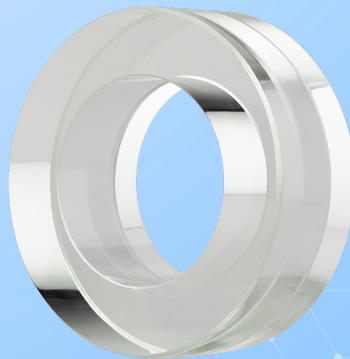




Intermediate flange execution for flanges according to
DIN EN 1092-1

USAGE

Glass ring tubular sight glasses serve to observe filling and flow in pipelines. The sight glass enables reliable 360° monitoring of the function and performance of individual devices as well as entire systems.

Glass ring tubular sight glasses of type 640 are suitable for installation between flanges according to DIN 1092-1 PN 16. The sight glass is free of dead space when installed correctly.

Operating conditions:

Temperature: (depending on the glass material)	up to 80 °C with acrylic glass up to 280 °C tempered borosilicate glass
Pressure:	≤ 16 ¹ barg

1) Higher see type 641

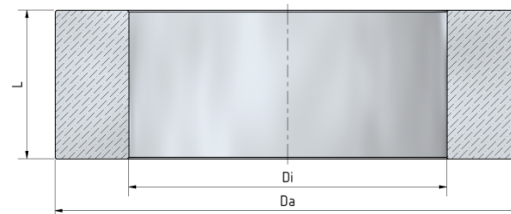
Materials:

Borosilicate glass tempered
Acrylic glass (PMMA)
Special materials on request

INSTALLATION NOTE

Seals matching the sealing surfaces should be used. The screw material should be equal to or higher than the flange material. Whenever possible, the screw thread and the screw head should be lubricated. The sight glasses must be installed in such a way that no pipe forces (tension, pressure, and torsion), vibrations, and pressure shocks can act on the glass rings!

DRAWING





Glass ring tubular sight glass type 640 PN 16

Intermediate sight glass
design for flanges according
to DIN EN 1092-1

Type 640

DN	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500
Di [mm]	14	18	22	29	38	44	55	71	83	108	132	160	208	260	310	341	392	443	494
Da [mm]	40	45	58	68	79	88	102	122	138	158	188	212	268	320	378	430	482	532	585
Weight ^{2 4}	0,13	0,16	0,27	0,36	0,46	0,56	0,71	0,94	1,16	1,27	1,71	1,85	2,73	3,28	4,41	6,2	7,1	7,8	8,9
Weight ^{3 4}	0,07	0,08	0,13	0,18	0,22	0,27	0,34	0,46	0,58	0,62	0,83	0,9	1,32	1,61	2,17	3,18	3,64	4,02	4,55
PS ^{2 5}	16	16	16	16	16	16	16	16	16	16	16	16	16	10	10	10	10	10	10
PS ^{3 5}	16	16	16	16	16	16	16	16	10	10	10	8	8	8	6	6	6	6	6

² Borosilicate glass
³ Acrylic glass
⁴ Weight in [kg] for L = 50 mm
⁵ max. operating pressure in [barg]
Other materials, sizes, lengths and flange standards on request

SPECIAL VERSIONS/OPTIONS

- a) High pressure variant (Type 641 PN 25 / 40)
- b) ASME B16.5 variant (Type 640A)
- c) Additional options on request

ASSEMBLY EXAMPLE



The delivery is made without screws, gaskets, and flanges

HIGHER OPERATING PRESSURES

In individual cases, higher Working pressure than those specified may be possible. Please contact us if necessary.



Glass ring tubular sight glass type 640 PN 16

Intermediate sight glass
design for flanges according
to DIN EN 1092-1

Type 640

PRODUCT CODE

Example for Explaining the Code Composition

11 - 640 - 200 - 2 - 50 - 000

GROUP	TYPE	NOMINAL SIZE	GLASS	TOTAL LENGTH	VARIANT
11	640	DN 10	1) Acrylic glass	100) 100 mm (only acrylic)	000) Standard
		DN 15	2) Tempered borosilicate glass	050) 50 mm (standard)	
		DN 20	6) Special	030) 30 mm	
		DN 25			
		DN 32			
		DN 40			
		DN 50			
		DN 65			
		DN 80			
		DN 100			
		DN 125			
		DN 150			
		DN 200			
		DN 250			
		DN 300			
		DN 350			
		DN 400			
		DN 450			
		DN 500			



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

EXAMPLE

The product code **11-640-200-2-050-000** corresponds to the standard version:

ACI type 640

DN 200

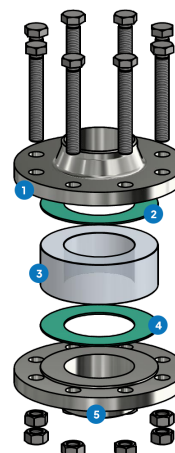
PS max. 16 barg

Borosilicate glass tempered

Standard length 50 mm

STRUCTURE

1. V-flange type 11 according to DIN EN 1092-1
2. Gasket
3. Glass ring tubular sight glass type 640
4. Gasket
5. V-flange type 11 according to DIN EN 1092-1



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



Glass ring tubular sight glass type 640 PN 16

Intermediate sight glass design for flanges according to DIN EN 1092-1

Type 640

QUICK OVERVIEW



max. 16 barg



heat resistant up to 280 °C



for liquid media



for gaseous media



Nominal sizes
DN 10 - 500



Custom manufacturing
possible

OPERATING CONDITIONS

Operating conditions depend on the choice of glass and seals:

		Sight glass					Gaskets			
		Borosilicate glass hardened	Acrylic 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 > 300 °C
TEMPERATURE	up to 80 °C	✓	✓	✓	✓	✓	✓	✓	✓	✓
	up to 130 °C	✓	✗	✓	✓	✗	✓	✓	✓	✓
	up to 175 °C	✓	✗	✓	✓	✗	✓	✓	✗	✓
	up to 180 °C	✓	✗	✓	✓	✗	✗	✓	✗	✓
	up to 200 °C	✓	✗	✓	✓	✗	✗	✗	✗	✓
	up to 280 °C	✓	✗	✗	✗	✗	✗	✗	✗	✓
PRESSURE	up to 16 barg	✓	✓	✓	✓	✓	✓	✓	✓	✓



suitable



unsuitable



Glass ring tubular sight glass type 640 PN 16

Intermediate sight glass
design for flanges according
to DIN EN 1092-1

Type 640

OPTIONAL ACCESSORIES



FEP protective screen / coating

> for high pH values

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