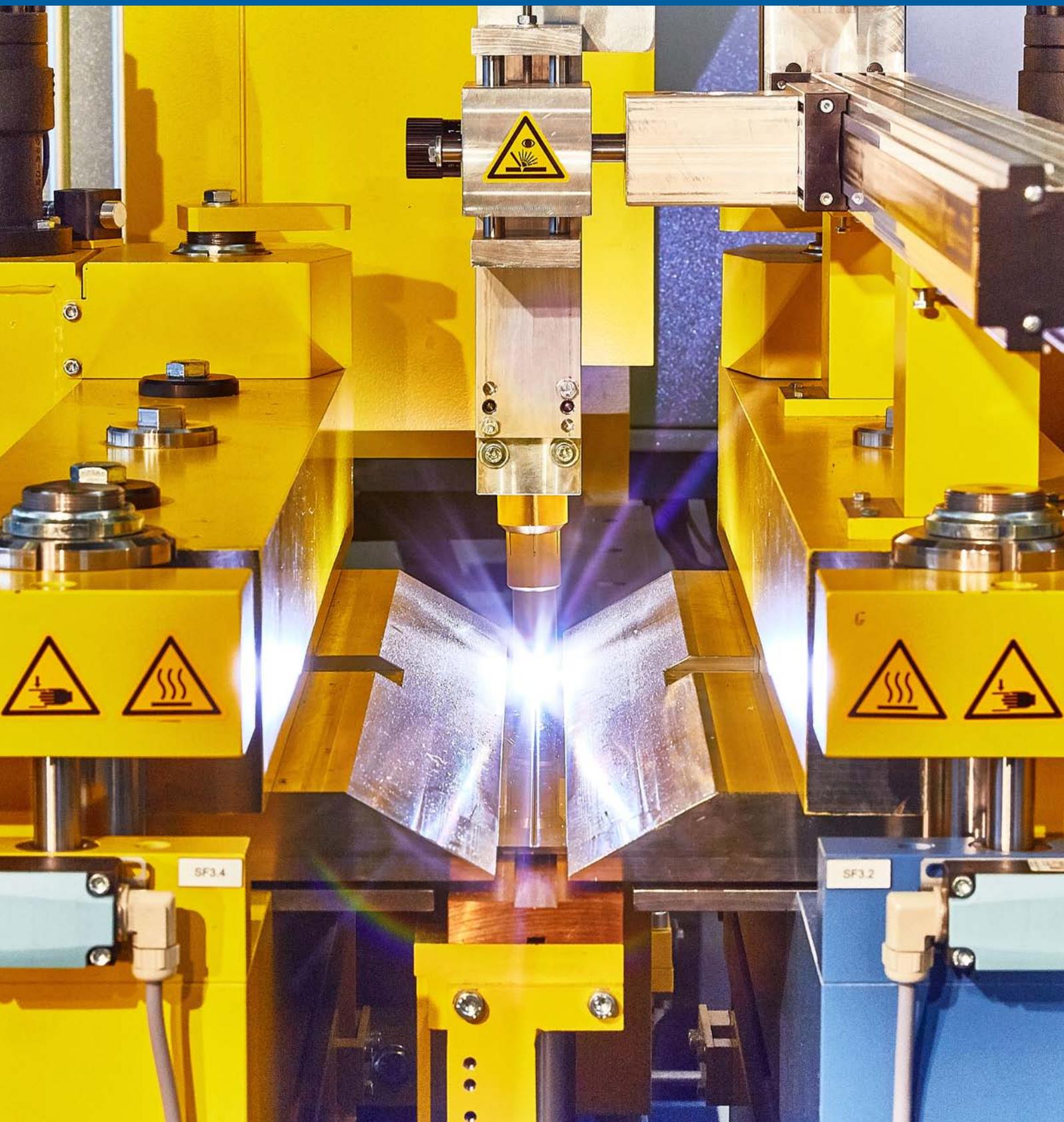




LBS/LAS coil welding machines

Individual solutions for perfect coil joints





Clemens Jungeblodt sen. Clemens Jungeblodt Eberhard Jungeblodt

In December 1923, the family company IDEAL – called “Elektro-Apparate-Bau GmbH” at that time – was founded in Lippstadt.

Since then, the name IDEAL has been synonymous with constant innovation and quality in machine and plant engineering. The core competency of the company – family-run in the third generation – is resistance and laser welding.



