

## Lumiglas Sight Glass Disc, Circular DIN 7080

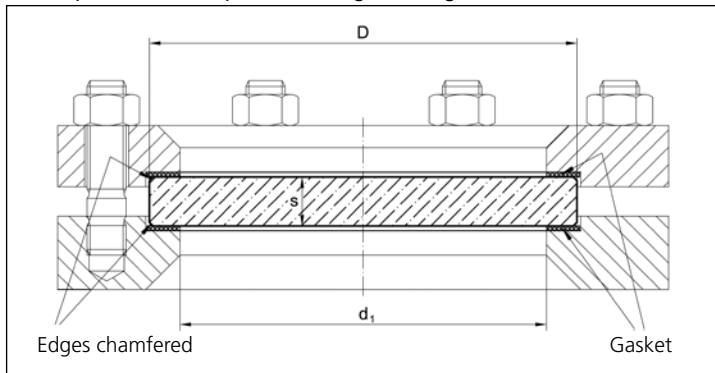
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| Dimension<br>D x s<br>(mm) | Viewing Diameter<br>d <sub>i</sub><br>(mm) | Nominal Pressure<br>(bar) |
|----------------------------|--|---------------------------|
| DIN-Sizes                  |  |                           |
| 63 x 10                    | 48   | 16                        |
| 80 x 12                    | 65   | 16                        |
| 94 x 11 <sup>1)</sup>      | 80 <sup>1)</sup>                           | 6                         |
| 100 x 15                   | 80   | 16                        |
| 113 x 15 <sup>1)</sup>     | 100 <sup>1)</sup>                          | 6                         |
| 125 x 15                   | 100  | 10                        |
| 125 x 20                   | 100  | 16                        |
| 141 x 15 <sup>1)</sup>     | 125 <sup>1)</sup>                          | 6                         |
| 150 x 20                   | 125  | 10                        |
| 150 x 25                   | 125  | 16                        |
| 166 x 15 <sup>1)</sup>     | 150 <sup>1)</sup>                          | 6                         |
| 175 x 20                   | 150  | 10                        |
| 175 x 25                   | 150  | 16                        |
| 200 x 20                   | 175  | 8                         |
| 200 x 25                   | 175  | 10                        |
| 200 x 30                   | 175  | 16                        |
| 250 x 25                   | 225  | 8                         |
| 250 x 30                   | 225  | 10                        |

**Additional dimensions available shown on Page 2**

1) As supplement to DIN standard for screwed sight glass fittings similar DIN 11851 – no DIN-dimension!

- For pressure duties at temperatures up to 280°C. Temperatures above 280 ° C up to a maximum of 300 ° C are permitted if:
  - The sight glass plate is protected with mica;
  - Restrict the cumulative working time above 280°C to a maximum of 300 hours
- Toughened borosilicate glass
- Ground and polished
- Optional extras possible, e. g. coating!



### • Safety precautions when using sight glass discs:

1. Whenever a sight glass assembly has been taken apart it is urgently recommended in accordance with DIN 7080 that the glass disc and gaskets are replaced by new ones. That is particularly important in the case of pressure vessels and/or aggressive media.

### The following extract from DIN 7080 text is verbatim:

'Sight glass discs may only be installed by personnel who have been informed fully about the following requirements:

- care in handling sight glass discs
- cleaning of recesses, sight glass discs, gaskets and other parts i. e. removal of foreign bodies (e. g. swarf), prior to installation/reassembly
- even tightening of retaining bolts

Sight glass discs that have been removed after operating use must not be re-used.'

### 2. Planned maintenance:

Sight glass discs should be included in routine maintenance and periodically checked visually or using ultrasound wall thickness measuring means. In the event of damage, a glass disc must be promptly exchanged, with the plant first having been brought to a standstill.

The service life of a sight glass – relative to the particular vessel in which it is mounted – should be established by regular and careful visual check of its condition.

**Caution:** Completely demineralised water may dissolve glass – especially intensive periodical inspection required!

### 3. Breakage of a sight glass:

In spite of careful installation and recommended use, sight glass discs can, on rare occasions, suffer breakage through external influences. In order to prevent the entry of glass particles into products of a critical nature, e. g. foodstuffs, appropriate safety precautions should be taken by the plant manufacturer or user.

