



**Weil
Technology**

Machines and systems
Solutions and services

Realizing fascinating solutions

Experience fascinating solutions.

Manufacturing solutions from Weil Technology are used wherever proven quality is required and, at the same time, change is taking place and tomorrow's products are being created. We support you in realising, optimising and automating your manufacturing processes in the context of sheet metal processing.

Our portfolio includes numerous process modules that can be intelligently combined into turnkey systems or used as stand-alone machines. In addition to machines and systems, we offer you versatile solutions and services such as feasibility studies, prototyping and service.



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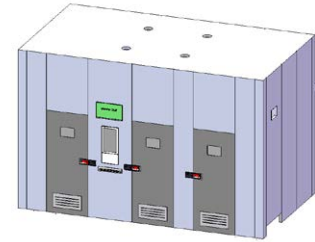
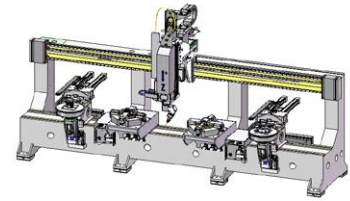
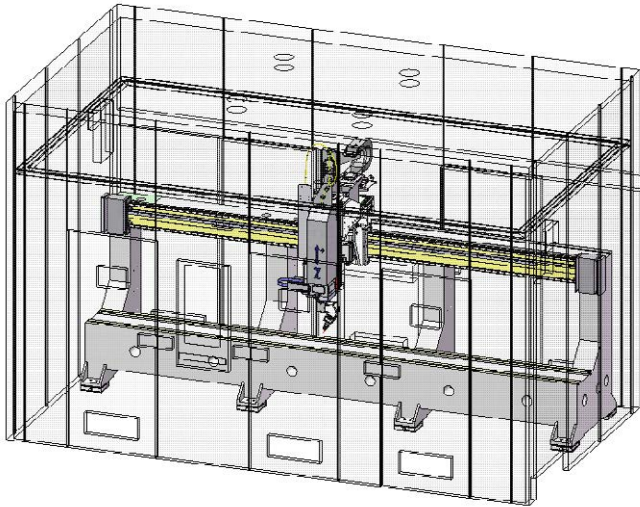
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MLC

Flexible Laser Solutions



Modular system technology for laser cutting and welding, as well as the integration capability of additional production technologies with the highest degree of automation

Modular system

MLC offers the combination of laser cutting and welding with additional manufacturing technologies – such as roll forming, punching, embossing, laser marking, etc. The modular design permits a high degree of scalability. It can be used both as a stand-alone system and in a chain of several machines in one system. Depending on the respective product requirements, project-specific process modules can be integrated into the system and linked together.

Flexible and automation-ready

Solid-state lasers, stationary optics, scanner-based systems and numerous options for process monitoring and quality assurance enable innovative

concepts for laser material processing. Due to the excellent level of accessibility, innovative automation concepts – up to fully autonomous system technology – can be realised.

Economical

The modular design allows other manufacturing technologies to be integrated in addition to laser processing. This unique feature links the individual value-added processes under one roof and efficiently reduces logistical effort. Furthermore, the complex integration of individual machines and the time-consuming creation of interfaces are eliminated. Fast and simple programming of the assemblies via an operating concept leads to fast and uncomplicated production start-up.

Equipment

- Axis module with integrated X, Y, Z axis (flying optics)
- Working area in X can

be extended in 500 mm steps to enable the sectional machining of large components

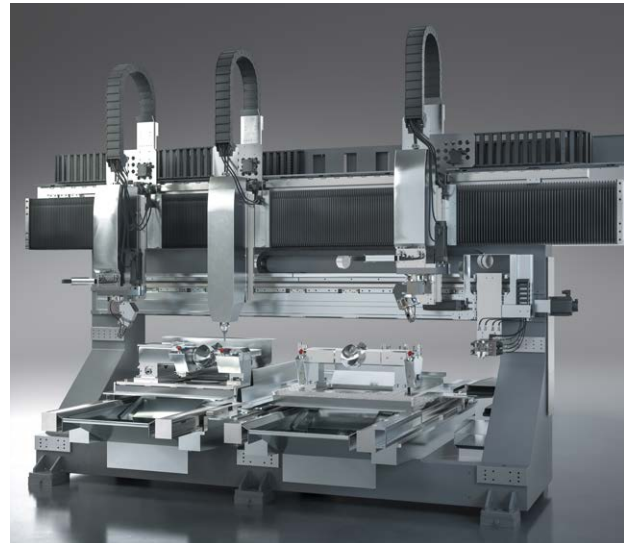
- Optimised for multiple nest machining sequentially in one process cell for even higher productivity
- Solid-state beam sources with associated process optics for product-specific laser material processing
- Other production technologies according to project-specific product requirements: You have the advantages of a standardised basic machine without compromises

Fields of application

- Combined production technology, e.g. roll forming + welding
- Machining of 3D assemblies
- Sectional machining of long components

FLC CutFusion

Flexible Laser Solutions



Simultaneous laser cutting and welding in one machine for three-dimensional machining with maximum precision

Innovation FLC

The combination of up to three laser processing optics in one machine allows simultaneous 3D cutting and welding operations without set-up times. Non-value-adding transport times and buffer formation are eliminated by combining work sequences in one processing station. All processing optics are supplied by the same laser beam source via the laser management system. The result is maximum quality, precision and productivity.

