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LASER SHEET CUTTING SYSTEM LS5

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LS5

Investing with an eye to the future...

LS5 is a sheet laser cutting machine created to fulfill a specific need: providing a modular, fully automated high-performance system which can be expanded to implement tube cutting functions later in time. The system is provided with a CO₂ laser source or state-of-the-art fiber laser depending upon Customer's application requirements, thus offering optimum processing capabilities. The **LS5** in sheet - only configuration is an advantageous investment because it satisfies an immediate requirement and allows you to access to the tube cutting sector at a later date making it still more advantageous.

The pallet changer on **LS5** can be positioned in two positions depending upon the space availability: on the left side or on the rear side of the machine. Both configurations are fully functional and have the same future expandability for integration of other functional modules (tube cutting, automatic sheet loader, sheet storage tower etc.).

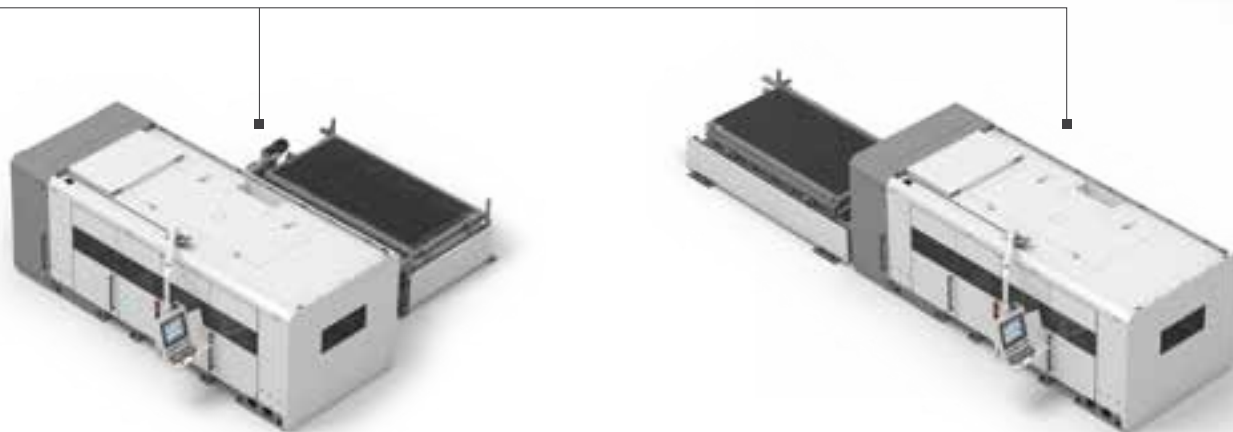
LS5

- modularity and expandability for the future
- compact layout that can be configured to suit available space
- choice of the laser: CO₂ or Fiber
- easy and wide access to the cutting area

Sheets are loaded by a fully automated pallet changer device. In this manner, parts can be picked and new blank sheets can be loaded entirely in the background.



The console is suspended on a pivoting arm. It can be positioned and oriented as required along the entire front side of the machine. In this way, operators are facilitated during the routine day-to-day adjustments, cleaning and preventive maintenance.



LS5

Ergonomics

Efficient fumes extraction

Four wide openings under the pallet in the working area are provided to ensure optimal extraction of the fumes and dust generated during cutting operations. The mechanical design of the pallet ensures maximum suction efficiency thus keeping the cutting area free of fumes and cutting dust.

Easy scrap management

Four scrap collection trays positioned under the cutting area and accessible from the operator side are used to collect the scrap. These trays are mounted on wheels for easy handling.

Front openings

Large front windows provide convenient viewing of the entire pallet working area and allow to take action promptly for checks on production.

Visibility and control

The position of the large 19" touch screen can be adjusted as desired along the front side of the machine to improve visibility and cutting process control.



