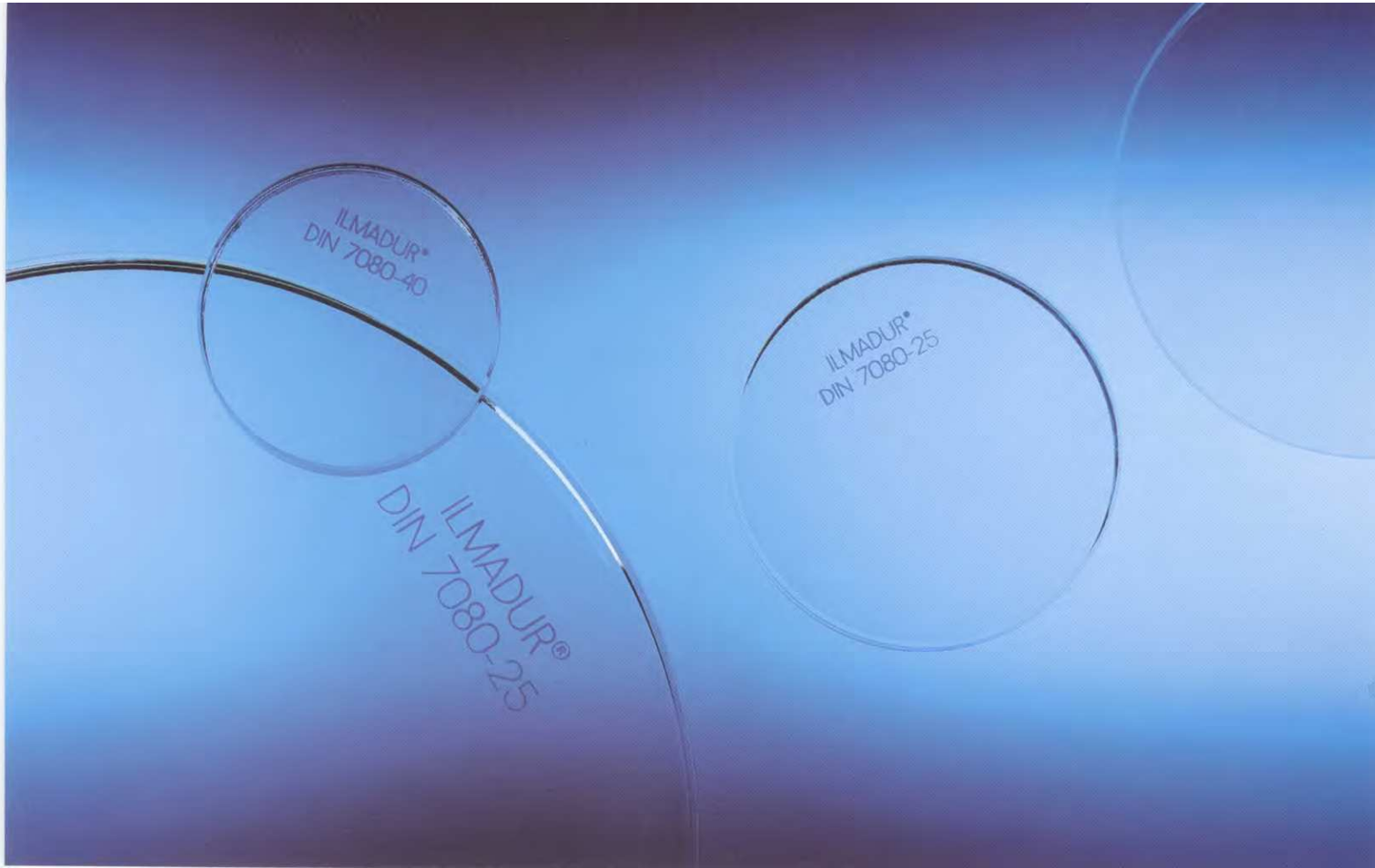




Sight glasses to DIN 7080

10

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

- **Max. working temperature: 300 °C**
Temperatures exceeding > 280 °C may cause the induced compressive stress to be relieved, reducing its durability.

