

Laser Cutting System AC 300 F

The new dimension in laser cutting

Draw – convert – cut:

From basic geometric forms to complex, ornate jewelry items made of precious metal – with the flexible cutting system AC 300 F you can cut sheets up to 3 mm in thickness automatically, quickly and accurately.

The CAD-generated cutting paths are converted within minutes and can be cut directly – ideal also for prototypes and small series.

With a small footprint of 1,340 mm × 1,180 mm, the compact system offers a spacious work area of 500 mm × 500 mm, where plates of arbitrary lengths and widths of up to 500 mm can be processed.

The fully automatic cutting process takes place in the closed, laser-safe working chamber and can be observed through a large protection window. The system is operated via the intuitive touch screen.

The nesting function shines especially in mass production. This function provides optimized use of materials, preventing unnecessary waste of material. Precious metal residues are collected and can be reused later.

Depending on your needs, fiber laser sources with 150 – 300 W of laser power are available.



System Components

- Fiber laser
- Cutting head
- Closed, laser-tight working chamber (laser class 1) with pneumatic collet chucks for plate fixation, illumination, extraction duct
- Drawer beneath the working chamber to collect precious metal residues
- Touch screen
- Camera integrated into cutting jet, for process monitoring and adjustment

Options

- CAD/CAM module (PC-based)
- Fume extraction

Technical data

External dimensions	(W × D × H)	1343 × 1180 × 1341 (or 1,960) mm
	Footprint	1343 × 1,180 mm
	Weight	approx. 913 kg
Electrical connection	3-phase	3 × 400 V, 50 – 60 Hz, 3 × 10 A, 3 kW + neutral conductor and grounding conductor
Laser	Laser source	Fiber laser
	Wavelength	1,070 nm (invisible, near-IR)
	Pilot laser	630 – 680 nm (≤ 1 mW)
	Laser protection class	1
	Average power	250 / 300 W (CW ¹) 150 / 300 W (pulsed)
	Peak pulse power	1,500 / 3,000 W
	Pulse duration	0.2 ms – CW ¹
	Pulse energy	15 / 30 W
	Laser cooling	Pressure cooling
	Cutting	Focal spot Ø / Cutting width
Focal distance		f = 56 mm
Work area		500 × 500 mm
Maximum sheet size (W × D × H)		500 × <i>arbitrary</i> ² × 3 mm
Cutting speed ³		3 m/min
Movement system	Precision ³ (at 1 m measurement length):	
	Smallest programmable increment	0.001 mm
	Positional deviation	0.05 mm max.
	Average positioning scatter	0.03 mm max.
Miscellaneous	Cutting gas supply	Included
	Fume extraction	Externally connectable
	Software CAD/CAM module	PEPS by Camtec / cncCUT by IBE

¹ CW = continuous wave

² A lead-through on the rear side of the system enables processing of sheets of any length.

³ According to VDI / DGQ 3441 – Depending on material, pretreatment, material thickness and sheet size.

