Processing options for special glass

SCHOTT Technical Glass Solutions GmbH
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Whether as cover glass for mobile devices, inspection glass in modern industrial facilities or carrier material in the semiconductor industry – the versatility and flexibility of special glass from SCHOTT Technical Glass Solutions is unrivaled. A wide range of processing and finishing options allow customer-specific adaptations for numerous applications. The special glass can be further processed within standard dimensions in accordance with customer requirements, from single part to series production. In addition to simple cut to size parts, this can include edge finishing, drilling, higher breaking strength, laminated glass production and other post-processing options.

CNC shape cutting
Production of simple and complex contours using different cutting methods.
In general, the cut edge is broken smooth. Shapes requiring higher precision and complex geometries are possible with water jet cut edges.

Cut edges
Waterjet-cut edges
Laser-cut edges

Special shapes according to customer-specific drawings are possible. Please contact us for further information on formats, dimensions and tolerances.

CNC-edge processing
The improvement of edge quality through selected processing methods and the use of special tools also enables a better integration of the components from different applications and increases glass strength.

Thickness (mm) Size min (mm) Size max (mm) Tolerances
0.4 – 25.4 10 x 10 1.200 x 1.200 +/- 0.3 to +/- 5mm (higher tolerances for greater thicknesses); greater thicknesses on request
1.1 – 21.0 50 x 50 2.200 x 4.200

The edges can be cut, ground and polished.

Special shapes according to customer-specific drawings are possible. Please contact us for further information on formats, dimensions and tolerances.
**Drilling**
Splinter-free insertion of various shapes and holes in glass surface by means of waterjet processing, milling and drilling.

![Drilling on both sides with a horizontal drilling machine](image1)

![Top view of drill holes](image2)

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Size min (mm)</th>
<th>Size max (mm)</th>
<th>Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,3 – 5</td>
<td>30 x 30</td>
<td>380 x 580</td>
<td>± 0,05 – ± 0,1 mm</td>
</tr>
<tr>
<td>3,0 – 25,4</td>
<td>100 x 100</td>
<td>1.690 x 3.200</td>
<td>± 0,50 – ± 1,0 mm</td>
</tr>
</tbody>
</table>

**Chemical & thermal toughening**
Significant increase in breaking strength of processed glass through thermal and chemical toughening.

![Thermal toughening](image3)

![Chemical toughening](image4)

<table>
<thead>
<tr>
<th>Type of toughening</th>
<th>Size (mm)</th>
<th>Thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal</td>
<td>min 150 x 230, max 1.680 x 3.150</td>
<td>3,3 – 15, 6,0 – 12</td>
</tr>
<tr>
<td>Chemical</td>
<td>min 10 x 10, max 1.000 x 2.000</td>
<td>0,3 – 16</td>
</tr>
</tbody>
</table>

**Laminated glass production**
Manufacture of glass laminates consisting of at least two glass panes and bonded together by an adhesive interlayer to guarantee special safety requirements.

![Glass laminate consisting of several panes of special glass](image5)

<table>
<thead>
<tr>
<th>Laminate type</th>
<th>Size min (mm)</th>
<th>Size max (mm)</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full laminate</td>
<td>200 x 300</td>
<td>1.600 x 3.300</td>
<td>No restriction</td>
</tr>
</tbody>
</table>

**Laser marking**
Glass panes can be marked individually by laser.

![Laser marking](image6)

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Size min (mm)</th>
<th>Size max (mm)</th>
<th>Max. label size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 – 20</td>
<td>200 x 200</td>
<td>1.800 x 3.000</td>
<td>54 x 54</td>
</tr>
</tbody>
</table>

Further data and information available upon request.