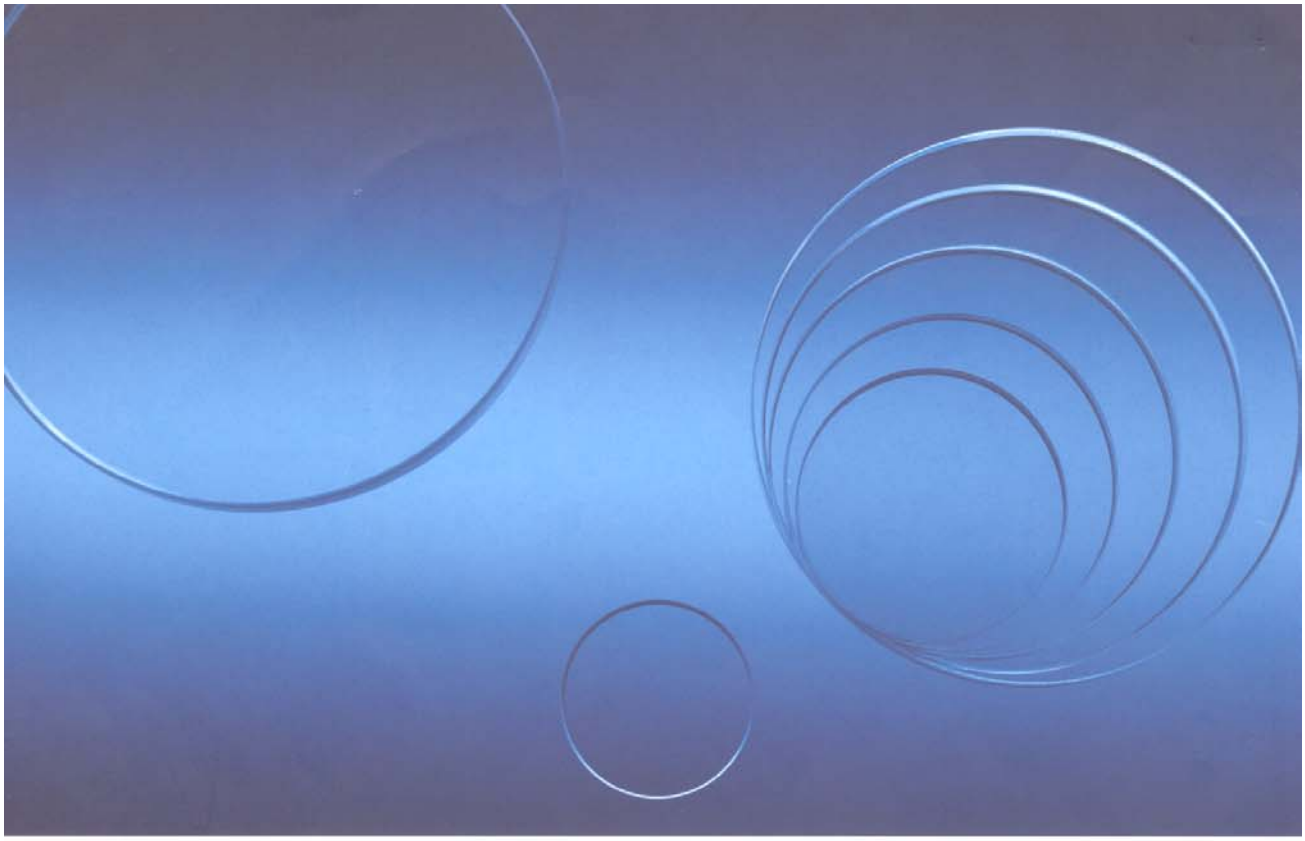
# SIGHT GLASS – Borosilicate Material



## Sight glasses to DIN 7080



Our delivery programme includes all sizes given in the DIN standard and further sizes to provide a complete programme. If you cannot find your sight glass here please contact us – we can do a lot.

### Mechanical properties

- Tensile bending strength: ≥160 N/mm²
- Surface pressure-prestressing: ≥100 N/mm²

The thermal prestressing increases the existing tensile bending strength by a factor of at least 2.5. This means that the safety required by DIN 7080 for sight glasses is guaranteed.

### Thermal properties and working conditions

- Maximum working temperature: 280 °C

Can also be used up to 300°C if special precautions are taken such as replacing the sight glasses after a maximum of 300 hours use at more than 280°C or if they are protected by a mica shield.

- Resistance to thermal shock: $\Delta T$ min. 265 °C

### Versions

- Surfaces: polished
- Lateral surface: press-moulded or ground
- Edges: chamfered

### Dimensional tolerances to DIN 7080

- Diameter ($d_1$):

| | |
|---|---|
| $d_1 \leq 125$ mm | ± 0.5 mm |
| 125 mm < $d_1 \leq 200$ mm: | ± 0.8 mm |
| $d_1 > 200$ mm | ± 1.0 mm |

- Thickness (s):

| | |
|---|---|
| $s \leq 20$ mm | +0.5 mm / -0.25 mm |
| $s > 20$ mm | +0.8 mm / -0.40 mm |

- Flatness (e):

| | |
|---|---|
| $d_1 \leq 100$ mm | 0.05 mm |
| 100 mm < $d_1 \leq 150$ mm | 0.08 mm |
| 150 mm < $d_1 \leq 200$ mm | 0.12 mm |
| $d_1 > 200$ mm | 0.15 mm |

- Parallelism (p):

| | |
|---|---|
| $d_1 \leq 100$ mm | 0.20 mm |
| 100 mm < $d_1 \leq 200$ mm | 0.25 mm |
| $d_1 > 200$ mm | 0.30 mm |

### Calculation of glass thickness

The glass thickness is calculated according to DIN 7080 even for those sizes which are supplementary to the DIN standard. The Timoshenko equation is used as the basis:

$$s \geq c \cdot d_m \sqrt{\frac{p \cdot S}{10 \cdot \sigma}}$$

s = glass thickness in mm

$d_m = \frac{d_1 + d_2}{2}$ in mm

p = max. permissible working pressure in bar

S = safety factor

$\sigma$ = min. pressure prestressing value in N/mm²

c = calculation constant 0.55

Sole Agent :
**LKS (M) SDN. BHD.**
No.15, Jln Anggerik Mokara 31/63, Kota Kemuning, 40460 Shah Alam, Selangor, Malaysia.
Tel: 603-5124 0822 Fax: 603-5124 0222 E-mail: lks5415@tm.net.my / info@lkssb.com.my