

An abstract graphic featuring two concentric circles. The outer circle is a lighter shade of blue, while the inner circle is a darker, more saturated blue. The circles are positioned in the upper half of the frame, with the inner circle slightly offset to the right. The background is a gradient of light blue and white.








Welding

Process diversity in perfection

CLOOS

Weld your way.

www.cloos.de

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Efficiency due to modern processes

The selection of the right welding process is essential for a successful production. With a large range of proven and innovative processes for manual and automated welding applications, we at CLOOS can offer solutions for the future providing excellent quality, maximum efficiency and productivity.

So, we continuously develop our welding processes in our technology centre under practical conditions.



With the right combination of process, equipment, parameters and our know-how arising from a tradition of nearly 100 years in welding and cutting, we find for you the perfect solution for your production task. Thus we can give you a decisive lead among your competitors.

Perfection due to diversity



Control Weld

Reliable MIG/MAG welding process for thin and thick materials



Speed Weld

Stable MIG/MAG pulsed arc for numerous applications



Vari Weld

MIG/MAG pulsed arc for optimum welding results even under demanding conditions



Rapid Weld

High-capacity MIG/MAG spray arc for efficient welding



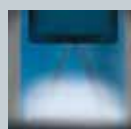
Cold Weld

Heat-reduced MIG/MAG AC pulsed arc for optimum results when welding sensitive materials



Tandem Weld

Combination of two synchronised MIG/MAG arcs for double capacity



Narrow Gap Weld

MIG/MAG process with narrow gap technology for efficient thick plate welding



TIG welding

Reliable process for clean and precise welding



Laser Hybrid Weld

Combination of laser welding and MIG/MAG arc for maximum efficiency and quality



Control Weld

Through thick and thin

Reliable MIG/MAG welding process for thin and thick materials

Control Weld covers the whole range of the controlled arc and is suitable for different applications. The classic MIG/MAG process offers a stable metal transfer from short arc to spray arc. At low power a short arc forms which is particularly advantageous when welding thin steel. When the power is increased the short arc turns to a spray arc.

With regard to spray arc, this process has more energy and there is more heat input in the base material and the wire than with the short arc process. There are only few spatters due to the small, short-circuit proof metal transfer which reduces rework considerably. Benefit from the versatile application possibilities of Control Weld.

Do you search a reliable entry process for perfect welding quality? Then rely on Control Weld by CLOOS!

Applications

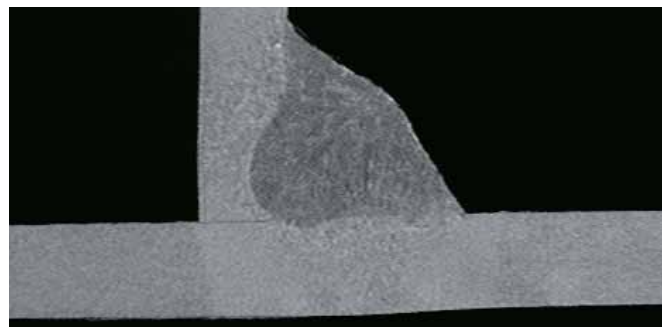
- Thin and thick plates
- Manual and automated welding
- Repair welding
- Welding under pure CO₂
- Welding with flux-cored wire
- MIG Brazing

Materials

- Steel
- High-strength steel
- Aluminium
- Chrome-nickel materials
- Coated plates

Your benefits

- Uniform arc
- Low heat input
- Good gap bridging ability





Application examples

Kuhn S.A.



Covering disks



Langmatz GmbH



Manhole cover



voestalpine AG



Axle casing



Speed Weld

Pulsed arc process for rapid welding

Stable MIG/MAG pulsed arc for numerous applications

Speed Weld is used in all sectors of industrial production and is perfectly suitable for joining components with different plate thicknesses. The Speed Weld process is a U/I-controlled pulsed arc. Here the pulse phase is voltage-controlled and very resistant to external influences, such as stickout changes for example. The background current phase is current-controlled and ensures that the arc is maintained also with low currents. Due to the voltage regulation of the pulse phase the arc stabilises itself because of the internal control.

With Speed Weld you achieve high welding speeds because of the directionally stable and powerful arc. You benefit from the excellent weld quality due to the deep penetration. You avoid extensive reworks as the pulsed arc technology reduces spatters to a minimum.

Do you look for a stable all-round process which can be used either in the low- or in high-capacity range? Then rely on Speed Weld by CLOOS!