All dimensions in mm unless stated otherwise. Subject to change without prior notice. 09.15

| Dimensions<br>d <sub>1</sub> x s<br>(mm) | Inspection<br>aperture<br>d <sub>2</sub> (mm) | Permissible<br>pressure<br>in bar | Dimensions<br>d <sub>1</sub> x s<br>(inch) | Inspection<br>aperture<br>d <sub>2</sub> (inch) | Permissible<br>pressure<br>in psi |
|--|---|-----------------------------------|--|---|-----------------------------------|
| 45 x 10                                  | 32  | 40                                | 1.772 x 0.394                              | 1.260   | 580                               |
| 45 x 12                                  | 32  | 50                                | 1.772 x 0.472                              | 1.260   | 725                               |
| 50 x 10                                  | 35  | 25                                | 1.969 x 0.394                              | 1.378   | 363                               |
| 50 x 12                                  | 35  | 40                                | 1.969 x 0.472                              | 1.378   | 580                               |
| 60 x 10                                  | 45  | 16                                | 2.362 x 0.394                              | 1.772   | 232                               |
| 60 x 12                                  | 45  | 25                                | 2.362 x 0.472                              | 1.772   | 363                               |
| 60 x 15                                  | 45  | 40                                | 2.362 x 0.591                              | 1.772   | 580                               |
| 63 x 10                                  | 48  | 16                                | 2.480 x 0.394                              | 1.890   | 232                               |
| 63 x 12                                  | 48  | 25                                | 2.480 x 0.472                              | 1.890   | 363                               |
| 63 x 15                                  | 48  | 40                                | 2.480 x 0.591                              | 1.890   | 580                               |
| 80 x 12                                  | 65  | 16                                | 3.150 x 0.472                              | 2.559   | 232                               |
| 80 x 15                                  | 65  | 25                                | 3.150 x 0.591                              | 2.559   | 363                               |
| 80 x 20                                  | 65  | 40                                | 3.150 x 0.787                              | 2.559   | 580                               |
| 100 x 15                                 | 80  | 16                                | 3.937 x 0.591                              | 3.150   | 232                               |
| 100 x 20                                 | 80  | 25                                | 3.937 x 0.787                              | 3.150   | 363                               |
| 100 x 25                                 | 80  | 40                                | 3.937 x 0.984                              | 3.150   | 580                               |
| 125 x 15                                 | 100   | 10                                | 4.921 x 0.591                              | 3.937   | 145                               |
| 125 x 20                                 | 100   | 16                                | 4.921 x 0.787                              | 3.937   | 232                               |
| 125 x 25                                 | 100   | 25                                | 4.921 x 0.984                              | 3.937   | 363                               |
| 135 x 25                                 | 110   | 25                                | 5.315 x 0.984                              | 4.331   | 363                               |
| 150 x 20                                 | 125   | 10                                | 5.906 x 0.787                              | 4.921   | 145                               |
| 150 x 25                                 | 125   | 16                                | 5.906 x 0.984                              | 4.921   | 232                               |
| 150 x 30                                 | 125   | 25                                | 5.906 x 1.181                              | 4.921   | 363                               |
| 175 x 20                                 | 150   | 10                                | 6.890 x 0.787                              | 5.906   | 145                               |
| 175 x 25                                 | 150   | 16                                | 6.890 x 0.984                              | 5.906   | 232                               |
| 175 x 30                                 | 150   | 25                                | 6.890 x 1.181                              | 5.906   | 363                               |
| 200 x 20                                 | 175   | 8                                 | 7.874 x 0.787                              | 6.890   | 116                               |
| 200 x 25                                 | 175   | 10                                | 7.874 x 0.984                              | 6.890   | 145                               |
| 200 x 30                                 | 175   | 16                                | 7.874 x 1.181                              | 6.890   | 232                               |
| 250 x 25                                 | 225   | 8                                 | 9.843 x 0.984                              | 8.858   | 116                               |
| 250 x 30                                 | 225   | 10                                | 9.843 x 1.181                              | 8.858   | 145                               |
| 265 x 30                                 | 240   | 8                                 | 10.433 x 1.181                             | 9.449   | 116                               |

|                              |                             |  |
|------------------------------|-----------------------------|--|
| Bending strength             | ≥ 160 N/mm <sup>2</sup>     | 23,000 psi   |
| Surface compressive stress   | ≥ 100–140 N/mm <sup>2</sup> | 14,500–20,000 psi  |
| Parallelism                  | ≤ 0.20 mm                   | 0.008 inches   |
| Flatness <sup>1)</sup>       | Diameter:                   | up to 100 mm ≤ 0.05<br>above 100 to 150 mm ≤ 0.08<br>above 150 to 200 mm ≤ 0.12<br>above 200 mm ≤ 0.15 |
| Thermal shock resistance     | ΔT 230 °C                   |  |
| Max. permissible temperature | 300 °C                      | 572 °F   |
| Protected with mica          | 320 °C                      | 608 °F   |

## Dimensional tolerances acc. to DIN 7080

### Diameter

|               |          |
|---------------|----------|
| up to 150 mm  | ± 0.5 mm |
| 150 to 200 mm | ± 0.8 mm |
| above 200 mm  | ± 1.0 mm |

### Thickness

|             |                      |
|-------------|----------------------|
| up to 20 mm | + 0.50 mm /– 0.25 mm |
| above 20 mm | + 0.80 mm /– 0.40 mm |