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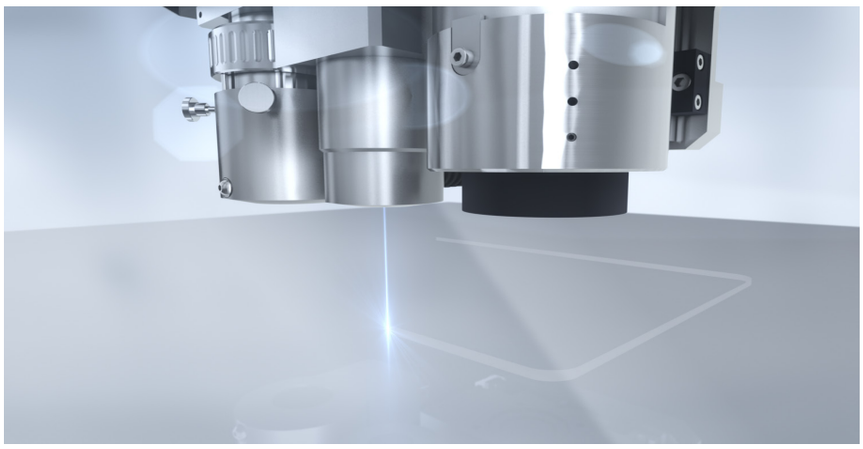

CLT 80G:

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 2300 mm x 2500 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.

Applications

Advanced multi purpose and flexible laser machining system for:

Processing Glass Substrates

- Automotive windshields, roofs
- Automotive windshields, roofs, sidelites, backlites
- Automotive interior glass

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 <50µm up to 6 mm in thickness
- Automatic/touch-free separation process
- Eliminates fluids and tooling required in traditional processing methods
- Consumer electronics
- Architectural glass
- Display technologies
- Coated substrates
- Thin glass
- Strengthened and non-strengthened glass
- Drilling of through holes and vias
- 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 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	X-axis range 2300 mm Y-axis range 2500 mm Z-axis range 100 mm max. traverse speed x/y-axis max. acceleration	Drive: linear motor [1] Drive: linear motor [1] Drive: rotation motor [1] up to 1000 mm/s (pattern dependent) up to 10 m/s² (pattern dependent)
Accuracy	Pattern accuracy	< +/- 100 µm for parts cut out of a GEN8 substrate [2] Accuracy depends on pattern geometry and process speed
CNC-Control	TwinCat 3 CNC control for all machine functions (G-code)	
Operator Interface	Based on Microsoft Windows 7 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. 20 l/min, max. 25 l/min [3]
Compressed Air	Supply pressure Consumption	min. 6 bar / max. 8 bar [3] typ. 80 l/min, peak: 150 std. liter/min at 50% duty cycle
Exhaust Air from Machine Enclosure	Volume	min. 450 m³/h [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	 14.600 x 6.500 x 2.700 mm approx. 13.500 kg (depending on configuration)
	Dimensions, including service area Size: Width x Depth x Height [3]	 17.600 x 8.500 x 4.000 mm
Temperature	18 °C min., 22 °C max., non condensing	Deviation +/- 2 °C

[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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