Applications

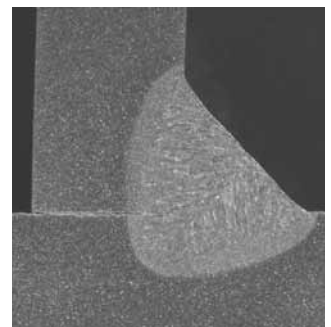
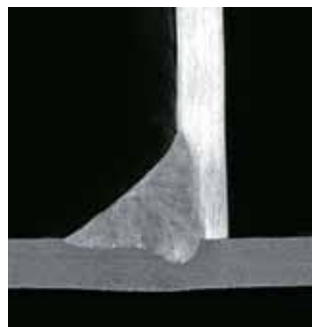
- Thin to thick materials
- Versatile use, either in the lower or in the upper capacity range
- Particular strengths in the case of aluminium applications
- Welding with flux-cored wire
- MIG Brazing

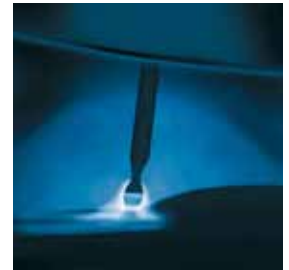
Materials

- Steel
- High-strength steel
- Aluminium
- Chrome-nickel materials
- Coated plates
- Heat-resistant steel

Your benefits

- High welding speed due to a stable arc
- Excellent weld quality due to deep penetration
- Reduced reworks thanks to the pulsed arc technology with regulated drop separation





Application examples

Terex Cranes Germany GmbH



Base frame



Stahl- und Metallbau IHNEN GmbH & Co. KG



Spinner supports



STAHA-Systemhallen GmbH



Hall girders





Vari Weld

For aluminium welding and MIG brazing

MIG/MAG pulsed arc for optimum welding results even under demanding conditions

Vari Weld is particularly suitable for aluminium applications, cladding or welds with special requirements regarding the appearance of the weld surface. The Vari Weld process creates an extremely low spatter pulsed arc. The arc control of this pulsed arc process ensures a constant amperage when the distance of the welding torch to the material changes. The capacity remains the same. Thus the weld pool is perfectly controllable within the whole capacity range.

The material characteristics remain nearly unchanged, particularly in the case of heat-sensitive materials. You avoid extensive reworks thanks to the reduced component distortion. So you achieve optimum welding results even under demanding conditions.

Do you wish a reliable welding process for excellent quality? Then rely on Vari Weld by CLOOS!

Applications

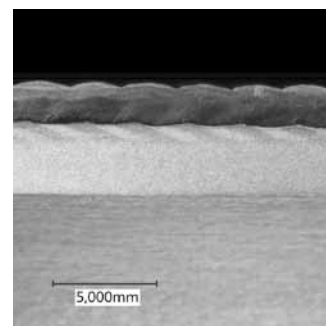
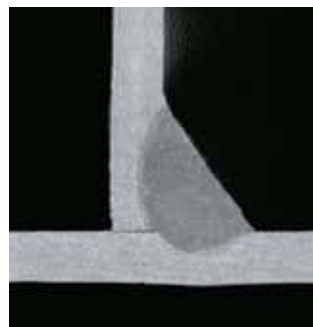
- MIG brazing of surface-coated or high-strength thin steel plates
- Sensitive materials
- Welding of flux-cored wires
- Cladding

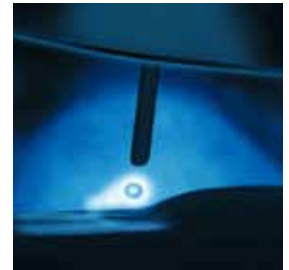
Materials

- Steel
- High-strength steel
- Aluminium
- Chrome-nickel materials
- Coated plates
- Heat-resistant steel

Your benefits

- Optimum weld pool control by a stable arc
- Conservation of the material characteristics due to minimised heat input
- Reduced reworks because of reduced component distortion





Application examples

LTI-Metalltechnik GmbH



Fan wheel



AGCO GmbH



Tractor cabin



Wessel GmbH Kessel- und Apparatebau



Heat exchanger pipe





Rapid Weld

That's what efficiency looks like!

