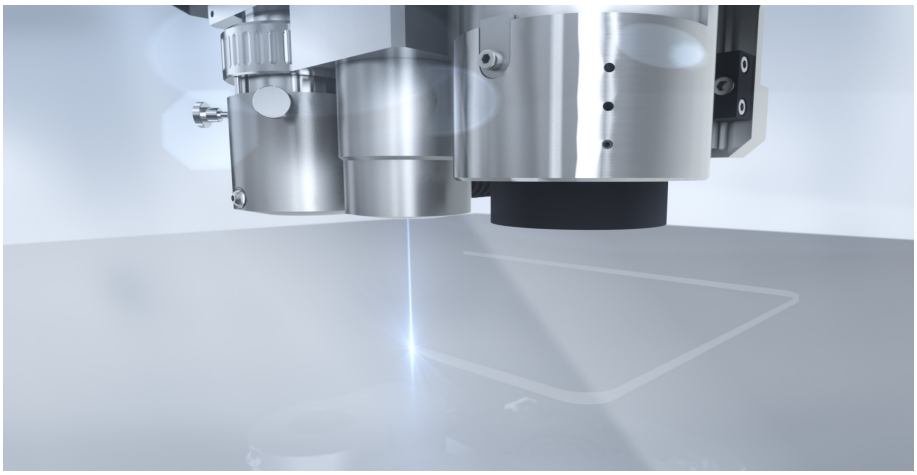
CORNING
Laser Technologies

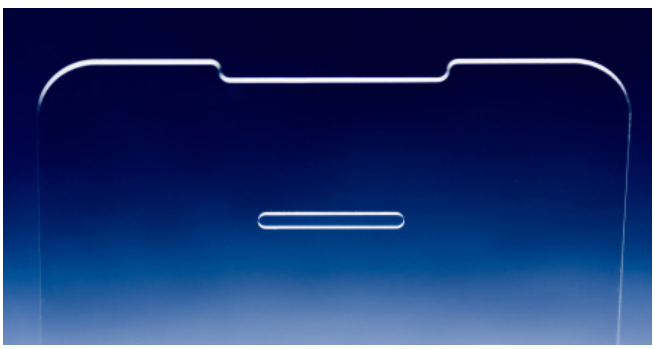


CLT 66G

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 transfering 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, 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 (depending on contur)
- 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 de-pendend)
- Eliminates fluids and tooling required in traditional processing methods

Photo © Corning Incorporated

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 Material Processing, such as:

Other Materials

- Cutting of OLED, PI, wafer, ceramic, plastic, and other brittle materials.

CLT 66G Technical Specificationen

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	X-axis travel 1,300 - 1,550 mm Y-axis travel 2,000 - 2,400 mm Z-axis travel 100 mm max. traverse speed x/y-axis max. acceleration Positioning accuracy Repeatability	Drive: linear motor [1] Drive: linear motor [1] Drive: rotation motor [1] up to 1,000 mm/s (pattern dependent) up to 10 m/s2 (pattern dependent) < 10 µm per 200 mm travel [2] < 2 µm [2]
CNC-Control	TwinCat 3 CNC control for all machine functions (G-code)	
Operating 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 Volt, 3Ph+N+PE, 50/60 Hz (transformator available) 15.0 - 22.0 kVA / 13.5 - 19.8 kVA [3]
Cooling	Rating (peak/ average): Consumption:	9.3 - 14.6 kW/ 6.0 - 10.4 kW [3] min. 28 l/min; max. 36 l/min [3]
Compressed Air	Supply pressure: Consumption:	min. 6 bar / max. 8 bar [3] typ. 500 - 1,000 Nl/min
Exhaust Air from Machine Enclosure	Volume:	min. 3,000 m^3/h exhaust air [3]
Exhaust Air from Vacuum Production	Volume:	up to 800 m^3/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: Weight:	11,460 x 3,400 x 2,400 mm [3] approx. 10,500 kg [3]
Temperature	22 °C, Deviation +/- 2 °C , non condensing	

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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