COMPACT DIMENSIONS

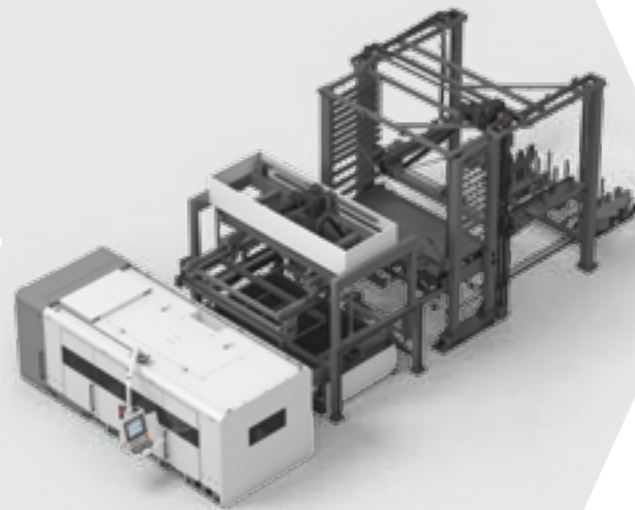
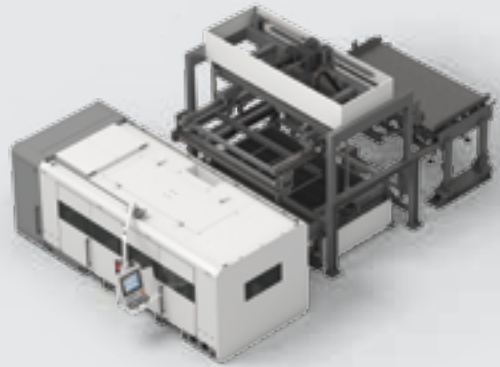
The machine is compact and integrates all electric components onboard to minimize space and installation time.



LS5

Expandable

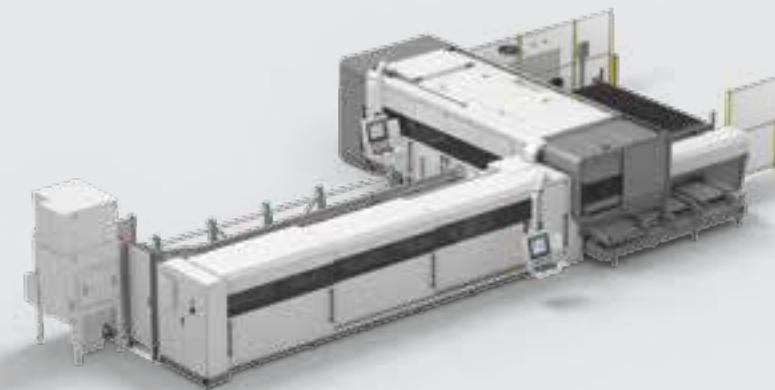
THE WORLD OF SHEET PROCESSING



An expansion option is provided by the sheet loading and processed sheet pallet changer system. The automatic loading and unloading system can be integrated at a later time and is available for all the machine configurations.

Further automation and flexibility can be achieved by adding one or two sheet storage towers on loading and unloading side. This opens the way to full automatic production.

THE WORLD OF TUBE PROCESSING



By integrating the tube cutting module at a later time you can expand system potentials to the maximum: a single laser source and a single cutting head is capable of switching from sheet to tube processing (and vice versa) immediately.

Parts up to 4500 mm (15') long can be unloaded in controlled manner on the front side of the tube line. Various collection options are available to facilitate part picking.



LS5

CO₂ or fiber: take your pick!



Optimal cutting parameters are set in fully automatic manner according to material and thickness.