Flexibility in terms of laser set-up

Solid-state lasers, stationary optics, scanner-based systems and numerous options for process monitoring and quality assurance enable innovative concepts for laser material processing.

Machine flexibility

Quick-change systems for the component-specific clamping devices enable minimum set-up times. Production can be carried out flexibly depending on the batch size, alternatively in a single or two-station operation.

Economic efficiency

The combination of cutting and welding technology in one machine reduces the logistical effort involved, it simplifies the material flow and increases productivity through cycle-time-parallel loading/unloading in a two-station operation.

Automation

FLC is a winning solution with modular automation concepts, starting from manual loading/unloading and moving up to fully autonomous systems incl. the associated test stations.

Product quality and precision

Maximum precision and processing quality through coordinated processing optics in one

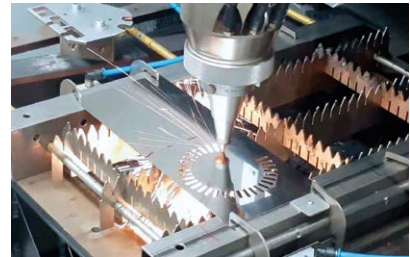
system help to avoid losses in quality due to reclamping and positioning.

Fields of application

- Combining laser cutting and welding tasks in one machine
- Media-conducting systems
- Substitution of cast components with sheet metal assemblies
- Substitution of IHU & AHU by innovative manufacturing processes with half-shell technology
- 3D assemblies from 2D components

LCC

Flexible Laser Solutions



Laser cutting cell for highly dynamic 2D- and 2 ½D machining

+/-0.02 mm can be achieved, even at high accelerations.

LCC combines the highest dynamics with maximum accuracy through the concept of decoupled machining axes.

Areas of application

The modular clamping concept allows the LCC to be used in a wide variety of applications:

Maximum accuracy

The machine base body with upright gantry portal – made of natural granite – is designed for maximum vibration rigidity and temperature consistency. The main axes are equipped with linear direct drives, with which contour accuracies of

- as a stand-alone system
- for autonomous coil/plate operation
- for integration into a line linkage
- for thin sheet processing with wall thicknesses of 0.15 mm – 0.5 mm

	LCC 501	LCC 1001	LCC 502
Work area X/Y/Z (mm)	500/500/120	1000/500/120	500/500/120
Unprocessed format plate X/Y/Z (mm)	500/2000/5*	1000/2000/5*	500/2000/5*
Unprocessed format coil X/Y/Z (mm)	500/∞/3*	1000/∞/3*	500 /∞/ 3*
Work area piece goods X/Y/Z (mm)	500/500/120	1000/500/120	500/500/120
Max. positioning speed plate/ coil/piece goods (X/Y – m/min)	100/80/100	80/80/100	100/80/100
Max. contour accuracy (mm)	+/-0.02	+/-0.02	+/-0.02

* Depending on the laser power used.



Multi-axis laser welding cells with intelligent tool concepts

The four axes of the processing optics in combination with one or more workpiece axes enable three-dimensional processing. This makes it possible to perform many high-precision welding and cutting operations.

Efficient production

LWC is spatter/oxide free and offers a very high level of consistency in weld penetration. With a contour accuracy of 0.05 mm, 100 % gas sealed precision and minimal heat input to ensure minimal distortion, the quality of the weld seam is impressive. In terms of output, the maximum welding speed and

high system dynamics also score highly.

Multi-axis laser welding cells with rotary table

Rational working on multi-station rotary table systems

5-axis machining

Machining of complex parts in one clamping movement

Intelligent clamping devices

Component monitoring Integrated measuring tasks

Ergonomic operation

Great accessibility at the insertion positions

In close cooperation with the customer, component architectures and clamping concepts

are coordinated and designed for laser-compatible processing. Depending on the component complexity in question, multi-station rotary table systems are developed for laser-compatible welding requirements.



Laser welding modules for assembly and welding tasks for the production of complex assemblies

By dividing the manufacturing process into individual steps, standardised modules can be used for workpiece collection and laser machining. Chaining with a workpiece carrier system allows for parallel processing of multiple modules.

Given that each module can be used and configured individually, the production of complex assemblies is possible.

Flexible clamping concept

The clamping tools are easy and quick to exchange, allowing for flexible part production.

Well thought-out modular system

The module system not only makes it possible to use multiple optics per module, but also to include mechanical processing stations. This enables simple, manageable processes and the combination of assembly, welding and testing tasks. Leak testing stations, laser engraving stations, and palletising systems

can be integrated with the chained workpiece carrier system.

Precision

Maximum accuracy is possible thanks to robust clamping devices.

