

Round Sight Glass Fitting PN 16 up to PN 390

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

TYPE 390



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

USE:

Round sight glasses are used for observation and illumination of the inside of closed vessels (boilers, tanks, silos, etc.) or pipelines.

Sight glass fittings type 390 are round flanged fittings with welding ends according to DIN EN 1092-1 for welding, each completed with a sight glass plate inserted between the gaskets and screwed firmly.

INSTALLATION INSTRUCTIONS:

After welding the flange on the pressure vessel, the sealing surface must be checked for deformations! Reworking may be required! Observe the listed torque values for remounting the cover flange! The pressure rating does not consider the base flange.



From PN 250 always with additional mica discs

OPERATING CONDITIONS		
Temperature: (depending on glass and gasket)	≤ 280°C	Borosilicate glass according to DIN 7080 or similar
	> 280°C	on request
Pressure:	≤ 16 bar(g) up to 320 bar(g)	
Low temperature application 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 according to DIN 7080 or similar
Gasket: ¹	PTFE; FKM; NBR; C4400; Silicone; EPDM; Graphite
Screws:	A4-70 / A2-70
Special materials on request	

1) Siehe „INFO Dichtungen“

ATTENTION!

! The pressure-temperature limits according to DIN EN 1092-1 apply!

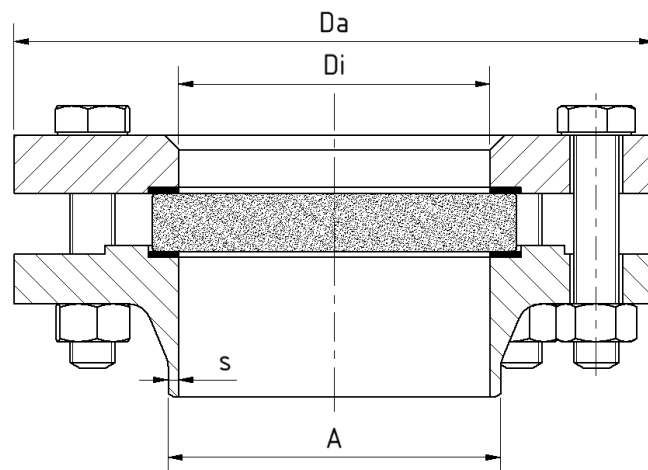
Our tool of the same name is available on our website for this purpose.
(www.AC124.com, in the Service category, subcategory Tools)



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	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	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
63	200	375	207	219,1	6,3	49,4
	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
	150	375	160	219,1	6,3	49,4
160	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	101,6	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

DRAWING:



1) max. operating pressure 6 bar(g) resp. 10 bar(g) for these nominal sizes

PRODUCT CODE:

Example to explain the code composition

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

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	1) PTFE	0) Standard
		2) 20	2) 40	3) 1.4404		2) FKM	
		3) 25	3) 63	4) 1.4301/7	4) Borosilicate glass ² + PTFE-wiper SGW	3) NBR	
		4) 32	4) 100	5) 1.4539	5) Borosilicate glass ² + Silicone-wiper SGW	4) C4400	
		5) 40	5) 160	7) 1.4435	8) Borosilicate glass untempered	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 stated, the highlighted factory standard is supplied.

EXAMPLE:

11-390-9-1-2-1-4-0 equivalent to:

ACI Type 390

DN 100

PN 16

Base flange made of 1.4571

Cover flange made of 1.4571

Borosilicate glass (DIN 7080 or similar)

Gasket C4400

Standard version

- other equipments optional

CONSTRUCTION:

Screws

Cover flange

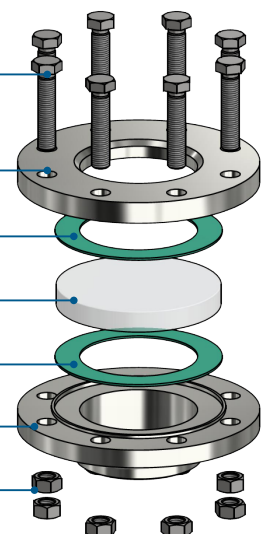
Gasket (on the atmosphere side)

Sight glass

Gasket (on the media side)

Base flange

Nuts



For aggressive media or steam, mica discs should be used to protect the glass.

QUICK OVERVIEW:



PN 16 up to 320
≤ 16 up to 320 bar(g)



heat-resistant up to
280 °C



for liquid
media



for gaseous
media



Nominal Size
DN 15 up to 350



Customized products
possible



> 50 gasket
materials



Additional equipment
available

OPERATING CONDITIONS:

Operating conditions depend on the
choice of glass and gaskets:

		SIGHT GLASS	GASKETS						
		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	✓	✗	✗	✗	✗	✗	✗	✓
	> 280 °C	on request	on request						
PRESSURE	16 bar(g)	✓	✓	✓	✓	✓	✓	✓	✓
	40 bar(g)	✓	✓	✗	✗	✗	✗	✗	✓
	63 bar(g)	✓	✗	✗	✗	✗	✗	✗	✓
	100 bar(g)	✓	✗	✗	✗	✗	✗	✗	✓
	160 bar(g)	✓	✗	✗	✗	✗	✗	✗	✓
	250 bar(g)	✓	✗	✗	✗	✗	✗	✗	✓
	320 bar(g)	✓	✗	✗	✗	✗	✗	✗	✓

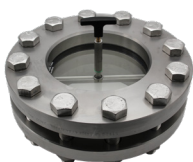
✓ suitable ✗ unsuitable

OPTIONAL EQUIPMENT:



Mica discs

- > up to 300°C with borosilicate glass
DIN 7080¹



Wiper SGW

- > with PTFE, Silicone, EPDM oder
FKM wiper



LED - light

- > for Ex- and Non-Ex areas



FEP protective screen/ coating

- > for high pH values



High pressure version

- > Type 390



Pipe attachment

- > Type 391



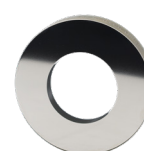
External thread connection

- > Type 392



Internal thread connection

- > Type 394

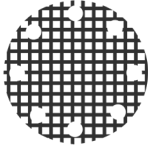


Metal fused safety sight glass

- > for chemical use

1) From nominal pressure PN 16&nominal size DN 15 to DN 200 up to 320°C
From nominal pressure PN 40&nominal size DN 15 to DN 80 up to 320°C

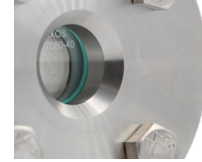
From nominal pressure PN 63, nominal size DN 15, DN 20 & DN 32 up to 320°C
From nominal pressure PN 100 in nominal size DN 32 up to 320°C



Grid impact protection window¹



PLEXIGLAS® impact protection



D- oder O-ring gasket

> vacuum compatible² Type 390V

1) Punching on customer request
2) Depending on environment variables