High-capacity MIG/MAG spray arc for efficient welding

Rapid Weld provides advantages wherever high penetration depths and a safe root fusion are required. The process is particularly suited for manual and automated applications in industries such as construction machinery, shipbuilding and railway vehicle construction. Rapid Weld is a high-capacity spray arc. The special control generates a very focused stable arc with a very high arc pressure. With the help of special electrical parameters, both a wide arc and a narrow, focussed arc can be set. Thus you can exactly model the penetration profile. Due to the very small opening angle you reduce filler material and shielded gas. You obtain complete fusions due to the deep penetration. You reduce the welding time as considerably less welding layers are necessary.

Do you wish to bring down your production costs with a powerful process and to increase your welding productivity? Then rely on Rapid Weld by CLOOS!

Applications

- Thick steel materials
- Automated and manual welding
- Root passes in the case of thick plates
- Welding with a large stick out

Materials

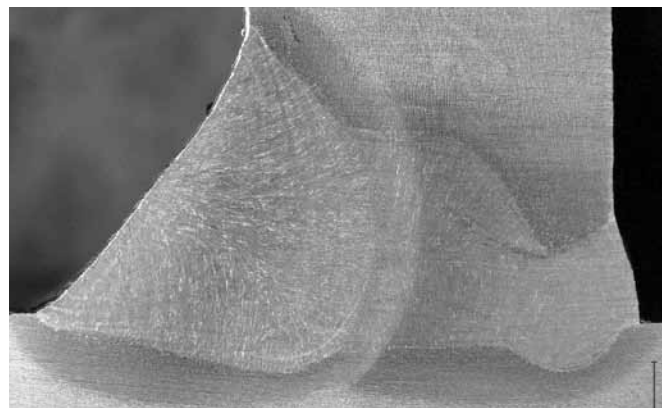
- Steel

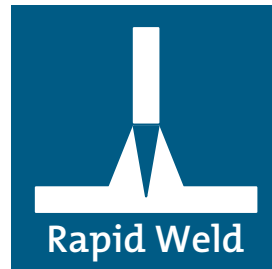
Your benefits

- Reduction of filler material and shielded gas due to a smaller opening angle

- Complete fusions thanks to deep penetration

- Minimised welding times because of a reduced number of welding layers





Application examples

Viessmann Group



Heating
boiler



Terex Cranes Germany GmbH



Base frame



GOLDBECK GmbH



Supports





Cold Weld

Welding with minimum heat input!

Heat-reduced MIG/MAG AC pulsed arc for optimum results when welding sensitive materials

Due to the minimum heat input, Cold Weld is perfectly suitable for thin plates and heat sensitive materials such as aluminium or high-strength steel. Cold Weld combines a pulsed arc with AC technology. By means of the polarity ratio the heat input in the component can be controlled very precisely. Thus the heat input can be controlled perfectly.

With Cold Weld you reduce your welding times due to the high deposition rate. You keep the original material properties because of the minimised heat input. You reduce the component distortion and avoid extensive reworks. You compensate material tolerances due to the good gap bridging ability.

Do you wish to reduce your production costs for thin plates and to increase the quality at the same time? Then rely on Cold Weld by CLOOS!

Applications

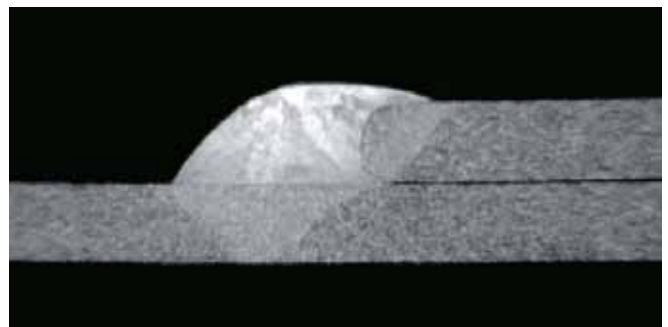
- Thin plates
- Welding of distortion-prone workpieces
- Very good automation capability
- Welding of workpieces with air gap

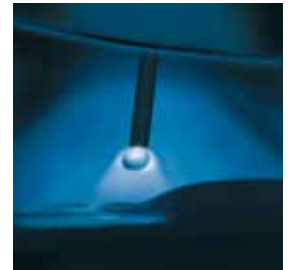
Materials

- Steel
- High-strength steel
- Aluminium
- Chrome-nickel materials
- Coated plates

Your benefits

- Reduced welding times because of high deposition rate
- Conservation of the material characteristics due to reduced heat input
- Avoidance of reworks thanks to minimised component distortion





Application examples

AKP Otomotiv



Fuel tank



Matyssek Metalltechnik GmbH



Hood





Tandem Weld

Powerful welding times two

Combination of two synchronised MIG/MAG arcs for double capacity

Tandem Weld can be universally applied either for thin or for thick plate welding. In the Tandem Weld process, two arcs burn in a common molten pool. The process is based on two electrically separated processes which match each other perfectly. This possibility opens up a multitude of combinations. The front wire ensures a safe penetration, the back wire quickly fills big joints with filler material. The high deposition rate can result in weld speed or in volume filling. Therefore, Tandem weld is suitable for thin and for thick plates.

