

Modular Laser Cell (MLC) – Optimal linking of individual production modules in one plant



Single module



Customized interlinked system

05 2022

With the Modular Laser Cell (MLC), laser cutting or welding technologies can be modularly linked with other manufacturing processes such as bending, punching, embossing and marking. The internal added value can be increased with each module.

Customized modular plant concepts

The MLC functions as a stand-alone system with efficient individual part processing. In the same way, individual manufacturing technologies can be combined to form a complete system. The „flying optics“ concept enables sequential multiple nest machining. Individual manufacturing technologies can be combined in the MLC to form a unit of almost any number and length. The working area can be scaled as required for long components. Integration of one or more processing optics is possible.

Automatable, highly productive and stable processing

Each module is very easily accessible. Automation solutions up to fully autonomous plants can therefore be optimally integrated. At the same time, the interlinking of the plant reduces the internal logistical effort. Quality assurance is guaranteed by continuous process monitoring.



You would like to learn more?
Contact us!
www.weil-technology.com



Experience our systems
live in the application!

The MLC – Advantages at a glance

Focus on necessary components with a flexible and designable size of your workspace

- The work area can be adapted to the specific component
- All necessary process steps are integrated in a cost-optimized manner
- The basic footprint of the system is optimized
- Automation solutions can be integrated individually

Upstream and downstream process steps can be linked modularly

- Processes such as bending, forming, punching, embossing can be easily integrated
- The MLC can be operated as a stand-alone system or with multiple work and process steps
- The flow of goods by means of pick & place is just as feasible as external parts are inserted and removed, which enables fully autonomous production

Technical Data

Processing focus	Cutting or welding + further production technologies
Work space X/Y/Z	Scalable (min. 1000)/250/350
Max. repeating accuracy	±0,03 mm
Max. positioning speed linear	X/Y/Z → 60/30/30 m/min
Max. positioning speed rotative (rotary optics)	200 rpm
Acceleration X/Y/Z	10/10/8 m/s ²
Jerk X/Y/Z	300/300/200 m/s ³
Control/Interface	Siemens: Sinumeric One (NC)
Dimensions L × W × H	(in X 1000 mm work space): X/Y/Z: 3300/2800/3200 mm
Possible materials	Mild steel, stainless steel, aluminum, copper
Laser power (min – max)	Up to 8.000 W
Maximum cutting speed (2 KW 3 KW) mild steel, 2 mm	15m/min 20m/min
Maximum welding speed (2 KW 3 KW) mild steel, 2 mm	±0,03 mm
Clamping/work table movable (yes/no)	No
Material feed (automation capability)	Very good
Optics flying (yes/no)	Yes
Beam guidance (options)	Laser management, bifocal technology, beam profile shaping
Process steps that can be integrated into the plant concept	Laser beam cutting, laser beam welding, laser beam hardening, laser buildup welding, laser marking, quality assurance: pressure test methods, optical testing, forming processes (bending, stamping), punching, additionally resistance welding, combination of laser and subsequently arc processing, quality assurance test methods

Visit us in the Tech Center and let us convince you of the innovative system technology live.