BySmart Fiber

The smart access to fiber laser technology

Customer benefits

- Outstanding cutting performance for high parts output and excellent cutting quality with thin to medium sheet metal

- Wide range of applications. In addition to steel, stainless steel, and aluminum, non-ferrous metals can also be processed in excellent quality

- High ease-of-use and intuitive process control enable a fast access to fiber laser technology

- More profit per part. Fast cutting processes combined with comparatively low operating costs and low maintenance requirements

- Flexible process solutions. Bystronic software and automation solutions optimally integrate the BySmart Fiber into the requirements of the sheet metal processing environment

1 Cutting head
2 Nozzle changer
3 Operator panel with ByVision Cutting

	BySmart Fiber 3015	BySmart Fiber 4020
Nominal sheet size	3,000 × 1,500 mm	4,000 × 2,000 mm
Max. simultaneous positioning speed	140 m/min	140 m/min
ByVision Cutting operation and manual control unit	▪	▪

BySmart Fiber
Technical Data

	BySmart Fiber 3015	BySmart Fiber 4020
Length	10,495 mm	12,765 mm
Width	6,903 mm	7,535 mm
Height	2,880 mm	2,880 mm
Nominal sheet size (X)	3,000 mm	4,000 mm
Nominal sheet size (Y)	1,500 mm	2,000 mm
Cutting area (X)	3,106 mm	4,120 mm
Cutting area (Y)	1,582 mm	2,110 mm
Cutting area (Z)	100 mm	100 mm
Max. positioning speed parallel axis X/Y	100 m/min	100 m/min
Max. simultaneous positioning speed	140 m/min	140 m/min
Bilateral repeatability of positioning of one axis R (following ISO 230-2:2014(E))	0.05 mm	0.05 mm
Averaged, bilateralposition deviation of one axis M (following ISO 230-2:2014(E))	0.1 mm	0.1 mm
Edge detection accurancy (±)	0.5 mm	0.5 mm
Max. workpiece weight	1,100 kg	1,900 kg
Maximum allowed workpiece weight on both shuttle tables	1,850 kg	3,200 kg
Machine weight (without exhaust, chiller and conveyor)	11,800 kg	14,800 kg
Table changeover time	27 s	36 s
Operation	ByVision Cutting Touchscreen and manual control unit	

Laser source	**Fiber 2000**	**Fiber 3000**	**Fiber 4000**	**Fiber 6000**	**Fiber 8000**	**Fiber 10000**
Power	2,000 W	3,000 W	4,000 W	6,000 W	8,000 W	10,000 W
Range of adjustment	200–2,000 W	300–3,000 W	400–4,000 W	600–6,000 W	800–8,000 W	1,000–10,000 W
Wavelength	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber
Steel (max. cutting sheet thickness) *	12 mm	20 mm	20 mm	25 mm	25 mm	25 mm
Steel (with option BeamShaper) *					30 mm	30 mm
Stainless steel (max. cutting sheet thickness) *	6 mm	12 mm	15 mm	30 mm	30 mm	30 mm
Aluminum (max. cutting sheet thickness) *	8 mm	12 mm	20 mm	30 mm	30 mm	30 mm
Brass (max. sheet thickness) *	4 mm	6 mm	8 mm	15 mm	15 mm	15 mm
Copper (max. sheet thickness) *	3 mm	6 mm	8 mm	12 mm	12 mm	12 mm
Total electric consumption of system BySmart Fiber 3015 **	14 kW	14 kW	15 kW	17 kW	18 kW	18 kW
Total electric consumption of system BySmart Fiber 4020 **		14 kW	15 kW	17 kW	18 kW	18 kW

* In order to cut the maximum thicknesses, the following conditions must be met:
  - optimally maintained and adjusted laser cutting systems
  - the materials must be of the quality specified by Bystronic (laser materials)

** Entire system with exhaust and chiller: Electrical consumption data shows an average value based on 4 reference cutting plans of mild steel between 1–10 mm thickness

The right to make changes to dimensions, construction, and equipment is reserved. ISO-9001-certified.

The technical data can vary in the different countries, according to local security rules and configuration of the machine.

Fiber Warranty
Premium

Modern sheet metal processing without high-performance software is unimaginable these days. BySoft 7 offers a comprehensive range of functions and is still easy to operate. With BySoft 7, the user can quickly and easily design tailored parts and create cutting plans and bending programs with the push of a button. On top of that, scheduling and manufacturing monitoring is easy. Planning of changes in production schedule are effortless.

BySoft 7

Modular CAD/CAM software with 2D and 3D CAD as well as extensive functions for scheduling and monitoring manufacturing processes

Customer benefits

- Existing drawings and models can be input, edited, and processed easily

- Perfect nesting of parts results in reduced costs and full utilization of raw material. Also for tubes and profiles.

- One-click creation of cutting plans and bending programs, that is the most loved feature of BySoft 7.
  The correct cutting technology is automatically set and the bending process is automatically simulated and monitored

- Scheduling and monitoring manufacturing processes

- All machine and job data are always available

- Connection to ERP/PPS systems

ByVision Cutting

With ByVision Cutting, laser cutting is as easy as using your smartphone. The user interface is based on a touchscreen. Control the entire cutting process with a few swipes of your finger: Sort the job list, assign cutting parameters, and define automation mode. Then start the process, let your laser do the work. In addition, ByVision Cutting also supports users with its extensive database, which includes parameters for all common sheet types and cutting technologies.

Available for: ByStar Fiber, BySmart Fiber