The management: Dorothee Jungeblodt, Dipl.-Ing. Rainer Pumpe and Dipl.-Ing. Max Clemens Jungeblodt

The product portfolio of IDEAL includes welding machines for the joining of wire, stranded wires, wood saws and metal band saws; for wire processing, the production of sheet metal products; as well as coil joints and profile connections. The offer ranges from smaller series machines to modular standard versions all the way to tailor-made, customer-oriented special solutions.

The consistent further development of the product program and an excellent, problem-oriented consultancy have helped us to reach a leading position in the market and made us a reliable partner for the industry. In over 45 countries, we have expert professional representatives who ensure proximity to the customer on site.

Our own distribution and service office in the United States has been marketing machines and spare parts in North America and Canada since 1995.

In order to meet the requirements of a demanding international industrial customer base, we rely on fair teamwork with customers, employees and suppliers.

With their dedication, skills and close attachment to the company, our staff of about 240 employees make a significant contribution to our mutual success. On the basis of our own hands-on professional training and continuous further training, we secure in-depth knowledge and experience in the long run.



Our headquarters in Lippstadt in Westphalia houses the management, the commercial and technical departments such as Project Management as well as engineering and design offices. Our mechanical production facility is equipped with state-of-the-art machinery and provides high-quality individual parts of the highest precision.

At the second site in Lippstadt, the machines are built in our assembly shops; the hydraulic, pneumatic and electrical systems are installed, and a function test is performed. This is also where the test run with customer materials is performed in order to prepare the acceptance procedure and training of the customer's personnel in the best possible way.



For smaller coil dimensions, we offer arc welding machines, semi-automatic or fully automatic versions, with integrated coil end shears. Reliable **MIG/MAG, TIG or plasma welds** are created that ensure a continuous coil change without stops.

For the most stringent requirements for coil joints, especially in the case of large steel works, we rely on the advantages of a laser; it enables high welding speeds and a perfect welding quality. **IDEAL laser transverse seam welding machines** cut and weld coils of various qualities and material combinations by means of a laser beam in one clamping.

IDEAL provides

- Customer-specific solutions – design of machines in collaboration with the customer
- Implementation/testing out joining-specific applications in the test field
- Support with the planning of a new factory or production plant
- Construction of all mechanical machine parts and supply components
- Design of the control unit, sequential programs and communication interfaces
- Manufacture of the mechanical and electrical machine sections
- Assembly and commissioning of all machine parts
- Testing of the machine and determination of the welding parameters
- Dismantling, transport and installation at the customer's plant
- Commissioning and, if applicable, line connections at the customer's plant
- After-sales service and supply of spare parts



Customer orientation is fine – but we have a better name for it:

IDEAL Service

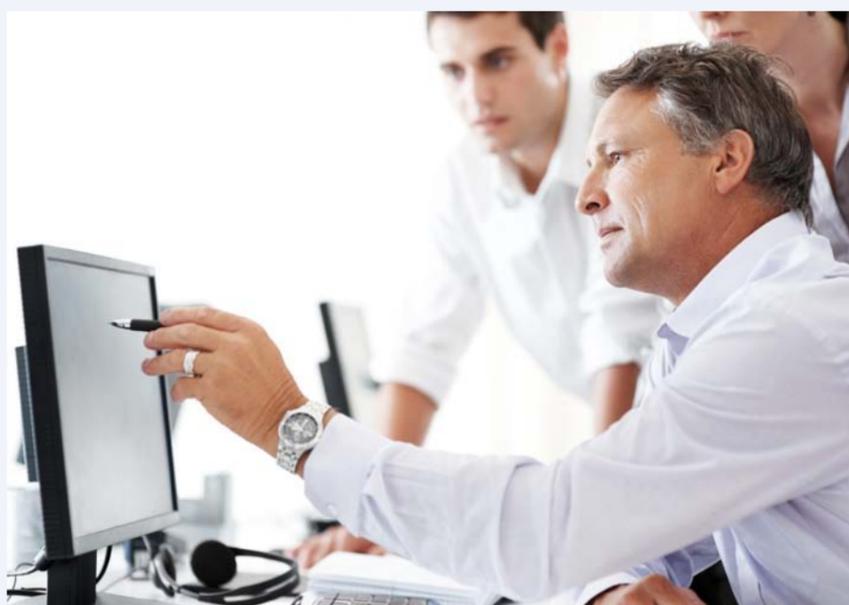
Our experienced team offers professional advice and support – over the phone or directly at your premises:

- Spare parts
- Repairs
- Upkeep/maintenance
- Remote maintenance
- Upgrades
- Conversions
- Training

Unsere qualifizierten Projektleiter stehen Ihnen als Ansprechpartner zur Seite, um individuelle Aufgabenstellungen intensiv zu besprechen und gemeinsam mit Ihnen zu lösen.