Quality

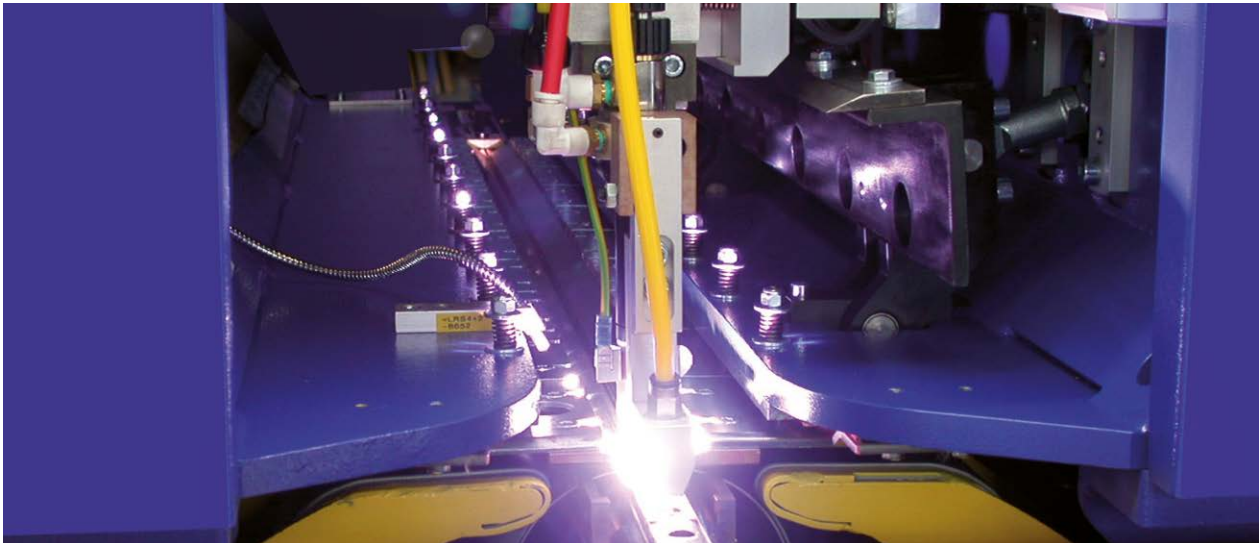
The division of the individual processes allows the individual adaptation of the detailed tasks.

Economic efficiency

Parallel processes guarantee a large output quantity.

Flexmaster

Welding



The single-station welding system for maximum flexibility in tube production for small to medium batch sizes

Patented clamping technology

The clamping belt system enables precise and reproducible clamping without the need for a diameter-specific tool: round, oval, polygonal.

Programming

Up to 400 programmes with their respective clamping and welding parameters can be stored in the control panel.

Automatic set-up

The machine sets itself up automatically depending on the selected programme.

Reproducibility

The high-level accuracy of the joining and clamping process guarantees consistent quality in automated welding processes.

Modular concept

The systems found in the Flexmaster series can be combined with numerous modules from Weil Technology, and they can be operated as a stand-alone

solution or in a fully automated production line.

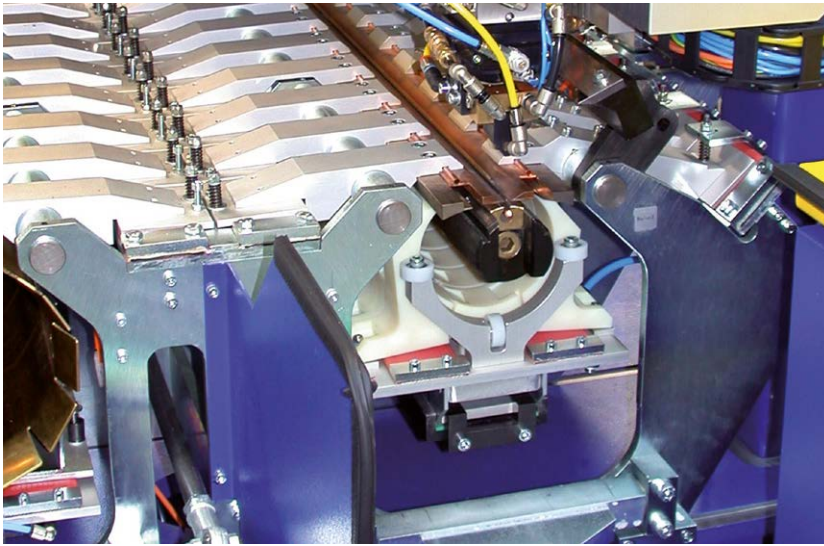
By using a flexible clamping unit, no mechanical retooling is necessary for a diameter change.

	Flexmaster 400/1250	Flexmaster 400/2000	Flexmaster 600/1500	Flexmaster 1000
Tube diameter	76 – 400 (600) mm	76 – 400 (600) mm	76 – 400 (600) mm	200 – 1,000 mm
Tube length	100 – 1,270 mm	100 – 2,000 mm	100 – 2,000 mm	500 – 1,250 mm
Material thickness	0.4 – 2.0 mm	0.8 – 2.0 mm	0.8 – 2.0 mm	0.6 – 2.0 mm
Materials	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*
Welding source	Laser, TIG, Plasma	Laser, TIG, Plasma	Laser, TIG, Plasma	Laser, TIG, Plasma
Output	up to 150 tubes/h		up to 80 tubes/h	up to 60 tubes/h

* Other materials upon request.

LRSA 250

Welding



The compact 2-station tube welding machine for maximum output

Geometry and clamping process

Round, oval and polygonal tubes can be welded by using diameter-specific tools that have been optimised for a fast clamping sequence.

Quick changeover

Ergonomically designed tool cassettes allow quick and easy diameter changes.

Easy maintenance

Despite the small footprint, large maintenance doors ensure good accessibility.

Modular concept

This machine can be operated as a stand-alone solution or integrated in a fully automated production system.

One station can load and unload.

LRSA 250/1100	
Tube diameter	76 – 250 mm
Tube length	100 – 1,100 mm
Material thickness	0.4 – 2.0 mm
Materials	Steel, stainless steel*
Welding source	Laser, TIG, Plasma
Output	up to 240 tubes/h

* Other materials upon request.

