



Three-way flow sight glass with flange connections according to DIN EN 1092-1

USAGE

Three-way flow sight glasses of type 590 serve to observe the level and flow in pipelines.

They enable reliable monitoring of the function and performance of individual devices as well as complete systems. The flow sight glasses of type 590 are designed for installation between flanges according to DIN EN 1092-1.

Operating conditions:

| | |
|---|---|
| Temperature: (depending on glass and gasket) | 150 °C Soda-lime glass DIN 8902 280 °C Borosilicate glass DIN 7080 300 °C or 320 °C ¹ Borosilicate glass DIN 7080 with mica protection discs |
| Pressure: | ≤ 16 / 40 / 63 / 100 / 160 / 250 / 320 / 400 barg |

1) Only possible when MAXOS® safety sight glasses according to DIN 7080 are used

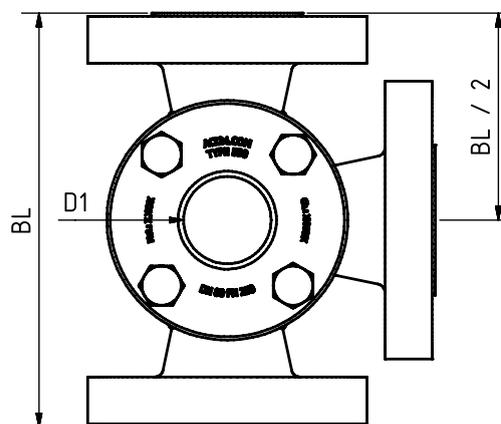
Materials:

| | |
|--|---|
| Connection flange, cover flange, and body: | 1.4571 |
| Glass: | Borosilicate glass DIN 7080 Soda-lime glass DIN 8902 |
| Gasket: | Graphite; C4400; PTFE; FKM; NBR; silicone; EPDM |
| Screws: | A2-70 / A4-70 |

INSTALLATION NOTE

Seals should always be used that match the sealing surfaces. The screw material should be equivalent or higher grade compared to the flange material. Whenever possible, both the screw thread and the screw head should be provided with a suitable lubricant.

DRAWING



| DN | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|---|--------------------|-----|-----|-----|-----|-----|-----|
| Length (BL) ² | DIN EN 558-1 FTF 2 | | | | | | |
| Flange dimensions | DIN EN 1092-1 | | | | | | |
| Free view (D1) ² | 100 | 150 | 175 | 175 | 175 | 175 | 240 |
| 2) All measurements will be carried out according to standards – provided it is constructively possible. Otherwise, the information from the order confirmation and customer drawing applies. Measurements correspond to the nominal pressure level PN 16; other pressure levels may differ | | | | | | | |
| Custom dimensions and other standards available upon request | | | | | | | |

PRODUCT CODE

Example for Explaining the Code Composition

11 - 590 - 8 - 2 - 1 - 1 - 7 - 000

| GROUP | TYPE | DN | PN | BODY | GLASS | GASKET | VARIANT |
|-------|------|--|---|-------------------------|---|--|---------------|
| 11 | 590 | 5) 50 6) 65 7) 80 8) 100 9) 125 10) 150 11) 200 12) Special | 1) 16 2) 40 3) 63 4) 100 5) 160 6) 250 7) 320 8) 400 9) Special | 1) 1.4571 8) Special | 1) Borosilicate glass DIN 7080 2) Soda-lime glass DIN 8902 4) Borosilicate glass DIN 7080 + Mica 5) META® glass | 1) PTFE 2) FKM 3) NBR 4) C4400 5) Silicone 6) EPDM 7) Graphite 8) Special | 000) Standard |



Unless otherwise specified, the highlighted factory standard is delivered.

EXAMPLE

The product code **11-590-8-2-1-1-7-000**

corresponds to the standard version:

ACI type 590

DN 100

PN 16

Body 1.4571

Cover flanges 1.4571

Connection flanges 1.4571

Borosilicate glass DIN 7080

Gasket novaphit® MST-XP

QUICK OVERVIEW



max. 400 barg



heat resistant up to 320 °C



for liquid media



for gaseous media



Nominal sizes
DN 50 - 200



custom productions
possible



> 50 sealing materials



accessories available

OPERATING CONDITIONS

Terms of Service depend on the choice of glass and the gaskets:

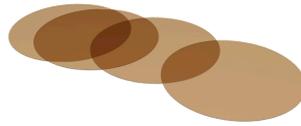
| | | SIGHT GLASS | | | | GASKETS | | | | |
|-------------|----------------|-----------------------------|--------------------------------|---------------------|--------------------|-------------------|----------------------|------------------------|---------------------|----------------------|
| | | Soda-lime glass DIN 8902 | Borosilicate glass DIN 7080 | PTFE max. 200 °C | FKM max. 200 °C | NBR max. 80 °C | C4400 max. 175 °C | Silicon 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 | | | | | | | | |
| 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 | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ |
| | up to 400 barg | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ |

✓ suitable ✗ unsuitable

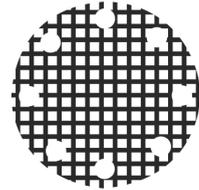
OPTIONAL ACCESSORIES



Double glazing



Round mica discs



Grid impact protection window

> up to 320 °C with Borosilicate glass
DIN 7080



Metal fused safety sight glass

> for safety applications



LED lights

> for Ex and non-Ex areas



FEP protective screen / coating

> for high pH values

NOTE !



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

Our tool with the same name is available on our website.
(www.aci24.com, under Service, sub-item Tools)