Vorausschauende Projektplanung führt zu Entwicklungen und CE-zertifizierten Konstruktionen, die auf nachfolgende Arbeitsprozesse abgestimmt sind, um die Lebenszykluskosten zu senken.

Mit IDEAL-Maschinen können Sie den Anforderungen des Marktes gelassen entgegensehen. In die durchdachte Grundausstattung sind langjährige Erfahrungswerte unserer Kunden eingeflossen. Intelligente Optionen öffnen Ihnen bei Bedarf zusätzliches Potential.



Typical applications

- etching lines
- coating lines
- inspection lines
- kiln lines
- press and punch lines
- profiling lines
- pipe fabrication lines
- galvanising lines
- pitch lines

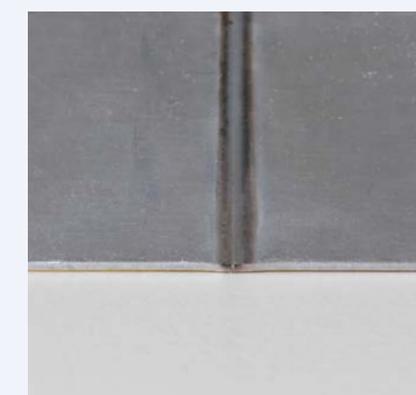
For individual requirements, the type LBS coil welding machines offer perfect solutions for the reliable welding of coils. Depending on the model and requirements, different degrees of automation with respect to the handling of the coil end can be realised. From manual to fully automated handling – everything is possible. With the welding method used, the coils are joined efficiently and cost-effectively. Optionally, the machines can be upgraded with various accessories.

With all machine types, the compact and rugged machine design with intuitive operation is made for industrial use in production. When the LBS and LAS machine types were designed, the focus was on the employees operating them, so special attention was paid to easy and ergonomic operation.

Used the world over, the IDEAL coil welding machines day after day deliver proof of their quality, durability and reliability – and that has been so for many decades.



Arc welding for high-performance coil joints



Arc welding



Laser welding

The type 041/043/044 LBS coil welding machines are extremely cost-effective models for the reliable welding of coils with manual handling of the coil ends.

The LBS 041/043/044 process coils with a width of max. 350 mm and a thickness of up to 3 mm. Optionally, with these models, you will receive an undercarriage for moving out of the production line as well as a manual smoothing roller for levelling the weld zone.



Compact, rugged and powerful – our models from the LBS 041/043/044 series

Persuasive advantages of the 041/043/044 LBS series:

- Affordable coil welding machine
- Precision coil shears for burr-free cuts
- Pneumatic clamping devices
- Alignment of the coil ends against the rear stops
- Use in punching and profiling lines

Optional modules for the LBS 041/043/044:

- Undercarriage for moving out of the production line
- Manual smoothing roller for levelling the weld zone



Modern Siemens KTP operator panel



Manual smoothing roller

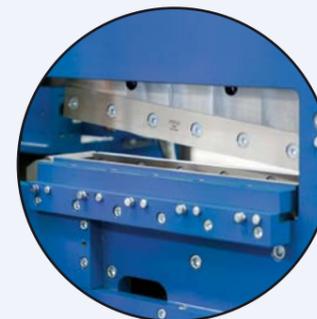


Persuasive advantages of the LBS 045 series:

- Creation of narrow strip joints with the same cross section without boundary craters
- Suitable for both steel as well as non-ferrous coils
- Pneumatic high-precision double-cutting shears with two-sided brackets for burr-free cuts
- Pneumatic clamping device during the coil handling in the rear rest position allows for unobstructed insertion of the coil ends and positioning fingers on an open machine table
- Alignment of the coil ends to a rear and centre stop with pre-tensioning of the coil ends over the positioning cylinder
- Use of positioning fingers to ignite the arc on the positioning finger so as to avoid boundary craters
- Dynamic drive of welding torch driven via servo motor with PLC controller for programming of torch speed, welding path and welding current
- Smoothing roller with manual or automatic control

Optional modules for the LBS 045:

- Undercarriage for moving out of the production line on rolls or rails
- Smoothing roller with manual or automatic control for levelling the welding point



Hydraulic double-cutting shears



Angle welding is possible

Machine type	LBS 041	LBS 043	LBS 044
Coil width mm	40 - 240 mm	15 - 320 mm	40 - 350 mm
Coil thickness mm	0,5 - 2 mm	0,3 - 3,0 mm	0,5 - 2,5 mm
Coil strength N/mm ²	500	500	500

Machine type	LBS 045/040/1,0	LBS 045/065/1,2	LBS 045/180/3,0
Coil width mm	8 - 40 mm	8 - 65 mm	40 - 180 mm
Coil thickness mm	0,2 - 1,0 mm	0,2 - 1,2 mm	0,8 - 3,0 mm
Coil strength N/mm ²	650	650	750

LBS 050: Coil joining at its best!

