CLT 80G:
High-precision laser glass processing for up to Gen 8

The CLT 80G laser glass processing tool is designed for 24/7 manufacturing in an industrial environment, supporting a glass substrate size of up to 2,300 mm x 2,500 mm. The Corning Laser Technologies systems are developed in close cooperation with the speciality glass experts at Corning. Their material science and optics knowledge adds unique advantages to this laser glass cutting process.

Using ultra-short laser pulses, the CLT 80G cuts by material disassociation rather than ablation. The result is a very low surface roughness, increased as-cut edge strength and faster throughput. The Corning Laser Technologies process enables cutting fully strengthened glass, Corning® Gorilla® glass, un-strengthened glass, as well as other transparent glass and crystalline materials.

Key Benefits
- Free-form, net-shape or near net-shape cutting at up to 1m/s
- Cuts: curved, straight, perpendicular and angled lines as well as holes and slots
- Cuts glass from 0.4mm up to 6 mm in thickness
- Automatic/touch-free separation process
- Eliminates fluids and tooling required in traditional processing methods

Applications
Advanced multi purpose and flexible laser machining system for:

**Processing Glass Substrates**
- Automotive windshields, roofs
- Automotive windshields, roofs, sidelites, backlites
- Automotive interior glass

This system is also extremely well suited for different kinds of Micro Material Processing, such as:

**Other Materials**
- Consumer electronics
- Architectural glass
- Display technologies
- Coated substrates
- Thin glass
- Strengthened and non-strengthened glass
- Electronic components
- Cutting of OLED, PI, wafer, plastic, and other brittle materials.
## CLT 80G Technical Specifications

### Mechanics
- Machine base and vertical structure are made from solid granite blocks
- X-Y single or double gantry design available
- Z-axis motorized (CNC-axis)
- Machine optimized for high precision processing at high speed
- Class 1 laser safety chamber

### Axes
<table>
<thead>
<tr>
<th>Axis</th>
<th>Range</th>
<th>Motor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis</td>
<td>1,950 - 2,350 mm</td>
<td>Drive: linear motor ¹</td>
</tr>
<tr>
<td>Y-axis</td>
<td>2,500 - 2,950 mm</td>
<td>Drive: linear motor ²</td>
</tr>
<tr>
<td>Z-axis</td>
<td>100 mm</td>
<td>Drive: rotation motor ³</td>
</tr>
</tbody>
</table>

- Max. traverse speed x/y-axis: up to 1,000 mm/s (pattern dependent)
- Max. acceleration: up to 10 m/s² (pattern dependent)
- Positioning accuracy: < 10 µm per 200 mm travel ²  
- Repeatability: < 2 µm ³

### CNC-Control
- TwinCat 3 CNC control for all machine functions (G-code)

### Operator Interface
- Based on Microsoft Windows 10 with CLT HMI

### Machine Vision
- Integrated in standard configuration for fiducial recognition

### Loading / Unloading
- Manual loading of substrates / unloading of parts

### Options
- Automation available for loading and unloading (e.g. tilt table, parts picking unit)
- Glass waste management
- MES connection

### Electrical Supply
- Rating: 400 Volts, 3Ph+N+PE, 50/60 Hz (transformer available)
- Power consumption (peak/average): 17.0 - 19.0 kVA / 15.3 - 17.1 kVA ³

### Cooling
- Rating (peak/average): 9.3 - 14.6 kW/ 6.0 - 10.4 kW ³
- Consumption: min. 28 l/min, max. 36 l/min ³

### Compressed Air
- Supply pressure: min. 6 bar / max. 8 bar ³
- Consumption: typ. 500 - 1,000 Nl/min

### Exhaust Air from Machine Enclosure
- Volume: min. 3,000 m³/h exhaust air ³

### Exhaust Air from Vacuum Production
- Volume: up to 800 m³/h exhaust air ³

### Machine Vacuum
- No requirement at customer site
- Will be provided by a side channel blower inside the equipment

### Machine Size and Weight
- Size: Width x Depth x Height (³): 14,000 x 4,150 x 2,400 mm ³
- Weight: approx. 13,500 kg ³

### Temperature
- 22 °C, Deviation +/- 2 °C, non condensing

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¹ Nominal travel range. Effective travel range may be reduced by use of multiple process heads and/or cameras.
² Environmental controlled room required.
³ These values may vary, depending on the tool configuration, e.g. type of laser source.
Specifications are subject to change without notice.