The maximum permissible load depends on the actual field of application (pressure, temperature, kind of medium, kind of frame).

- Resistance to thermal shock:
Δ T min. 265 K

Versions

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

Dimensional tolerances to DIN 7080

- Diameter (d₁):

d ₁ ≤ 125 mm	± 0.5 mm
125 mm < d ₁ ≤ 200 mm:	± 0.8 mm
d ₁ > 200 mm	± 1.0 mm
- Thickness (s):

s ≤ 20 mm	+0.5 mm / -0.25 mm
s > 20 mm	+0.8 mm / -0.40 mm
- Flatness (e):

d ₁ ≤ 100 mm	0.05 mm
100 mm < d ₁ ≤ 150 mm	0.08 mm
150 mm < d ₁ ≤ 200 mm	0.12 mm

d ₁ > 200 mm	0.15 mm
■ Parallelism (p):	
d ₁ ≤ 100 mm	0.20 mm
100 mm < d ₁ ≤ 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

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

p = max. permissible working pressure in bar

S = safety factor

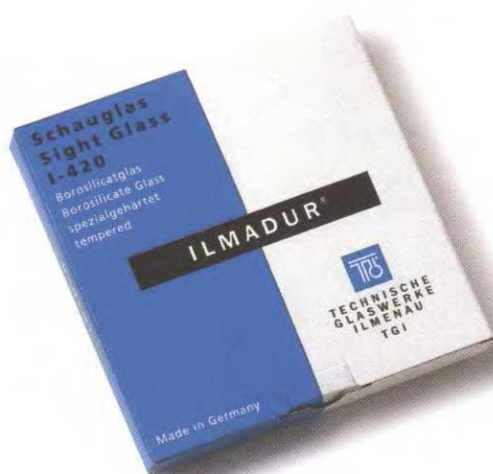
σ = min. pressure prestressing value in N/mm²

c = calculation constant 0.55

Sight glasses of Borosilicate Glass I-420

Dimensions d ₁ x s mm	Gasket inside diameter d ₂ mm	Max working pressure bar	Catalogue number	Dimensions d ₁ x s mm	Gasket inside diameter d ₂ mm	Max working pressure bar	Catalogue number
30 x 15 *	20	200	42 610 001	95 x 15 *	75	16	42 610 075
35 x 7 *	25	25	42 610 005	100 x 10 *	80	7	42 610 080
40 x 12 *	30	50	42 610 010	100 x 15	80	16	42 610 083
45 x 10	32	40	42 610 015	100 x 20	80	25	42 610 085
45 x 12	32	50	42 610 016	100 x 25	80	40	42 610 086
50 x 10	35	25	42 610 020	125 x 15	100	10	42 610 090
50 x 12	35	40	42 610 021	125 x 20	100	16	42 610 092
55 x 10 *	40	25	42 610 025	125 x 25	100	25	42 610 094
60 x 10	45	16	42 610 030	125 x 30 *	100	40	42 610 096
60 x 12	45	25	42 610 031	135 x 25	110	25	42 610 097
60 x 15	45	40	42 610 035	150 x 15 *	125	8	42 610 101
63 x 8 *	48	8	42 610 040	150 x 20	125	10	42 610 103
63 x 10	48	16	42 610 041	150 x 25	125	16	42 610 105
63 x 12	48	25	42 610 042	150 x 30	125	25	42 610 107
63 x 15	48	40	42 610 045	175 x 20	150	10	42 610 110
70 x 12 *	55	16	42 610 050	175 x 25	150	16	42 610 112
70 x 15 *	55	25	42 610 055	175 x 30	150	25	42 610 115
80 x 10 *	65	10	42 610 060	200 x 20	175	8	42 610 120
80 x 12	65	16	42 610 061	200 x 25	175	10	42 610 122
80 x 15	65	25	42 610 062	200 x 30	175	16	42 610 125
80 x 20	65	40	42 610 063	250 x 25	225	8	42 610 130
90 x 10 *	70	8	42 610 070	250 x 30	225	10	42 610 132
				265 x 30	240	8	42 610 134

* supplementary to DIN



We supply sight glasses to DIN 7080 and Ö-Norm M7353.