Our arc coil welding machines of the LBS 050 series join steel coils through MIG/MAG, TIG or plasma arc-welding, standing in front of each other in an I butt joint.

of the process and cut, positioned and welded from the position. This ensures a perfect I-joint and a consistently high quality at each weld.

The LBS 050 series achieves highly secure processes on account of the automated run with one-off fastening. Unlike with other machines, the material is fixated at the beginning

With the LBS 050, you can weld coils of a width of up to 1,250 mm!

Coil joining at its best!



LBS 050 – ideal for automated inline processes



State-of-the-art control unit
Siemens KTP



Arc process, MIG/MAG,
TIG, plasma according to
customer's request



Automatic smoothing roller

Persuasive advantages of the LBS 050:

- Highest possible reproducibility by the automated run
- With pneumatic clamping device for joining coils of a thickness of up to 2.5 mm using TIG or plasma welding
- With hydraulic clamping device for joining coils of a thickness of up to 5 mm thick using TIG or plasma welding
- Hydraulic double-cutting shears in heavy design, rest position outside the belt run
- Clamping the coil ends for the cutting and welding of the coil ends in just one clamping
- Coil centring either manually or automatically
- Cross slide for the alignment of the coil ends in clamped condition
- Automatic welding torch guidance

Optional modules for the LBS 050:

- Punch press for the seam detection
- Driving roller for automatic positioning of the coil end in front of the shears
- Light barrier

Machine type	LBS 050/320/2,5	LBS 050/400/2,5	LBS 050/500/2,5	LBS 050/650/2,0	LBS 050/1250/2,5
Coil width mm	70 – 320 mm	70 – 400 mm	80 – 500 mm	100 – 650 mm	400 – 1250 mm
Coil thickness mm	0,5 – 2,5 mm	0,5 – 2,5 mm	0,5 – 2,5 mm	0,5 – 2,0 mm	0,5 – 2,5 mm
Coil strength N/mm ²	500	500	500	500	500

Machine type	LBS 050/320/5,0	LBS 050/500/5,0	LBS 050/800/5,0	LBS 050/1000/5,0	LBS 050/800/7,0
Coil width mm	40 – 320 mm	60 – 500 mm	80 – 800 mm	100 – 1000 mm	80 – 800 mm
Coil thickness mm	0,65 – 5,0 mm	0,8 – 5,0 mm	0,8 – 5,0 mm	1,0 – 5,0 mm	1,5 – 7,0 mm
Coil strength N/mm ²	500	500	500	500	500

The special solution for pipe and smelting operations – for coil widths of up to 1,000 mm and coil thicknesses of up to 10 mm: Our heavy LBS 055 series with all the advantages of the basic type LBS 050. For the distortion-free welding of high coil strengths in combination with extensive automation in MIG/MAG, TIG or plasma process.



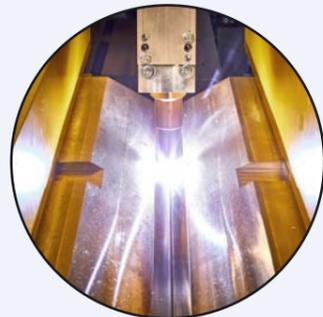
LBS 055 – processes coil thicknesses of up to 10 mm

Persuasive advantages of the LBS 055 series:

- Light barrier for the coil end stop
- Hydraulic double-cutting shears in heavy design, rest position outside the belt run
- Automatic removal of the cut coil ends from the machine
- Clamping the coil ends for the cutting and welding of the coil ends in just one clamping
- Automatic 4-roller coil centring on the feed in and feed out side
- Water-cooled welding bar with stop for variable air gap width in MIG/MAG welding for material thicknesses of up to 10 mm
- Cross slide for the alignment of the coil ends in clamped condition
- Automatic welding torch guidance
- Automatic milling off of the weld on the top and extraction of chips

Optional modules for the LBS 055:

- Milling attachment for the removal of excess material from the weld seam
- Chip extraction
- Light curtain for the protection of the operator
- Driving roller for automatic positioning of the coil end in front of the shears
- Punch press for the seam detection



MAG welding on clamping table



Milling device for smoothing the weld

Machine type	LBS 055/320/7,0	LBS 055/500/8,0	LBS 055/750/10,0	LBS 055/1000/7,0
Coil width mm	40 – 320 mm	70 – 500 mm	80 – 750 mm	100 – 1000 mm
Coil thickness mm	1,25 – 7,0 mm	1,75 – 8,0 mm	2,0 – 10,0 mm	2,0 – 7,0 mm
Coil strength N/mm ²	500	500	500	500

Our laser coil welding machines are used the world over in inspection lines, galvanising plants, coil coating systems, etching lines, pitch lines and continuous annealing lines. Leading steel manufacturers rely on these reliable machines to join their strips and coils and manufacture their products in a flexible and highly cost-effective way.

The coil welding machines can be extended to include further modules, e.g. smoothing device and weld seam monitoring.

Laser cross seam coil welding machines by IDEAL are widely used in the steel industry because they meet the most stringent requirements for the weld seam quality.

Throughout the world, steel coil manufacturers use IDEAL coil welding machines of the LAS 200 to 500 series to cut coils in one operation optimally with lasers and join them without any weld protrusion.

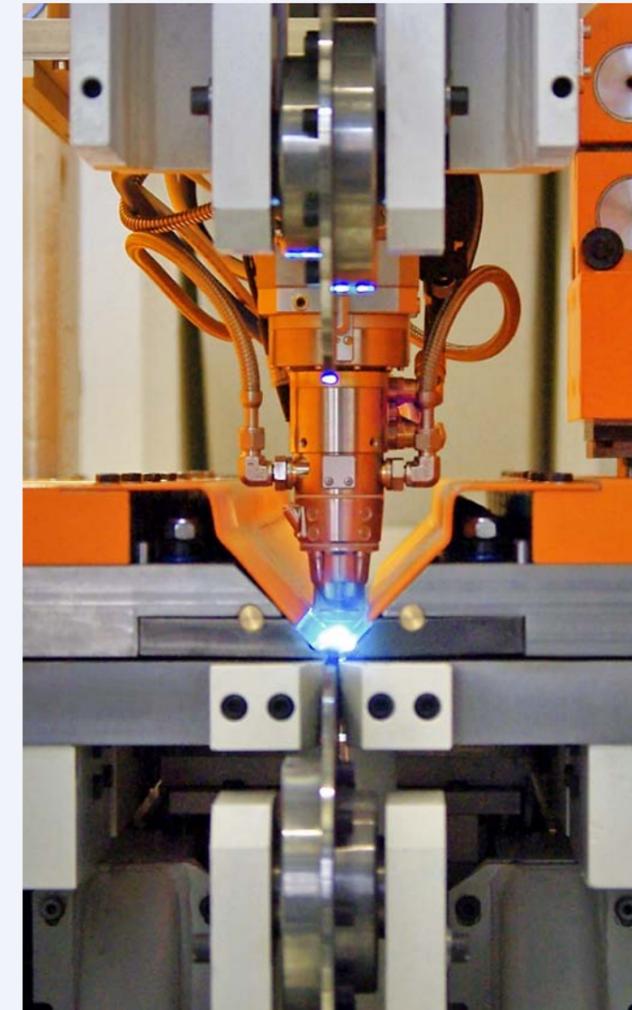
Cutting and welding by Laser!

Persuasive advantages of the LAS series:

- Coils with different widths and thicknesses
- Coil joints from the same or different materials
- Processing materials with high strengths
- Joining coils with high silicon content
- Welding of coated materials

Optional modules for the LAS series:

- Coil centring as a C-clamp or 4-point centring
- Hole units, by means of laser or mechanical
- Side punching, by means of laser or mechanical
- Smoothing device
- Annealing device
- Sling tables
- Drivers
- Weld monitoring



LAS 300 during the welding process



Perfect laser welding



IDEAL laser welding machine in a steel production line

Machine type	LAS 100	LAS 200	LAS 300	LAS 500
Coil width mm	1600 mm	1800 mm	2000 mm	2200 mm
Coil thickness mm	0,2 – 1,0 mm	0,4 – 3,0 mm	0,4 – 3,0 mm	1,5 – 6,5 mm
Coil strength N/mm ²	1600	1600	1600	1600



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