Tubestar

Welding



Continuous tube welding machine integrated into a fully automatic production system for short tubes

Automation

The line produces laser-welded hollow sections from coil or plates.

Production of automotive tubes

From individual elements of the exhaust system to

rear axles, engine mounts or other bodywork elements, the Tubestar system produces high-quality parts with different geometries in large quantities. Short changeover times enable the demand-oriented production of various tubular elements.

Application-specific rolling process

When rolling tubes with small diameters and large sheet

thicknesses, the use of tools guarantees the proper rolled form of the finished tube. Thin or perforated tubes can be roll formed with a roll-forming machine.

	Tubestar 100	Tubestar 150
Tube diameter	23 – 100 mm	50 – 150 mm
Tube length	210 – 1,300 mm	100 – 2,000 mm
Material thickness	0.3 – 2.0 mm	0.8 – 4.0 mm
Materials	Steel, stainless steel*	Steel, stainless steel*
Welding sources	Laser, TIG, Plasma	Laser, TIG, Plasma
Output	up to 800 tubes/h	up to 960 tubes/h

* Other materials upon request.

Multiroller

Roll forming



The NC-controlled multiroller rounding machine produces tubes of different diameters without mechanical retooling

The Multiroller is a proven high-tech rounding machine for the fully automatic and flexible production of tubes up to 2000 mm tube length and radii larger than 30 mm.

No changeover tool = no time lost due to changeover

Changeover to a different diameter is managed at the touch

of a button. Changes in material properties can be compensated for by the parameter settings.

Tube lengths up to 2000 mm

With Multiroller technology, excellent rounding results can be achieved, even with long tubes.

Small diameters

Long tubes with small diameters and materials that are difficult to form are no problem at all for the Multiroller.

Modular construction

Automation modules are available for the Multiroller as a

stand-alone rounding machine or in combination with a welding system.

	Multiroller 400/1250	Multiroller 400/2000	Multiroller 150/2000
Tube diameter	80 – 400 mm	80 – 400 mm	60 – 150 mm
Tube length	max. 1250 mm	max. 2000 mm	max. 2000 mm
Material thickness	0.8 – 3.0 mm	0.8 – 3.0 mm	0.8 – 3.0 mm
Materials	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*
Welding source	Laser	Laser	Laser
Output	up to 240 tubes/h		

* Other materials upon request.

RMA series

Roll forming



Automatic NC-controlled 2-roll roll-forming machine, suitable for integration into an automated production line

Process

The roll-forming process runs fully automatically under program control and guarantees a high level of reproducibility. All process parameters can be stored for later use.

Automation

The system can be automated by combining it with a stacker and a destacker unit.

Multiple production

Multiply your output: depending on the plate size, several components can be roll formed at the same time.

Top results

By using a top roller with support, even smaller tube diameters can be produced to the highest quality.

The ideal solution for all tube shapes: round, oval or square.

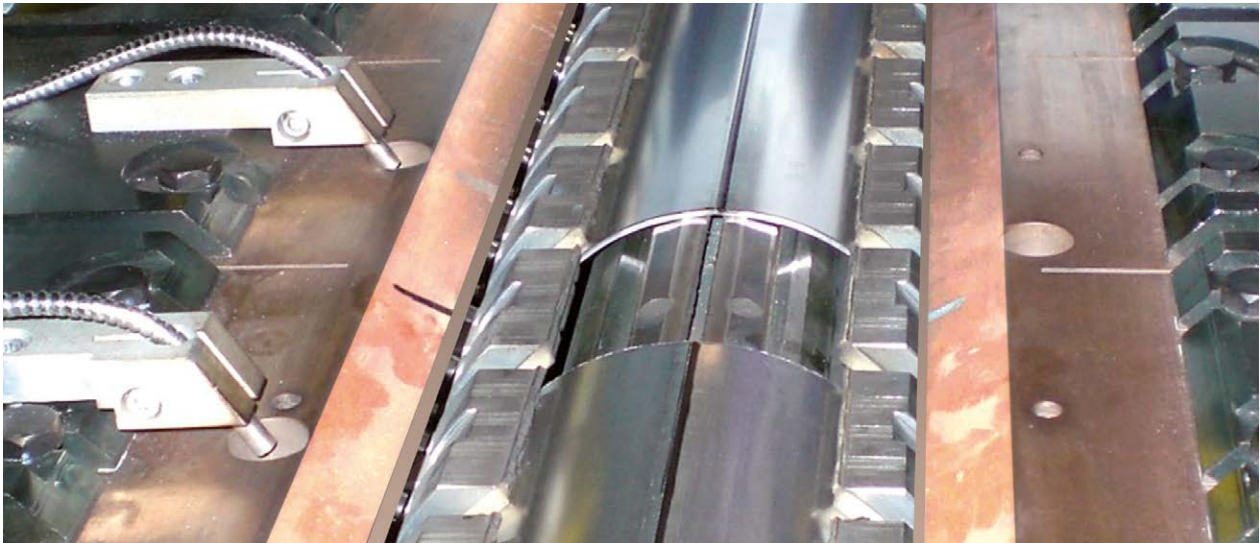
Ideal for integration into a fully automated production line or as a stand-alone solution.

