



With welding ends according to DIN EN 1092-1 type 11

USAGE

Round sight glass fittings are used for observing and illuminating the interiors of closed containers (boilers, tanks, silos, etc.) or pipelines. Type 390 sight glass fittings are round flange fittings with welding ends according to DIN EN 1092-1 for welding, completed with a sight glass plate inserted between the seals and tightly bolted.

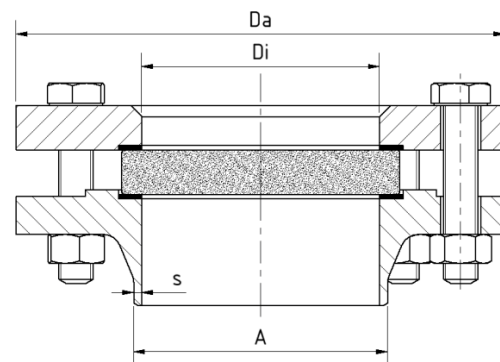
INSTALLATION NOTE

After welding the base flange, it must be checked whether the sealing surfaces have warped! If necessary, rework must be done! Also, pay attention to the specified torques for the bolting according to the working and maintenance instructions.



From PN 250 always with additional mica protection

DRAWING



Operating condition

Temperature: (dependent on glass and gasket)	$\leq 280\text{ }^{\circ}\text{C}$	Borosilicate glass (DIN 7080 or similar)
	$> 280\text{ }^{\circ}\text{C}$	on request
Pressure:	$\leq 16\text{ barg}$ to 320 barg	
Low temperature applications as well as higher temperatures / pressures on request		

Materials

Base flange:	1.4571; 1.4404; 1.4539; 1.4435; 1.4541; 1.4301/7; 1.4876; 1.4828; 2.4602; 2.4610
Glass:	Borosilicate glass (DIN 7080 or similar)
Gasket ¹⁾ :	PTFE; FKM; NBR; C4400; Silicone; EPDM; Graphite
Screws and nuts:	A2-70 / A4-70
Special materials upon request	

1) See „INFO Gaskets“

PN	DN	Da [mm]	Di [mm]	A [mm]	s [mm]	Weight [kg]
16	15	95	17	21.3	2	1.6
	20	105	22	26.9	2.3	2.3
	25	115	28	33.7	2.6	2.7
	32	140	37	42.4	2.6	4.0
	40	150	43	48.3	2.6	4.5
	50	165	54	60.3	2.9	5.3
	65	185	70	76.1	2.9	6.4
	80	200	83	88.9	3.2	9.9
	100	220	107	114.3	3.6	9.7
	125	270	132	139.7	4	19.1
	150	300	160	168.3	4.5	24.9
PS 10 ¹	200	375	207	219.1	6.3	46.4
PS 6 ¹	250	425	259	273	7.1	51.6
	300	485	308	323.9	8	69.1
	350	555	339	355.6	8	105.2
40	15	95	17	21.3	2	1.6
	20	105	22	26.9	2.3	2.3
	25	115	8	33.7	2.6	2.7
	32	140	37	42.4	2.6	4.0
	40	150	43	48.3	2.6	4.5
	50	165	54	60.3	2.9	6.0
	65	185	70	76.1	2.9	8.0
	80	200	83	88.9	3.2	10.2
	100	235	107	114.3	3.6	13.9
	125	270	132	139.7	4	19.9
	150	300	160	168.3	4.5	25.8
	200	375	2007	219.1	6.3	49.4
63	15	105	17	21.3	2	2.5
	20	130	22	26.9	2.6	4.3
	25	140	28	33.7	2.6	5.5
	32	155	37	42.4	2.9	6.8
	40	170	43	48.3	2.9	8.7
	50	180	54	60.3	2.9	9.6
	65	205	70	76.1	3.2	12.2
	80	215	82	88.9	3.6	14.3
	100	250	106	114.3	4	20.3
	125	295	131	139.7	4.5	31.8
	150	345	157	168.3	5.6	46.8

