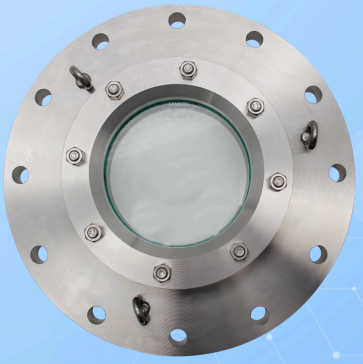
INDUSTRIEARMATUREN

Manhole sight glass Type 325 PN 6/10/16

Flange mounting according to DIN EN 1092-1

Type 325



EDELSTAHL Rostfrei INOX STAINLESS STEEL

For closing entry and inspection openings (manhole)

USAGE

Manhole sight glass fittings are used for observation and illumination of the interior of closed vessels (boilers, tanks, silos, etc.). Manhole sight glass fittings can, like a blind flange, be used to close access openings. They also feature a pressure-tight sight glass mounting, allowing visual observation even when the opening is closed.

Operating conditions		
Temperature: (depending on glass and gasket)	≤ 150 °C	Soda-lime glass (DIN 8902 or similar)
	≤ 280 °C[1]	Borosilicate glass (DIN 7080 or similar)
Pressure:	≤ 6/10/16 barg[1]	

1) Higher on request

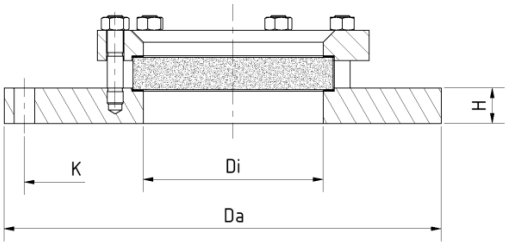
Materials	
Base flange:	1.4571; 1.4404; 1.4541; 1.4539; 1.4306 etc.
Glass:	Soda-lime glass (DIN 8902 or similar); Borosilicate glass (DIN 7080 or similar)
Gasket[2]:	PTFE; FKM; NBR; C4400; silicone; EPDM, graphite
Bolts:	A2-70 / A4-70
Special materials on request	

2) See "INFO Gaskets"

INSTALLATION NOTE

Appropriate gaskets should be used for the sealing surfaces. The screw material should be equivalent to or of a higher grade than the sight glass flanges. As a rule, use screws that match the bolt-hole pattern! Where possible, the screw thread and the screw head should be lubricated.

DRAWING



DN[3]		300	350	400	450	500	600	700	800
Di [mm]		175	225	280	280	325	325	325	325
H [mm]	PN 6	23	25	28	31	33	37	42	47
	PN 10	29	34	38	40	44	49	57	63
	PN 16	36	45	50	54	60	68	71	79
Weight [kg]	PN 6	30	40	52	68	92	135	193	279
	PN 10	38	58	75	92	128	187	279	394
	PN 16	49	80	104	134	189	290	354	497
DA/K		According to DIN EN 1092-1 PN 6/10/16							

3) Other sizes and other Di on request

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PRODUCT CODE

Example for Explaining the Code Composition

11 - 325 - 2 - 6 - 2 - 1 - 4 - 000

GROUP	TYPE	PN	NOMINAL SIZE	BASE FLANGE[1]	GLASS	GASKET	VARIANT
11	325	1) 6	1) DN 300	1) 1.4539	1) Borosilicate glass according to DIN 7080 or similar.	1) PTFE	000) Standard
		2) 10	2) DN 350	2) 1.4571	2) Soda-lime glass according to DIN 8902 or similar	2) FKM	
		3) 16	3) DN 400	3) 1.4404	4) Borosilicate glass[2] + PTFE wiper SGW	3) NBR	
			4) DN 450	4) 1.4541	5) Borosilicate glass[2] + Silicone wiper SGW	4) C4400	
			5) DN 500	5) 1.4462	6) Soda-lime glass[3] + PTFE wiper SGW	5) Silicone	
			6) DN 600	6) 1.4306	7) Soda-lime glass[3] + Silicone wiper SGW	6) EPDM	
			7) DN 700	8) Custom made design		7) Graphite	
			8) DN 800			8) Custom made design	

1) Cover flange according to offer / order confirmation
2) In accordance with DIN 7080
3) In accordance with DIN 8902

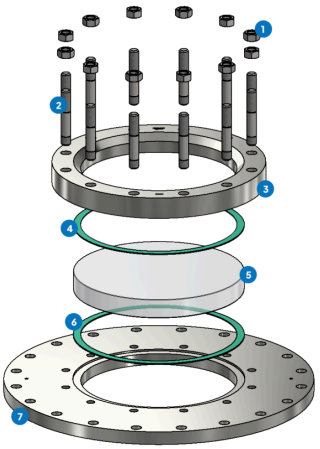
Unless otherwise stated, the highlighted factory standard will be supplied.

EXAMPLE

The product code 11-325-2-600-2-1-4-000 corresponds to the standard design:
ACI type 325
DN 600
PN 10
Base flange made of 1.4571
Cover flange made of 1.4571
Borosilicate glass (DIN 7080 or similar)
Gasket KlingerSil® C4400

STRUCTURE

1. Nuts
2. Stud bolts
3. Cover flange
4. Glass pad
5. Sight glass
6. Gasket
7. Base flange



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

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QUICK OVERVIEW



max. 16 barg



heat-resistant up to 400 °C



for liquid media



for gaseous media



Nominal sizes DN 300 - 800



Custom-made designs possible



> 50 gasket 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)	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	✗	✓	✓	✓	✗	✗	✗	✗	✓
	up to 280 °C	✗	✓	✗	✗	✗	✗	✗	✗	✓
PRESSURE	6/10/16 barg[3]	✓	✓	✓	✓	✓	✓	✓	✓	✓

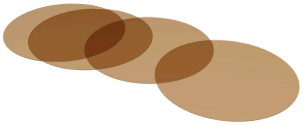
3) Higher on request

✓ suitable ✗ unsuitable

OPTIONAL ACCESSORIES

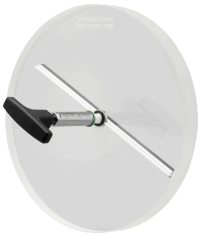


Double glazing



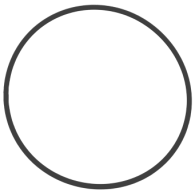
Round mica discs

> up to 320 °C with Borosilicate glass DIN 7080



Sight glass wiper

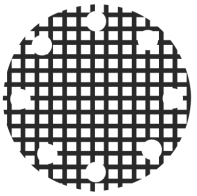
> with PTFE, silicone, EPDM or FKM wipers



O-Ring Gasket

> vacuum-compatible

PLEXIGLAS Impact protection window



Grid impact protection window



LED lights

> for Ex and non-Ex areas



FEP protective screen / coating

> for high pH values



Spraying device SV1

> from high-quality stainless steel of grade 1.4571

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