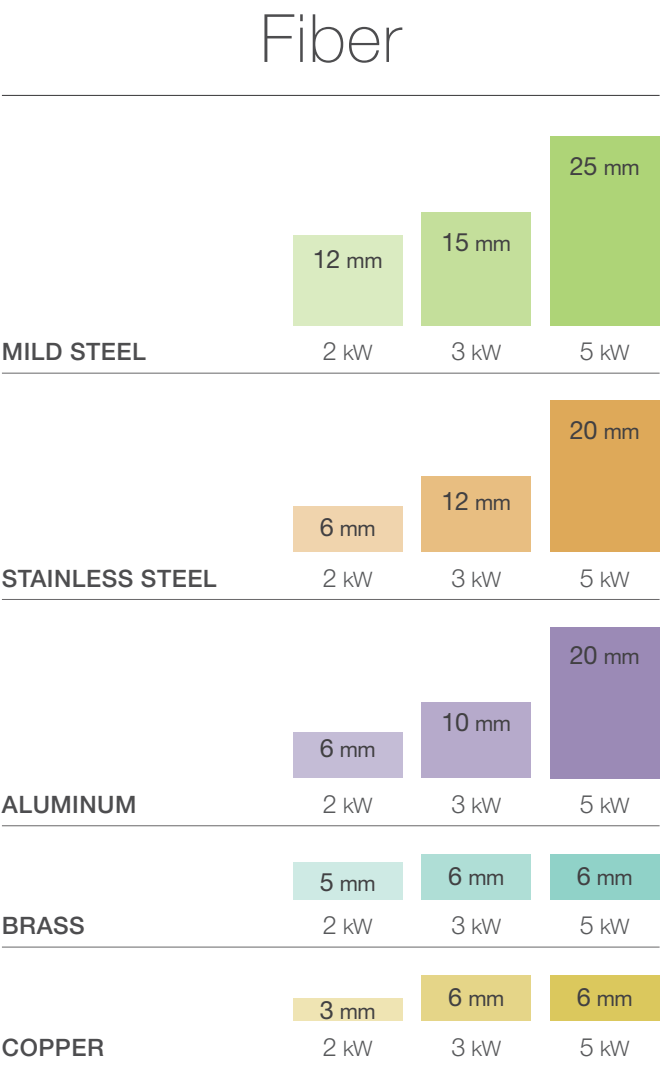
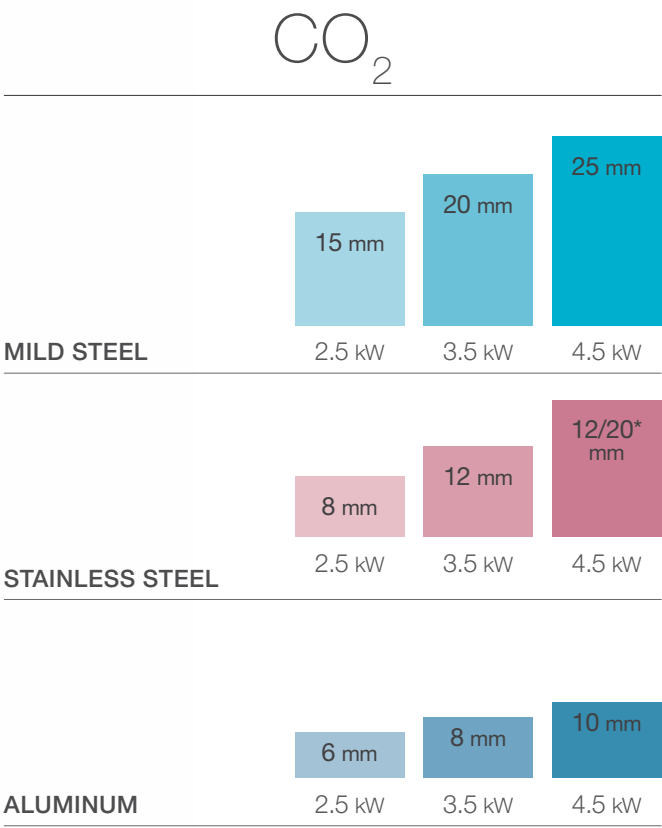
LS5 can be equipped with either a CO₂ laser source with a power of up to 4.5 kW or a fiber laser source with power up to 5 kW. The fiber source is advantageous for cutting high-reflecting materials (brass, copper) and for more effective aluminum processing. For nitrogen cutting of thin stainless steel, fiber laser technology provides better performance in terms of absolute cutting speed.