With Tandem Weld you reduce your welding times due to the high deposition rate. You reduce the component distortion and avoid extensive reworks thanks to the low heat input. You compensate material tolerances due to the good gap bridging ability. You benefit from the wide range of applications as Tandem Weld can be used for many materials and thicknesses.

Do you wish to maximise the efficiency of your weld production? Then rely on Tandem Weld by CLOOS!

Applications

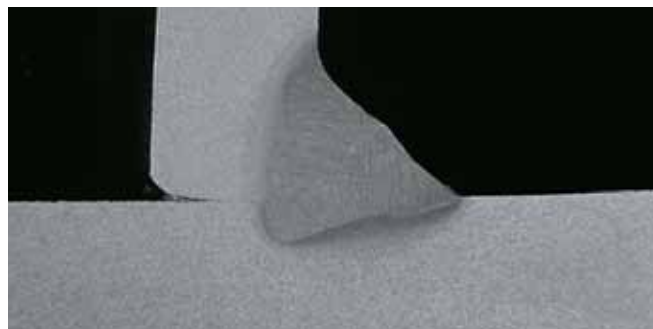
- Universally applicable
- Thin to thick materials
- Automated welding
- Welding with a high duty cycle
- Applications requiring high deposition rates

Materials

- Steel
- High-strength steel
- Aluminium
- Chrome-nickel materials
- Coated plates

Your benefits

- Maximum weld speed because of high deposition rate
- Reduced component distortion thanks to low heat input
- Compensation of material tolerances due to good gap bridging ability





Application examples

Albert-Frankenthal GmbH



Print rollers



SCHOTTEL GmbH



Structural
support tube



F.X. Meiller GmbH & Co. KG



Dumpers





Narrow Gap Weld

Revolution for thick plate welding

MIG/MAG process with narrow gap technology for efficient thick plate welding

Narrow Gap Weld is suitable for plates with a material thickness of more than 35 mm. The narrow gap blade is the heart of narrow gap welding. The oscillating wire guarantees optimum side wall joints. The narrow gap blade is able to enter into gaps which are up to 300 mm deep, but only 20 mm wide. It guides wire, shielding gas and coolant.

With the narrow gap technology you just start saving during the prefabrication as there is no need of a weld seam preparation. You reduce the machine running time and the need of welding wire. You need less shielding gas. And you save energy.

Do you wish to reduce your production costs for thick plates and to increase the quality at the same time? Then rely on Narrow Gap Weld by CLOOS!

Applications

- Plate thicknesses of more than 35 mm
- Equipment manufacturing
- Tank construction for raised manholes
- Systems for power generation

Materials

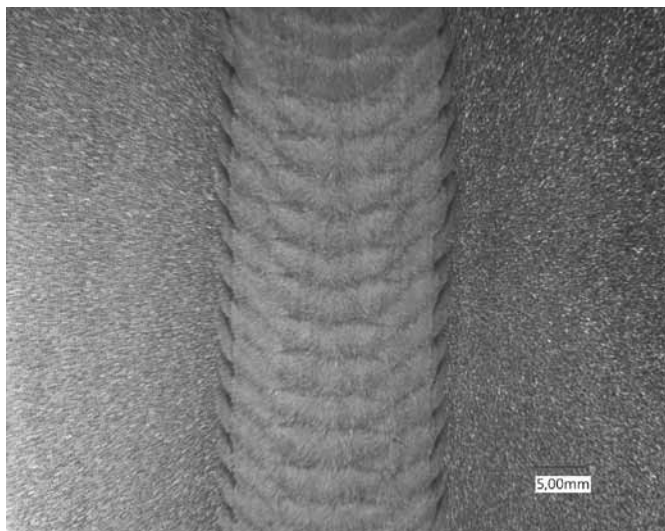
- Steel
- High-strength steel
- Heat-resistant steel

