CLT 66G:
High-precision laser glass processing for up to Gen 6

The CLT 66G laser glass processing tool is designed for 24/7 manufacturing in an industrial environment, supporting a glass substrate size of up to GEN6 transferring into 1,500 mm x 1,850 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 66G cuts by material disassociation rather than ablation. The result is a very low surface roughness, increased as-cut edge strength and yield.

The Corning Laser Technologies process enables cutting fully strengthened glass, Corning® Gorilla® glass, unstrengthened 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 (depending on contour)
- Cuts: curved, straight, perpendicular and angled lines as well as holes and slots (depending on tool setup)
- Cuts glass from 0.4mm up to 6 mm in thickness
- Automatic/touch-free separation process (material dependend)
- 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, sidelites, backlites
- Automotive interior glass
- Consumer electronics
- Architectural glass
- Display technologies
- Coated substrates
- Thin glass
- Strengthened and non-strengthened glass
- Electronic components

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

Other Materials
- Cutting of OLED, PI, wafer, ceramic, plastic, and other brittle materials.
## CLT 66G 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>Travel Range</th>
<th>Drive Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis</td>
<td>1,700 mm</td>
<td>Linear motor 1)</td>
</tr>
<tr>
<td>Y-axis</td>
<td>2,000 mm</td>
<td>Linear motor 1)</td>
</tr>
<tr>
<td>Z-axis</td>
<td>80 mm</td>
<td>Rotation motor 1)</td>
</tr>
</tbody>
</table>

### Accuracy
- Pattern accuracy
- Accuracy: $< +/- 100 \, \mu m$ for parts cut out of a GEN6 substrate 2)

### 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 Power consumption
  - (peak/ average) 400 Volts, 3Ph+N+PE, 50/60 Hz (transformer available)
  - 23 kVA/ 15 kVA 3); 13 kW/ 9 kW 1)

### Cooling
- Rating (peak/ average)
  - Consumption 7.0 kW/ 4.0 kW 3)
  - min. 15 l/min, max. 25 l/min 3)

### Compressed Air
- Supply pressure Consumption
  - min. 6 bar / max. 8 bar 3)
  - typ. 560 NL/min

### Exhaust Air from Machine Enclosure
- Volume
  - min. 450 m³/h exhaust air 3)

### Exhaust Air from Process Head
- Volume
  - up to 200 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
- Dimensions, including electrical/ supporting cabinets, load/ unload units and waste glass management
  - Size: Width x Depth x Height 3)
  - Weight 12,300 x 5,605 x 2,900 mm
  - approx. 11,000 kg (depending on configuration)

### Temperature
- 20 °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.

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