	150/700	250/700	400/600	400/1000
Tube diameter	50 – 150 mm	80 – 250 mm	80 – 400 mm	80 – 400 mm
Tube length	80 – 700 mm	80 – 700 mm	80 – 600 mm	80 – 1,000 mm
Material thickness	0.4 – 1.5 mm	0.4 – 2.0 mm	0.4 – 2.0 mm	0.4 – 2.0 mm
Materials	Steel, stainless steel*			
Output	up to 360 tubes/h			

* Other materials upon request.

Twinmaster

Roll forming + welding



Combination of roll forming and welding machine in one system

The Twinmaster is the highly efficient machine for short tube production at high volumes.

Multiple production

Depending on the size, several components can be rolled and welded simultaneously.

Proven technology

The sophisticated clamping process that optimally positions the tube in the welding station is a key characteristic.

Flexibility

The machine permits the production of a wide variety of geometries and shapes: up to 14 different radii in one tube, production of double-walled tubes, and the processing of perforated sheets, etc. are possible.

Modular construction

By adding a destacker and several options for further processing (weld annealing, calibrating, smoothing, stacking, etc.), the Twinmaster will become your complete production system for short tubes.

Twinmaster 250/700	
Tube diameter	80 – 250 mm
Tube length	100 – 700 mm
Material thickness	0.4 – 2.0 mm
Materials	Steel, stainless steel*
Welding sources	Laser, TIG, Plasma
Output	up to 580 tubes/h

* Other materials upon request.

Flexistar

Roll forming & welding



Innovative flexible production line for the manufacture of thin-walled quality tubes

Continuous throughput

The tried-and-tested Flexistar concept is a high-quality patented tube production line for thin-walled material.

Variable

As a compact tube production centre in one plant – combining multiroller and laser welding equipment – Flexistar does not require any change parts when changing length or

diameter. This unique feature enables the production of two different diameters in alternation (e.g. inner tube – outer tube), as required for insulated chimney tubes or multi-layer bellows.

Modular automation

On the insertion side, the sheets can be fed from stacks or a coil. Automatic inline quality control can be integrated with ease.

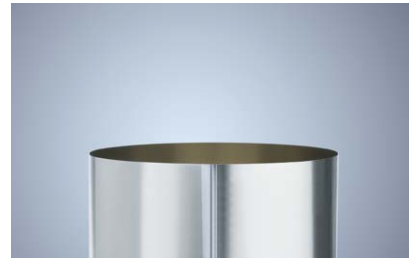
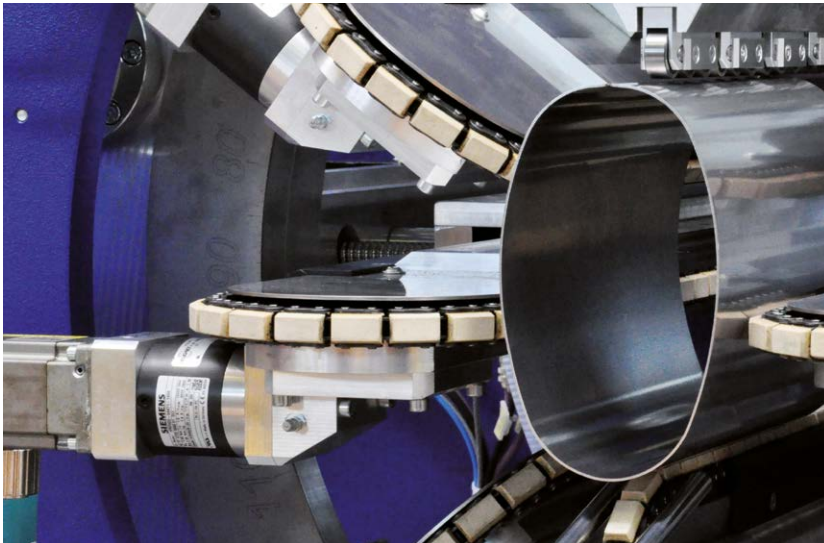
Options for further processing of the tubes include expanding, beading, marking, etc.

Flexistar	150/1000	150/2200	250/1250	400/1250	600/1250	600/1550
Tube diameter	40 – 150 mm	60 – 150 mm	60 – 250 mm	80 – 400 mm	76 – 600 mm	76 – 600 mm
Tube length	200 – 1,000 mm	300 – 2,200 mm	250 – 1250 mm	250 – 1,250 mm	250 – 1,250 mm	250 – 1,550 mm
Material thickness	0.2 – 0.8 mm	0.2 – 0.8 mm	0.4 – 1.0 mm	0.4 – 1.0 mm	0.4 – 1.0 mm	0.4 – 1.0 mm
Materials	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*
Welding source	Laser	Laser	Laser	Laser	Laser	Laser
Output	up to 240 tubes/h	up to 240 tubes/h	up to 240 tubes/h	up to 240 tubes/h	up to 240 tubes/h	up to 240 tubes/h

* Other materials upon request.

Ecostar

Roll forming & welding



Evolutionary economic tube production for wall thicknesses up to 2 mm

Greater flexibility

Requirements for flexibility in terms of length and diameter, the elimination of changeover times, and programme-controlled changeover without change parts are the strengths of the Ecostar.

Freedom when it comes to tube geometry

In addition to the advantages for

short tube production – without the shape-specific reworking of the tubes – the Ecostar offers tremendous freedom in terms of tube geometry. The Ecostar's core is the automatic diameter adjustment in roll forming and welding. The rounded sheet is joined by radially movable clamping bars on the outside and is continuously welded under a stationary welding optic.