Your benefits

- Less material consumption because of reduced weld volume

- Shorter production times due to reduced number of welding layers

- Avoidance of reworks thanks to minimised heat input





Application examples

Siemens AG



Turbine housings



BORSIG Process Heat Exchanger GmbH



Custom heat exchangers





TIG welding

Clean, precise and reliable

Reliable process for clean and precise welding

With the CLOOS products for TIG welding you are always a pinpoint ahead. Thin plates or pipe constructions: CLOOS has the right products for all materials and the most different components. The TIG welding process is very good for automation purposes and application at the robot. But we also offer small and compact inverter technology for workshop and trade.

You can individually adapt the deposition rate to the welding task as the welding power is not coupled to the wire feed. Avoid extensive reworks due to high-quality, spatter-free welds.

Do you wish a reliable welding process for excellent quality? Then rely on the TIG welding process by CLOOS!

Applications

- Thin to thick materials
- Root welding
- Visual welds
- Pipeline construction
- Equipment and reactor construction

Materials

- Steel
- Aluminium
- Chrome-nickel materials

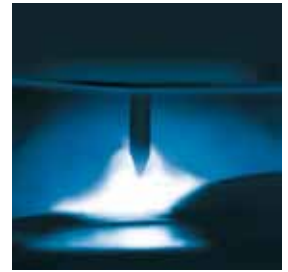
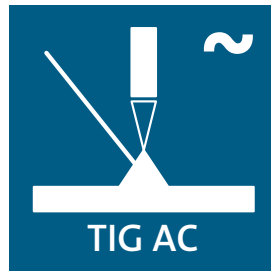
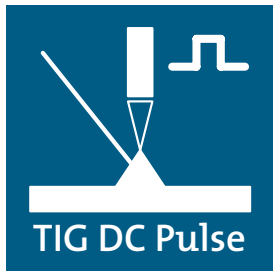
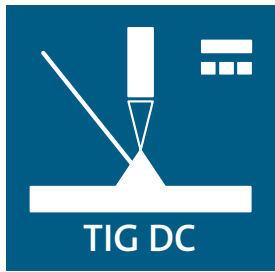
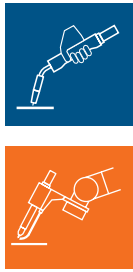
Your benefits

Individual adaptation of the deposition rate by uncoupling the welding capacity from the wire feed

Avoidance of extensive reworks due to high-quality, spatter-free welds

Excellent weld quality because of reliable process





Application examples

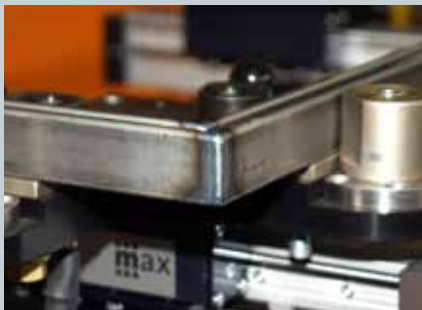
Hilge GmbH & Co. KG



Pump housing



SPARTHERM Feuerungstechnik GmbH



Door frame



häwa GmbH



Housings





Laser Hybrid Weld

As efficient as never before

Combination of laser welding and MIG/MAG arc for maximum efficiency and quality

Laser Hybrid Weld is perfectly suitable for long, straight weld seams. Laser Hybrid Weld combines a laser beam with a MIG/MAG welding process in one common process zone. You benefit from the advantages of both welding processes. A restricted light beam with focus on the weld is created which is characterised by a very high energy density. This energy evaporates the material and penetrates it deeply. The MAG arc fed to the laser fills the crater and ensures a perfect side wall fusion. The main advantages of Laser Hybrid Weld are a deep penetration, low heat input and perfect side wall joints.

With Laser Hybrid Weld you increase your productivity due to highest welding speeds. You need less filler material because of the reduced number of welding layers. You reduce the component distortion and avoid extensive reworks thanks to the low heat input. You accelerate your whole production process by means of the reduced weld preparation.

Do you wish to combine maximum productivity and minimum costs? Then rely on Laser Hybrid Weld by CLOOS!

