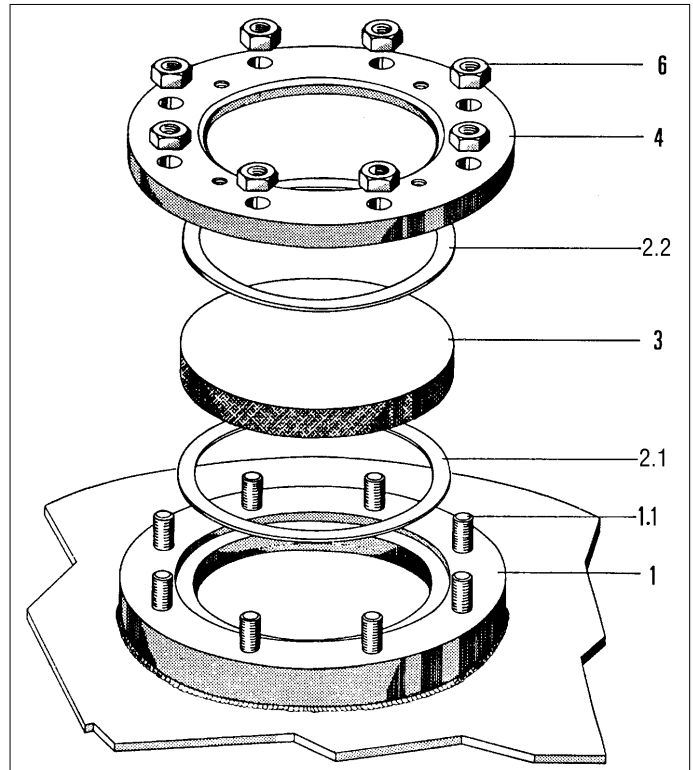
Chemical and Physical Test Reports for Non-Code Weld Pad Materials will be supplied upon request.



Complete assembly of sight glass unit DIN 28120

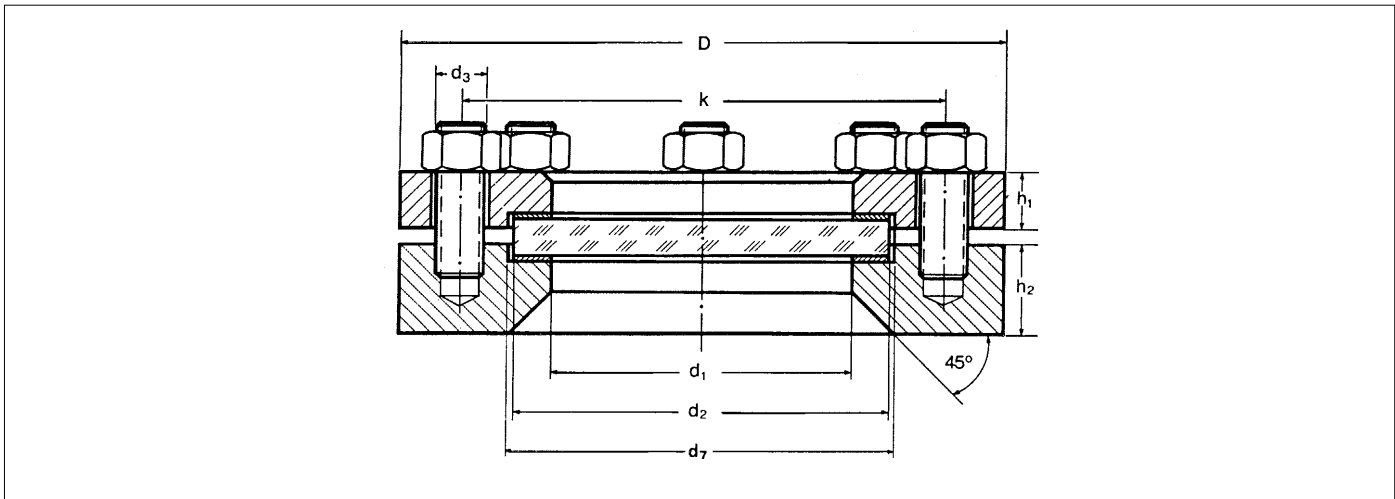
**Assembly**

After welding base flange 1 onto or into vessel wall, seals 2.1 & 2.2, glass disc 3 and cover flange 4 are placed together in the order shown. Then the nuts 6 are progressively tightened, always working on diametrically opposed pairs of nuts at a time. Tightening torque values are given in table on overleaf.



Exploded view of sight glass assembly DIN 28120

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



Size		DN50		DN80		DN100			DN125			DN150			DN200		
Nominal bore	DN	50		80		100			125			150			200		
Pressure rating (psig)	PN	150	235	150	235	90	150	235	90	150	235	90	150	235	90	150	
Viewing diameter	d1*	80 (3.15")		100(3.94")		125 (4.92")			150 (5.91")			175 (6.89")			225 (8.86")		
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	
Weld Pad and Cover Flange	D*	165 (6.5")		200 (7.87")		220 (8.66")			250 (9.84")			285 (11.22")			340 (13.39")		
	k	125		160		180			210			240			295		
	Cover Flange	h1	16	16	20	20	18	22	22	18	25	25	18	30	30	20	35
	Weld Pad	h2	30 (1.18")		30 (1.18")		30 (1.18")			30 (1.18")			36 (1.42")			36 (1.42")	
Bolts or studs and nuts	No.	4		8		8			8			8			8		
	Size	M16		M16		M16			M16			M20			M20		
	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/ $\mu$ 0.1	Nm	28	32	20	23	( )	26	30	( )	32	34	( )	47	54	( )	63	
	FT/LBS	21	24	15	17	( )	19	22	( )	24	25	( )	35	40	( )	47	

## Ordering Information:

Please specify the selected items as follows:

Fittings: Nominal bore (DN) and nominal pressure (PSIG)

Material: welding pad, bolts, cover flange, glass disc, seals

All dimensions in mm unless stated otherwise.

\* Use mm dimensions for accuracy

Subject to change without prior notice

ISO 9001 QA CERTIFICATE

GERMAN MANUFACTURER:

F.H. PAPANMEIER AWARDED QA APPROVAL CERTIFICATE



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