Areas of application

With its dimensions, the Ecostar is ideally suited for the pro-

duction of catalytic converter housings, round/oval small containers, pressure tanks and similar products.

Extensions

The Ecostar can be extended with these modules:

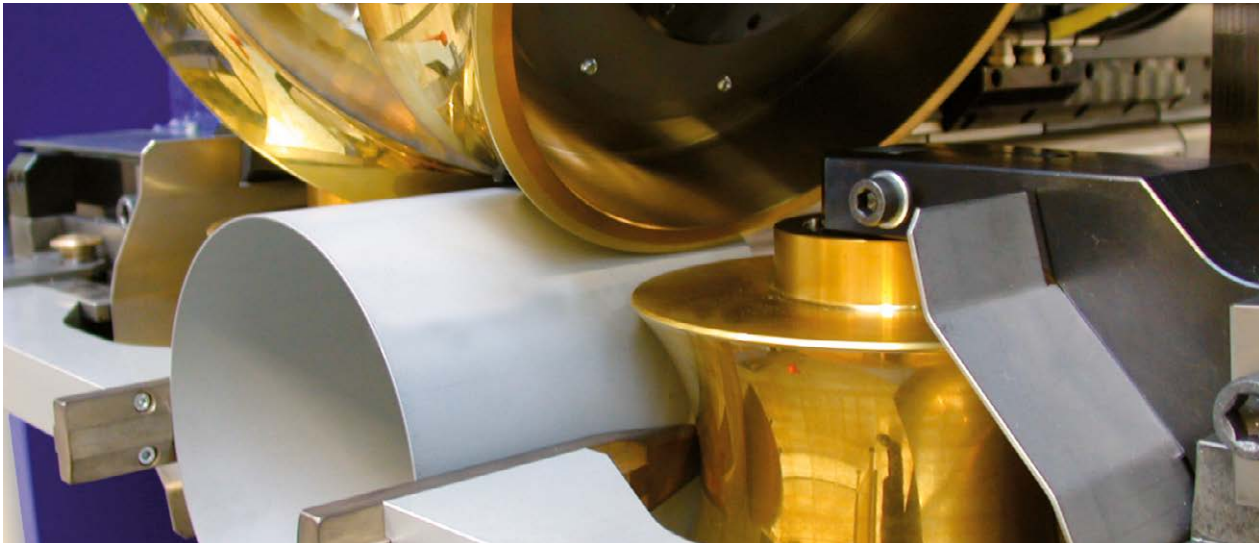
- Seam annealing to counteract hydrogen embrittlement in ferritic stainless steels
- Seam planishing, to eliminate any height offsets in the weld seam
- Laser marking for tube traceability

Ecostar	200/600	400/600	400/1250
Tube diameter	60 – 200 mm	80 – 400 mm	100 – 1,250 mm
Tube length	50 – 600 mm	50 – 600 mm	50 – 600 mm
Material thickness	0.8 – 2.0 mm	0.8 – 2.0 mm	0.8 – 2.0 mm
Materials	Steel, stainless steel*	Steel, stainless steel*	Steel, stainless steel*
Welding source	Laser	Laser	Laser
Output	up to 200 tubes/h	up to 185 tubes/h	up to 240 tubes/h

* Other materials upon request.

Ecomaster

Roll forming & welding



Production centre for medium short tubes with integrated multi-roll rounding machine

Compact and slim

As a compact and economical production cell, the Ecomaster is a real winner when it comes to the decentralised production of short tubes. It consists of an automatic rounding unit and a continuous welding unit. Production starts with the plate.

Demand-oriented production

The machine is designed as a production centre for small and medium batch sizes and can be adapted to the speed

of subsequent operations, i.e. canning, stuffing, expanding, etc.

Round and oval

Different tube geometries can be produced by changing the clamping roller set. Tube ends optimised for demanding forming operations can be achieved with the "tube to tube" option.

Extensions

The Ecomaster can be extended with these modules:

- Seam annealing to counteract hydrogen embrittlement in ferritic stainless steels
- Seam planishing, to eliminate any height offsets in