Applications

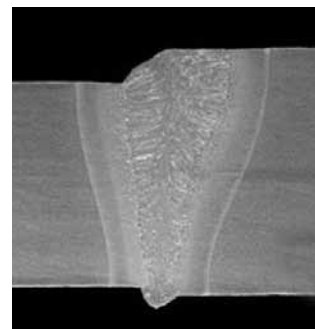
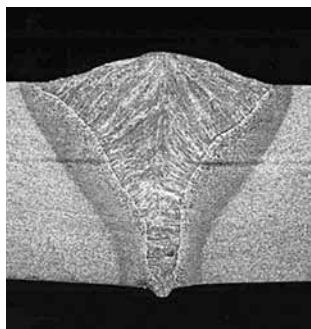
- Long straight welds
- Thin plates and thicker materials
- Heat-sensitive workpieces
- Complete fusions up to 15 mm plate thickness

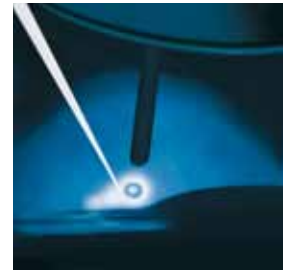
Materials

- Steel
- High-strength steel
- Aluminium
- Chrome-nickel materials
- Coated plates

Your benefits

- Increased productivity due to maximum welding speed
- Less filler material because of a reduced number of welding layers
- Less component distortion due to low heat input





Application examples

TMS Metall- und Stahlbau S.A.



Housing



Manitowoc Deutschland GmbH



Telescope boom



Palfinger AG



Telescope boom



From the idea to the finished component, a whole product life ...

1. Consulting

With this comprehensive "pre-service", we take care of your project from the beginning and transfer our integrated process expertise to your component.. Thus we ensure you a decisive lead in technology.



2. Planning

We elaborate a solution which perfectly meets your individual requirements. We work hand-in-hand with our customers to guarantee you on-schedule project processing.



3. Design

From the cell to the fully-automated production line - due to the modular design of our product series we develop customised solutions which meet all your production requirements.



...with our tried-and-tested products and systems - from a single source!



Robots



Power sources



Workpiece positioner

4. Production

Our production workshops are the core of our company.

Welding machine and robot technology is our strength - including our core competence: the arc.



5. Commissioning

Our specialists carry out the installation step-by-step in your production hall and test your system for faultless functionality. In this way, we guarantee a smooth installation and a rapid start of production.



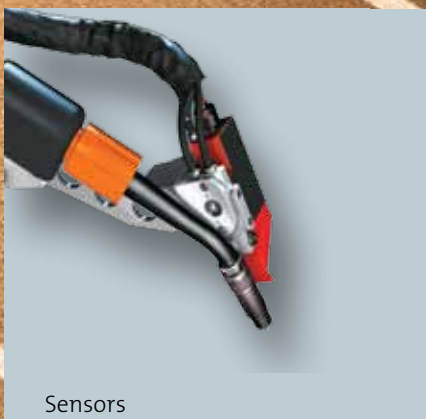
6. Training

We train your employees and service technicians in programming, operation and maintenance in our modern training centre.



7. Service

Our competence team advises you on any extensions, modifications and retrofits of your existing robot and welding systems. We offer complete service packages for inspection, calibration and maintenance.



Sensors



Process software



Machine control systems



Weld your way!

Providing added value for our customers! – This is the motivational force behind our 700 employees. We are constantly raising the bar by pushing ourselves to provide innovative welding processes and solutions that will contribute to the long-term commercial success of your company!

Our process competence is at the forefront in welding and cutting of various ferrous and non-ferrous metals. We offer our customers individual solutions which are optimised and adapted specifically to your product and production requirements. Leadership and competence equals process automation and welding at its best.



Whatever your needs are, we “Weld your way.”
CLOOS develops, manufactures and delivers innovative solutions in more than 40 countries worldwide.

With QINEO, the new generation of welding machines for manual and automated applications, and QIROX, the system for automated welding and cutting, our product range covers the entire spectrum of arc welding technology. Our product portfolio includes intelligent software, sensor and safety technology solutions – all of which are customised to meet your specific needs and requirements! CLOOS provides full service solutions – all from a single source!

With CLOOS you weld and cut ...



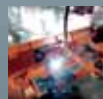
... all types of metal!



... all material thicknesses from 0.5 to 300 mm!



... with innovative processes!



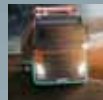
... manually or automated, just as you need it!



... efficiently and individually!



... and profit from many additional services!



... in all industries!



... all over the world!



... to your utter satisfaction!



... and benefit from almost 100 years of welding experience!

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Weld your way.