On the other hand, for thicker sheets, CO₂ technology is preferable and provides better performance in terms of finish of the cut surface. The cutting process

is controlled by sensors which monitor all the main parameters on both the CO₂ source and fiber versions. Focus is regulated by a servo mechanism fitted inside the cutting head.

On fiber versions, the lens protection window has integrated sensors for status monitoring. A warning will appear on the operator console if the protection window gets dirty or damaged. In this way the operator can take corrective action (cleaning or replacement) and thus maintain the cutting quality on one side and save time and money on the other side by preventing eventual further damage.

MAX. THICKNESS



* plasma quality

NUMERICAL CONTROL AND AUTOMATION ON BOARD

LS5 fits the most recent Siemens Sinamics Numerical Control (Operate interface) Solution: picking top of the range components means guaranteeing better usability and a higher degree of reliability over time. The system may be connected to the company LAN to exchange data and allows quick and easy production setup and connects in secure manner to the Internet (VPN) in order to receive remote assistance in case of need.

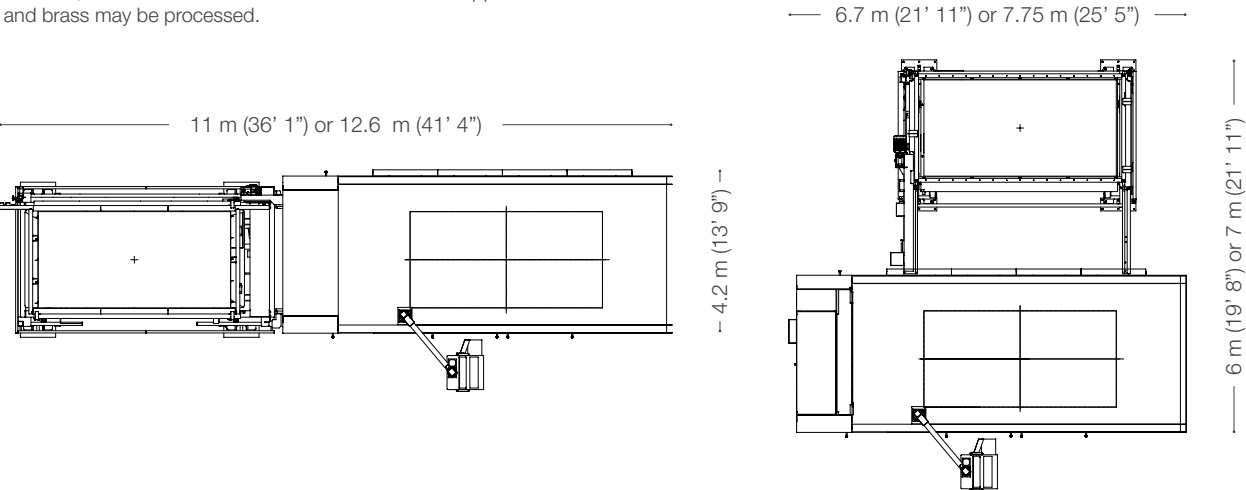


LS5

Technical specifications

WORKING AREA:	
Axis X	3000 mm - 4000 mm (10' - 13')
Axis Y	1500 mm - 2000 mm (5' - 6' 6")
Axis Z	150 mm (6")
PERFORMANCE:	
Max. axial speed	140 m/min
Max. XY speed	196 m/min
Accuracy	0.05 mm
Repeatability	0.03 mm
Standard materials	steel - stainless steel - aluminum* - copper* - brass*

* PC = Pallet Changer
* the CO₂ source allows to cut aluminum with some restrictions but not copper nor brass. With a fibre laser machine, there are no restrictions for aluminum and copper and brass may be processed.



☞ Features, weights, measures, capacities and machine performance descriptions are not binding and may be changed without prior notice. The photographs are only examples.

LASER SHEET CUTTING SYSTEMS

tube bending
endforming
sawing, deburring and washing
cutting and end machining
combination sheet and tube lasers
handling
manufacturing cells
process control software



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