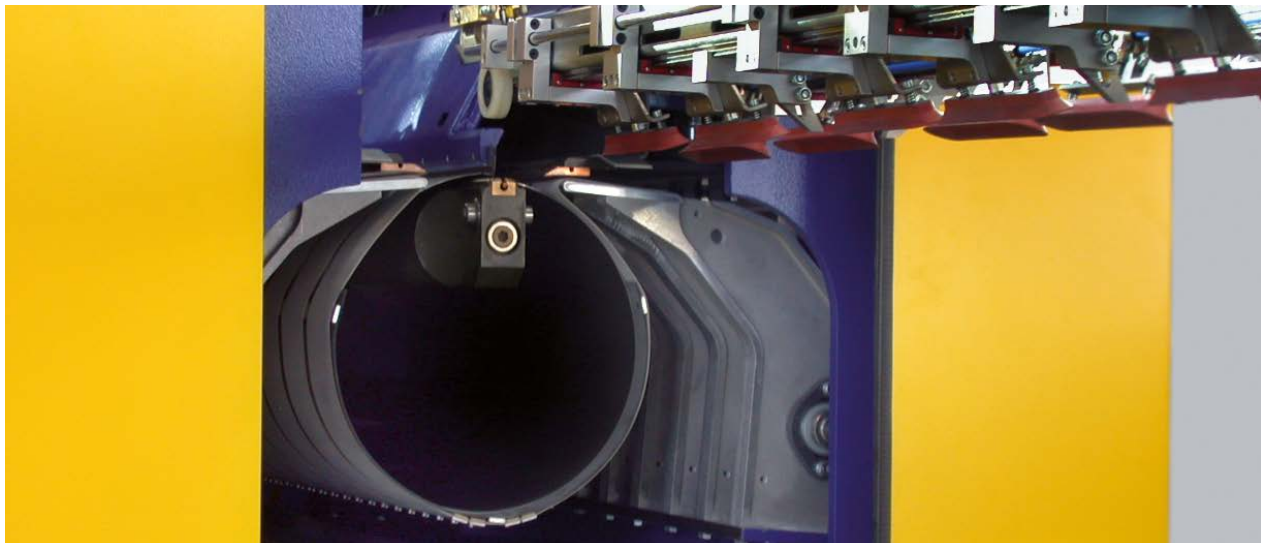
the weld seam

- Laser marking to ensure the traceability of the tube

Ecomaster 200/500	
Tube diameter	80 – 200 mm
Tube length	80 – 500 mm
Material thickness	0.8 – 2.0 mm
Materials	Steel, stainless steel*
Welding source	Laser, TIG, Plasma
Output	up to 240 tubes/h

* Other materials upon request.

Tube production centre



The interlinking of the stand-alone systems (roll forming and welding) creates a production centre for tubes through automation

From sheet to tube

A destacking system loads plates of up to 2000 mm onto a slide-in table (up to four blanks at a time, depending on the tube length).

Automatic transfer

A portal handling system automatically loads and unloads the roll forming and welding station and transports the finished welded tubes to optional downs-

tream operations – such as brushing and calibrating.

Automation

The automatic destacking and loading of the roll forming and welding station eliminate the need for manual intervention.

Versatile possibilities

Flexibility in terms of the geometries, diameters and lengths of tubes are what characterise the systems from Weil Technology.

Cycle

Simultaneous processing of several parts in the system ena-

bles a high level of production output.

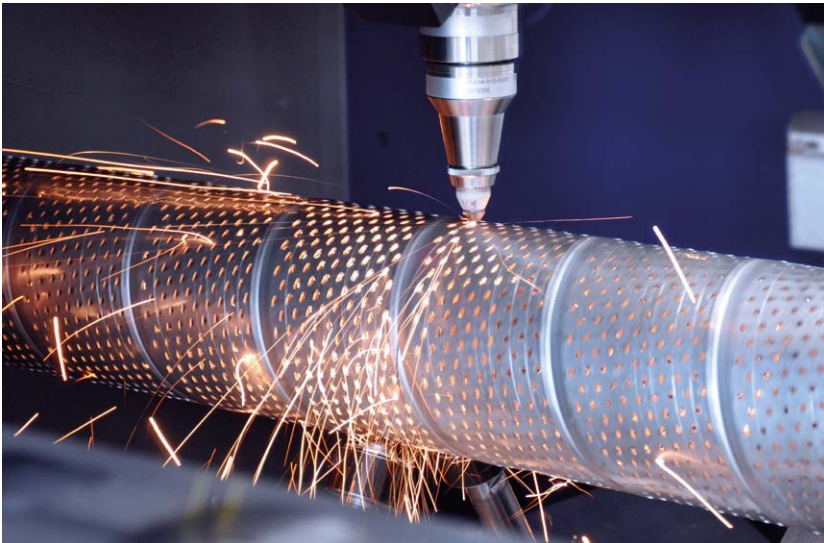
Modular concept

The combination of Stacker, Multiroller, Flexmaster, Portal Handling and Equipment for tube finishing can be easily adapted to individual production requirements. The sophisticated combination of multiroller and welding system makes oval and round geometries possible.

	Production centre for ventilation tubes	Production centre for chimney tubes and catalytic converters
Diameter	76 – 400 mm	76 – 400 mm
Tube length	200 – 2,000 mm	120 – 1,270 mm
Material thickness	0.8 – 3.0 mm	0.8 – 2.0 mm
Materials	Steel, stainless steel*	Steel, stainless steel*
Welding source	Laser, TIG, Plasma	Laser, TIG, Plasma
Output	up to 580 tubes/h	up to 240 tubes/h

* Other materials upon request.

Tube cutting machine



Laser tube cutting machine for thin-walled tubes with large diameters and for cutting bar material to length

Flexibility

This machine is ideal for cutting bevels, rings, ellipses, squares and freely programmable contours in thin-walled tubes. All necessary parameters – imported from CAD or graphic data – are stored in the control panel and can be changed or recalled at any time.

Quality tubes

The results are splash-, deformation-, burr- and oxide-free edges and dry tubes.

