



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

USAGE

Glass tube sight glasses are used to observe the 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 tube sight glasses of type 641 are suitable for mounting between flanges according to DIN 1092-1 PN 25/40. 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:	≤ 40 ¹ barg

1) Max. operating pressure PS see table below.
PN 16 see type 640!

Materials:

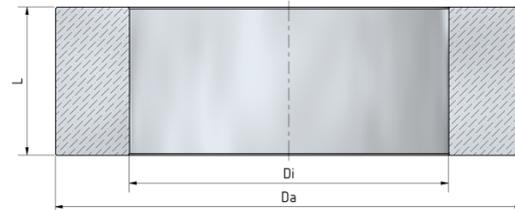
Tempered borosilicate glass
Acrylic glass (PMMA)

Special materials on request

INSTALLATION NOTE

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

DRAWING



DN	10	15	20	25	32	40	50	65	80	100	125
Di [mm]	14	18	22	29	38	44	55	71	83	108	132
Da [mm]	40	45	58	68	79	88	102	122	138	158	188
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
Weight ^{3 4}	0.07	0.08	0.13	0.18	0.22	0.27	0.34	0.46	0.56	0.62	0.83
PS ^{2 5}	40	40	40	40	40	40	40	25	25	25	20
PS ^{3 5}	25	25	25	25	20	20	---	---	---	---	---

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

SPECIAL VERSIONS/OPTIONS

- a) ASME B16.5 variant (Type 640A)
- b) Additional options on request

ASSEMBLY EXAMPLE



The delivery is made without screws, gaskets, and flanges

HIGHER OPERATING PRESSURES

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

PRODUCT CODE

Example for Explaining the Code Composition

11 - 641 - 50 - 2 - 50 - 000

GROUP	TYPE	NOMINAL SIZE	GLASS	TOTAL LENGTH	VARIANT
11	641	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			



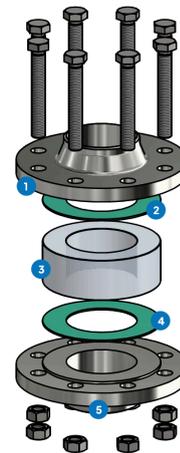
Unless otherwise stated, the highlighted factory standard will be delivered.

EXAMPLE

The product code **11-641-50-2-050-000** corresponds to the standard version:
 ACI Type 641
 DN 50
 PS max. 40 barg
 Borosilicate glass tempered
 Standard length 50 mm

STRUCTURE

1. WN flange type 11 according to DIN EN 1092-1
2. Gasket
3. Glass ring tubular sight glass type 641
4. Gasket
5. WN flange type 11 according to DIN EN 1092-1



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

QUICK OVERVIEW



max. 40 barg



heat resistant up to 280 °C



for liquid media



for gaseous media



Nominal sizes
DN 10 - 125



Custom made designs
possible

OPERATING CONDITIONS

Terms of operation depend on the choice of glass and seals:

		Sight glass				Gaskets				
		Borosilicate glass tempered	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	✓	✗	✓	✓	✗	✗	✗	✗	✓
PRESSURE	up to 280 °C	✓	✗	✗	✗	✗	✗	✗	✗	✓
	up to 25 barg	✓	✓	✓	✓	✗	✓	✗	✗	✓
	up to 40 barg	✓	✗	✓	✗	✗	✓	✗	✗	✓

✓ suitable ✗ unsuitable

OPTIONAL ACCESSORIES



FEP protective screen / coating

> for high pH values

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