PN	DN	Da [mm]	Di [mm]	A [mm]	s [mm]	Weight [kg]
100	15	105	17	21.3	2	2.5
	20	130	22	26.9	2.6	4.4
	25	140	28	33.7	2.6	5.5
	32	155	37	42.4	2.9	6.8
	40	170	43	48.3	2.9	8.7
	50	195	54	60.3	3.2	12.5
	65	220	69	76.1	3.6	16.7
	80	230	81	88.9	4	19.1
	100	265	104	114.3	5	28.4
	125	315	127	139.7	6.3	45.0
160	15	105	17	21.3	2	2.5
	25	140	28	33.7	2.9	5.5
	40	170	41	48.3	3.6	9.4
	50	195	52	60.3	4	13.5
	65	230	60	76.1	8	26.4
	80	225	79	88,9	11	34.8
250	15	130	16	21.3	2.6	5.3
	25	150	27	33.7	3.6	7.6
	40	185	38	48.3	5	14.0
	50	200	48	60.3	6.3	17.8
	65	230	60	76.1	8	26.5
320	15	130	15	21.3	3.2	5.3
	25	160	24	33.7	5	10.6
	40	195	36	48.3	6.3	17.6
	50	210	48	63.5	8	22.2

PRODUCT CODE

Example for Explaining the Code Composition

11 - 390 - 9 - 16 - 2 - 1 - 4 - 0

GROUP	TYPE	NOMINAL SIZE	PN	BASE FLANGE ¹	GLASS	GASKET	VARIANT
11	390	1) 15	1) 16	2) 1.4571	1) Borosilicate glass according to DIN 7080 or similar 4) Borosilicate glass ² + PTFE wiper SGW 5) Borosilicate glass ² + silicone wiper SGW 8) Borosilicate glass untempered	1) PTFE	0) Standard
		2) 20	2) 40	3) 1.4404		2) FKM	
		3) 25	3) 63	4) 1.4301/7		3) NBR	
		4) 32	4) 100	5) 1.4539		4) C4400	
		5) 40	5) 160	7) 1.4435		5) Silicone	
		6) 50	6) 250	8) 1.4541		6) EPDM	
		7) 65	7) 320	9) Special		7) Graphite	
		8) 80				8) Special	
		9) 100					
		10) 125					
		11) 150					
		12) 200					
		13) 250					
		14) 300					
		15) 350					

1) Cover flange according to quotation / order confirmation

2) Similar to DIN 7080



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

EXAMPLE

The product code **11-390-9-1-2-1-4-0** corresponds to the standard version:

ACI Type 390,

DN 100

PN 16

Base flange made of 1.4571

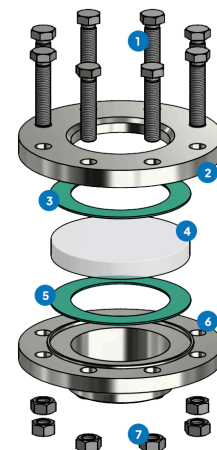
Cover flange made of 1.4571

Borosilicate glass according to DIN 7080

Gasket KlingerSil® C4400

STRUCTURE

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



For aggressive media, FEP or Halar® coated sight glass plates can be used.

QUICK OVERVIEW



max. 320 barg



heat resistant up to 280 °C



for liquid media



for gaseous media



Nominal sizes
DN 15 - 350



Custom made design
possible



> 50 gasket materials



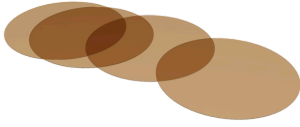
Accessories available

OPERATING CONDITIONS

		SIGHT GLASS							
		Borosilicate glass (DIN 7080 etc.)	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	✓	✗	✗	✗	✗	✗	✗	✓
	> 280 °C	On request		On request					
PRESSURE	up to 16 barg	✓	✓	✓	✓	✓	✓	✓	✓
	up to 40 barg	✓	✓	✗	✗	✓	✗	✗	✓
	up to 63 barg	✓	✗	✗	✗	✗	✗	✗	✓
	up to 100 barg	✓	✗	✗	✗	✗	✗	✗	✓
	up to 160 barg	✓	✗	✗	✗	✗	✗	✗	✓
	up to 250 barg	✓	✗	✗	✗	✗	✗	✗	✓
	up to 320 barg	✓	✗	✗	✗	✗	✗	✗	✓

✓ suitable ✗ unsuitable

OPTIONAL ACCESSORIES



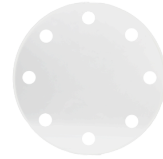
Round mica discs

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

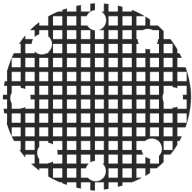


Sight glass wiper

- > with PTFE, silicone, EPDM or FKM
wipers



**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