



Similar to DIN 28120 as a lightweight version

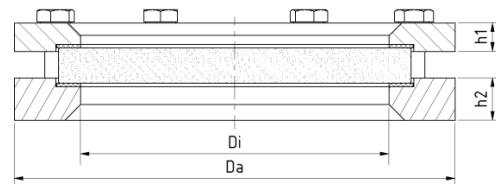
## USAGE

Round sight glass fittings are used for observation and illumination of the interior of closed containers (boilers, tanks, silos, etc.). Sight glass fittings of type 318 are round flange sockets for welding in or onto, completed with a sight glass plate that is inserted between the seals and tightly bolted in place.

## INSTALLATION NOTE

After welding the base flange, it must be checked whether the sealing surface has warped. If necessary, it must be reworked! Please also note the specified torque values for the fastening! The working pressure does not apply to the base flange; this must be checked together with the pressure device according to AD2000 Leaflet B9!

## DRAWING



For biogas applications, sizes DN 300 and DN 400 are particularly suitable



Operating condition		
Temperature: (depending on glass and Gasket)	$\leq 150\text{ }^{\circ}\text{C}$	Soda-lime glass (DIN 8902 or similar)
	$\leq 280\text{ }^{\circ}\text{C}$	Borosilicate glass (DIN 7080 or similar)
	$\leq 400\text{ }^{\circ}\text{C}$	Borosilicate glass untempered
	$> 400\text{ }^{\circ}\text{C}$	on request
Pressure:	$\leq 2.5\text{ barg}$	

Materials	
Base flange:	1.4571
Glass:	Borosilicate glass (DIN 7080 or similar), Soda-lime glass (DIN 8902 or similar), Unhardened borosilicate glass
Gasket: <sup>1</sup>	PTFE; FKM; NBR; C4400; Silicone; EPDM; Graphite
Screws:	A2-70 / A4-70
Special materials available upon request	

1) See "INFO Gaskets"

DN	50	80	100	125	150	200	300	400
Da [mm]	150	175	200	220	250	300	400	500
Di [mm]	80	100	125	150	175	225	305	390
h1 [mm]	12	14	14	16	16	16	20	22
h2 [mm]	24	24	24	24	24	24	24	24
Weight [kg]	3,6	5,0	5,9	7,1	8,8	11,3	21,7	35,0

### PRODUCT CODE

Example for Explaining the Code Composition

**11 - 318 - 100 - 1 - 1 - 4 - 000**

GROUP	TYPE	NOMINAL SIZE	BASE FLANGE <sup>1</sup>	GLASS	GASKET	VARIANT
11	318	DN 50	1) 1.4571	1) Borosilicate glass according to DIN 7080 or similar	1) PTFE	000) Standard
		DN 80		2) Soda-lime glass according to DIN 8902 or similar	2) FKM	G00) Borosilicate glass <sup>2</sup> + mica protection
		DN 100		3) Quartz glass	3) NBR	SV3) Spraying device
		DN 125		4) Borosilicate glass <sup>2</sup> + PTFE wiper SGW	4) C4400	TA0) TA-Luft <sup>4</sup>
		DN 150		5) Borosilicate glass <sup>2</sup> + silicone wiper SGW	5) Silicone	
		DN 200		6) Soda-lime glass <sup>3</sup> + PTFE wiper SGW	6) EPDM	
		DN 300		7) Soda-lime glass <sup>3</sup> + silicone wiper SGW	7) Graphite	
		DN 400		8) Borosilicate glass untempered	8) Special	

1) Cover flange according to the quote/ order confirmation

2) Similar to DIN 7080

3) Similar to DIN 8902

4) Calculated proof of tightness according to EN 1591-1, taking into account the requirements of TA Luft, is only possible in combination with novaphit® MST gaskets on both sides. If this calculated proof of tightness is required, please specify the product code with the suffix TA0.



Unless otherwise specified, the highlighted factory standard will be delivered.

### EXAMPLE

The product code **11-318-100-1-1-4-000** corresponds to the standard version:

ACI type 318

DN 100

PN 2.5

Base flange made of 1.4571

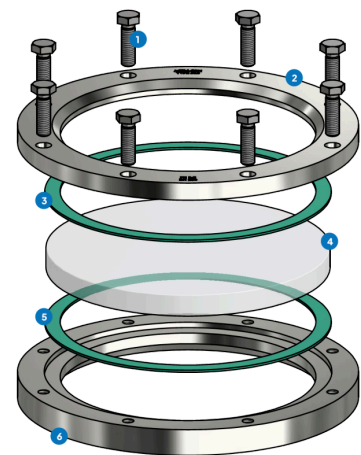
Cover flange made of 1.4541

Borosilicate glass DIN 7080

Gasket KlingerSil® C4400

### STRUCTURE

1. Screws
2. Cover flange
3. Glass cushion
4. Sight glass
5. Gasket
6. Base flange



For aggressive media, FEP or Halar® coated sight glass plates can be used. In steam, mica discs should be used to protect the glasses.

### QUICK OVERVIEW



max. 2.5 barg



heat resistant up to 400  
°C



for liquid media



for gaseous media



Nominal sizes  
DN 50 - 400



Custom designs possible



> 50 sealing materials



Accessories available

### OPERATING CONDITIONS

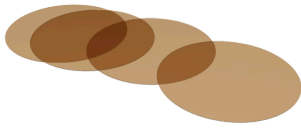
Operating conditions depend on the choice of glass and gaskets:

		Sight glass				Gaskets						
		Soda-lime glass (DIN 8902 or similar)	Borosilicate glass (DIN 7080 or similar)	Borosilicate glass untempered	Quartz glass	PTFE max. 200 °C	FKM max. 200 °C	NBR max. 80 °C	C4400 max. 175 °C	Silicone max. 180 °C	EPDM max. 130 °C	Graphite > 400 °C
TEMPERATURE	up to 80 °C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	up to 130 °C	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
	up to 150 °C	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓
	up to 175 °C	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓
	up to 200 °C	✗	✓	✓	✓	✓	✓	✗	✗	✗	✗	✓
	bis 280 °C	✗	✓	✓	✓	✓	✓	✗	✗	✗	✗	✓
	up to 400 °C	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗	✓
PRESSURE	>400 °C	upon request				upon request						
	up to 2.5 barg	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓

1) Conditional, the use must be checked by the plant operator for compliance with regulations

✓ suitable    ✗ unsuitable

**OPTIONAL ACCESSORIES**



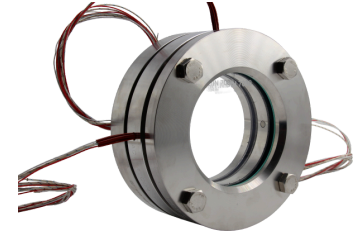
**Round mica discs**

- > up to 320 °C with Borosilicate glass  
DIN 7080



**Sight glass wiper**

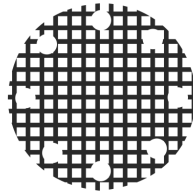
- > with PTFE, silicone, EPDM or FKM  
wipers



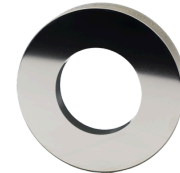
**Double glazing with heating cartridge**



**PLEXIGLAS Impact protection  
window**



**Grid impact protection window**



**Metal fused safety sight glass**

- > for safety applications



**LED lights**

- > for Ex and non-Ex areas



**FEP protective screen / coating**

- > for high pH values