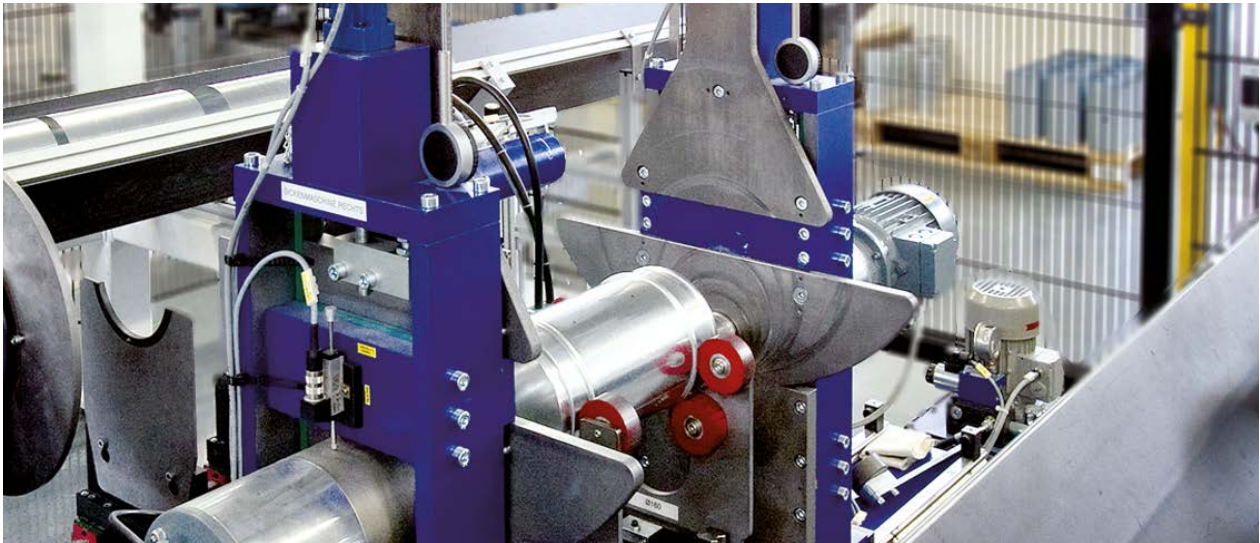
Optimisation

Using a beam deflector, the system can optimise the utilisation of an existing laser source and thus expand the production possibilities.

	RSM 600	RSM 3400
Tube diameter	80 – 600 mm	60 – 400 mm
Input tube length	100 – 1,500 mm	600 – 1,600 mm
Finished tube length	100 – 1,500 mm	600 – 1,600 mm
Material thickness	0.4 – 1.0 mm	0.4 – 3.0 mm
Materials	Steel, stainless steel, Al*	
Cutting source	Laser	

* Other materials upon request.

Tube end processing



Advancing into new dimensions of tube end processing in connection with flexible tube production lines

The tube end processing centre can be seamlessly connected to an existing longitudinal seam welding machine. A stand-alone version with manual tube infeed and discharge is also possible.

High-level efficiency

The transport system – in portal design – loads and unloads the processing stations in a simultaneous cycle. This

guarantees the highest possible output, production reliability and product quality with the smallest possible space requirement.

Flexible use

The individual units can be designed as a single-sided machining system or as a double system, in order to be able to machine both tube ends simultaneously.

One special feature is the production of double-walled tubes, where the inner or outer tube is machined

alternately.

Advantages:

Alternating production optimises the logistics process for manufacturing:

- Minimised stocks
- Highest level of delivery flexibility

Fields of application:

- Expanding
- Calibration
- Beading

Tube end processing	
Diameter	80 – 400 mm
Tube length	250 – 1,250 mm
Material thickness	0.4 – 1.0 mm
Material	Steel, galvanised and stainless steel
Cycles	Ø 100: 25 Sec.* Ø 200: 28 Sec.* Ø 400: 34 sec.
Changeover times	from Ø 100 to Ø 400: 6 minutes from Ø 80 to Ø 100: 12 minutes

* For lengths below 500 mm, the cycle times are extended to 30 s, as the expanding units are run in one after the other.



TechCenter

Are you looking for solutions that deviate from the standard? We are happy to take on this challenge in our TechCenter and find ways to meet your special requirements. In addition to experienced engineers, our laboratory and external partners are available to you for handling specialist tasks. Here, too, all interfaces are always optimally coordinated to ensure stable processes: Whether it's individual systems comprising proven standard modules or customised module development, our viable concepts have often helped to achieve significant advantages over the competition.

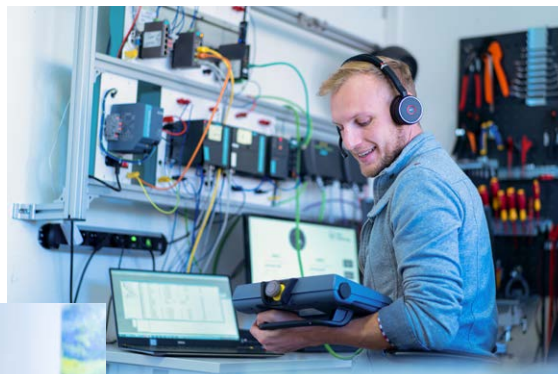
Service

Reliability is one of our principles and does not stop with the sale of our machines. Our service is broad-based and always there for you:

Whether through the delivery of spare parts, performing remote diagnostics or providing maintenance services – the primary goal of our service staff is to reduce downtimes in your production set-up to a minimum. To this end, we offer you customised service packages that optimally meet the requirements of your production.

Our services for you

- Remote maintenance and hotline support: fast and uncomplicated support that, in many cases, offers a suitable solution online or by telephone, there by helping to avoid time-consuming service calls
- Repair and maintenance to avoid (and eliminate) downtimes as quickly as possible
- Spare parts supply and recommendations for stocking your maintenance: all components from a single source
- Conversions, upgrades and extensions of your Weil system



Contact

Would you like a personal consultation with our experts or information about our products and services?

We will be happy to advise you individually and free of charge on your production's hidden potential. Talk to us!

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