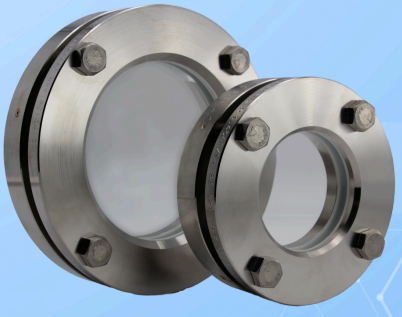
Circular sight glass fitting type 318 nominal pressure 2.5

For welding in or on similar to DIN 28120

Type 318



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.

Operating condition		
Temperature: (depending on glass and Gasket)	≤ 150 °C	Soda-lime glass (DIN 8902 or similar)
	≤ 280 °C	Borosilicate glass (DIN 7080 or similar)
	≤ 400 °C	Borosilicate glass untempered
	> 400 °C	on request
Pressure:	≤ 2.5 barg	

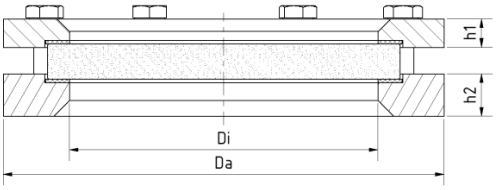
Materials	
Base flange:	1.4571
Glass:	Borosilicate glass (DIN 7080 or similar), Soda-lime glass (DIN 8902 or similar), Unhardened borosilicate glass
Gasket:[1]	PTFE; FKM; NBR; C4400; Silicone; EPDM; Graphite
Screws:	A2-70 / A4-70
Special materials available upon request	

1) See "INFO Gaskets"

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

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

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Type 318

PRODUCT CODE

Example for Explaining the Code Composition

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

GROUP	TYPE	NOMINAL SIZE	BASE FLANGE[1]	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[2] + mica protection
		DN 100		3) Quartz glass	3) NBR	SV3) Spraying device
		DN 125		4) Borosilicate glass[2] + PTFE wiper SGW	4) C4400	TA0) TA-Luft[4]
		DN 150		5) Borosilicate glass[2] + silicone wiper SGW	5) Silicone	
		DN 200		6) Soda-lime glass[3] + PTFE wiper SGW	6) EPDM	
		DN 300		7) Soda-lime glass[3] + 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.

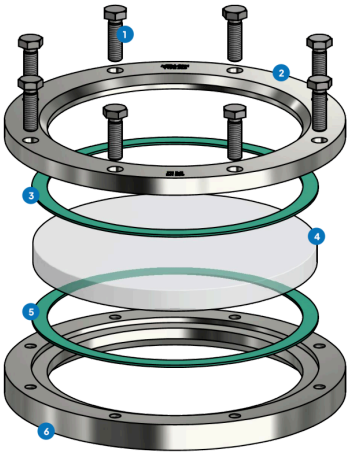
Unless otherwise specified, the highlighted factory standard will be delivered.

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. Srews
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.

INDUSTRIEARMATUREN

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Type 318

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

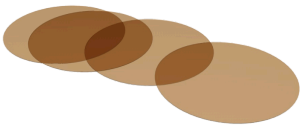
Operating conditions depend on the choice of glass and gaskets:

		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	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗	✓
	>400 °C	upon request				upon request						
PRESSURE	up to 2.5 barg	✓	✓	✓	✓ [1]	✓	✓	✓	✓	✓	✓	✓

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

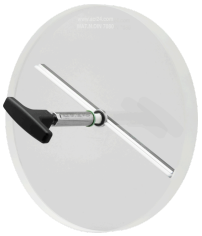
✓ suitable ✗ unsuitable

OPTIONAL ACCESSORIES



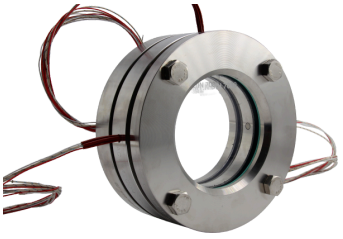
Round mica discs

> up to 320 °C with Borosilicate glass DIN 7080



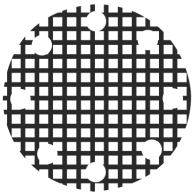
Sight glass wiper

> 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

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