



Welding Machines

Unrivalled
performance
in welding
automation

For Welding **Professionals**

Contents



Our machines are the most precise, durable, and reliable in the industry. Designed for simplicity and easily upgradable to the next generation, backed by technical expertise and a comprehensive spare parts inventory.

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Our company

For the last 50 years, Welding Alloys has pioneered the design and manufacture of automated welding machines. Our range of machines offers the most sophisticated technology, enabling high quality and reproducibility of demanding hardfacing, cladding and rebuilding applications.

To complement our automated machines and ensure optimised performance and welding quality, Welding Alloys produces a wide range of advanced welding consumables, available globally.

Since 1966, the Welding Alloys name has been synonymous with excellence in research and development (R&D), resulting in a steady stream of innovative products and advanced technical solutions and services.

Today, our R&D and technical teams remain at the heart of the business, able to solve the most complex industrial wear protection challenges by leveraging the latest scientific and engineering practices.

Many of our technological innovations are a result of tapping into our network of academia, standards organisations, welding associations, and research partnerships across the world. We deliver fast-track wear protection solutions in the most challenging environments and industries, through multidisciplinary teams located around the globe.

Welding Alloys is a participating member of the United Nations Global Compact and supports all principles relating to the environment, labour, human rights, and anti-corruption. We continue to improve our products and processes in order to optimise energy consumption, increase safety and reduce our impact on the environment. We do this through continuous innovation of the technologies used in our machines and our retrofit solutions, which provide an economical solution to improve performance, with less waste.

History

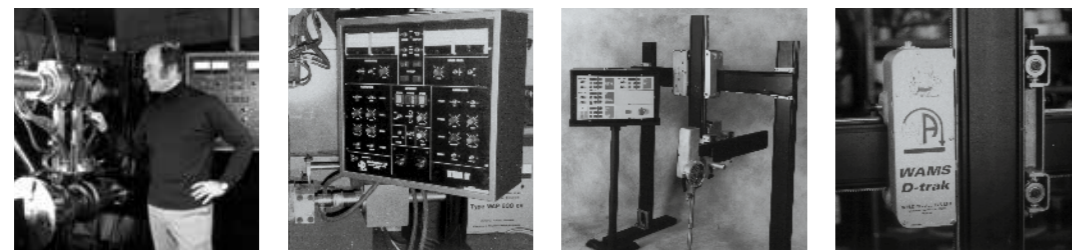
The story of Welding Alloys is one of passion, courage, and innovation. Our founder, Jan Stekly, was first introduced to the world of wire production while working at a wire mill during a summer holiday in Vancouver, Canada. In 1966 Welding Alloys was born.

From as early as 1974 Welding Alloys designed and manufactured our first generation of welding machines. Since then, we have continued to innovate and produce world class automated welding equipment.

Today our machines are designed and manufactured in Colmar, France, ready for delivery, installation and training across the globe.

<p>1966</p> <p>The founding of Welding Alloys Ltd in Fowlmere by Jan Stekly</p>	<p>1974</p> <p>We design & manufacture our first generation of D-Trak welding machines</p>	<p>1983</p> <p>We introduce the first modular system WAMS</p>	<p>1989</p> <p>We design & manufacture our first generation of truly portable machines</p>	<p>1993</p> <p>WAMS Robo trak is added to the range to allow for program recording</p>
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<p>1997</p> <p>We launch our second generation of fully digital welding machines - WAMS D2</p>	<p>2007</p> <p>Third generation of fully digital welding machines operated by D3 technology</p>	<p>2016</p> <p>Our new generation Sugar Mill Kit is launched</p>	<p>2020</p> <p>Welding Alloys adds the Flex e.bot (cobot) to our range of machines</p>	<p>2023</p> <p>Thousands of Welding Alloys machines operating across the globe</p>
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For decades, Welding Alloys has been manufacturing advanced automated welding machines operated by the latest technology.

Welding Alloys machines: our offer

Renowned for engineering excellence, Welding Alloys manufactures a comprehensive range of top-tier welding equipment designed for specialist applications in hardfacing, cladding, rebuilding, and joining. Our machines incorporate state-of-the-art technology, enabling intricate and accurate welding patterns with our advanced D3 Touch and D3 Pendant control systems.

We understand the importance of customisation, which is why our control system offers tailored user access and permissions to meet specific requirements. Our versatile machines can be seamlessly adapted to accommodate various welding processes and are compatible with both single and multiple heads. Whether operation with a single wire or twin wire is required, our machines deliver unmatched performance and flexibility.

As a trusted manufacturer, Welding Alloys specialises in producing heavy-duty fixed installation machines, portable machines, and custom machines tailored to specific applications.

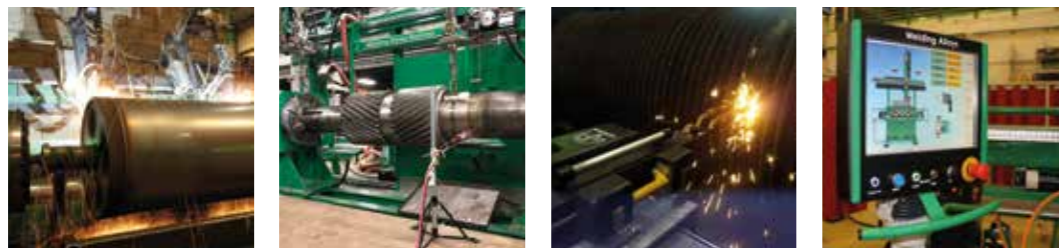
Our comprehensive range is backed by a team of technical experts who ensure seamless on-site commissioning and start-up of all our machines. We provide training to operators and supervisors worldwide and our dedicated support network guarantees that customers receive the necessary guidance and expertise to maximise machine performance.

In addition to our new machines, Welding Alloys provides retrofit solutions for outdated or obsolete equipment. We offer seamless upgrades, equipping old machines with the latest technology advancements.

Welding Alloys provides exceptional support for our welding machines through a global spare parts inventory and distribution network. We are committed to excellence, ensuring maximum machine uptime and productivity; further solidifying our dedication to customer satisfaction.



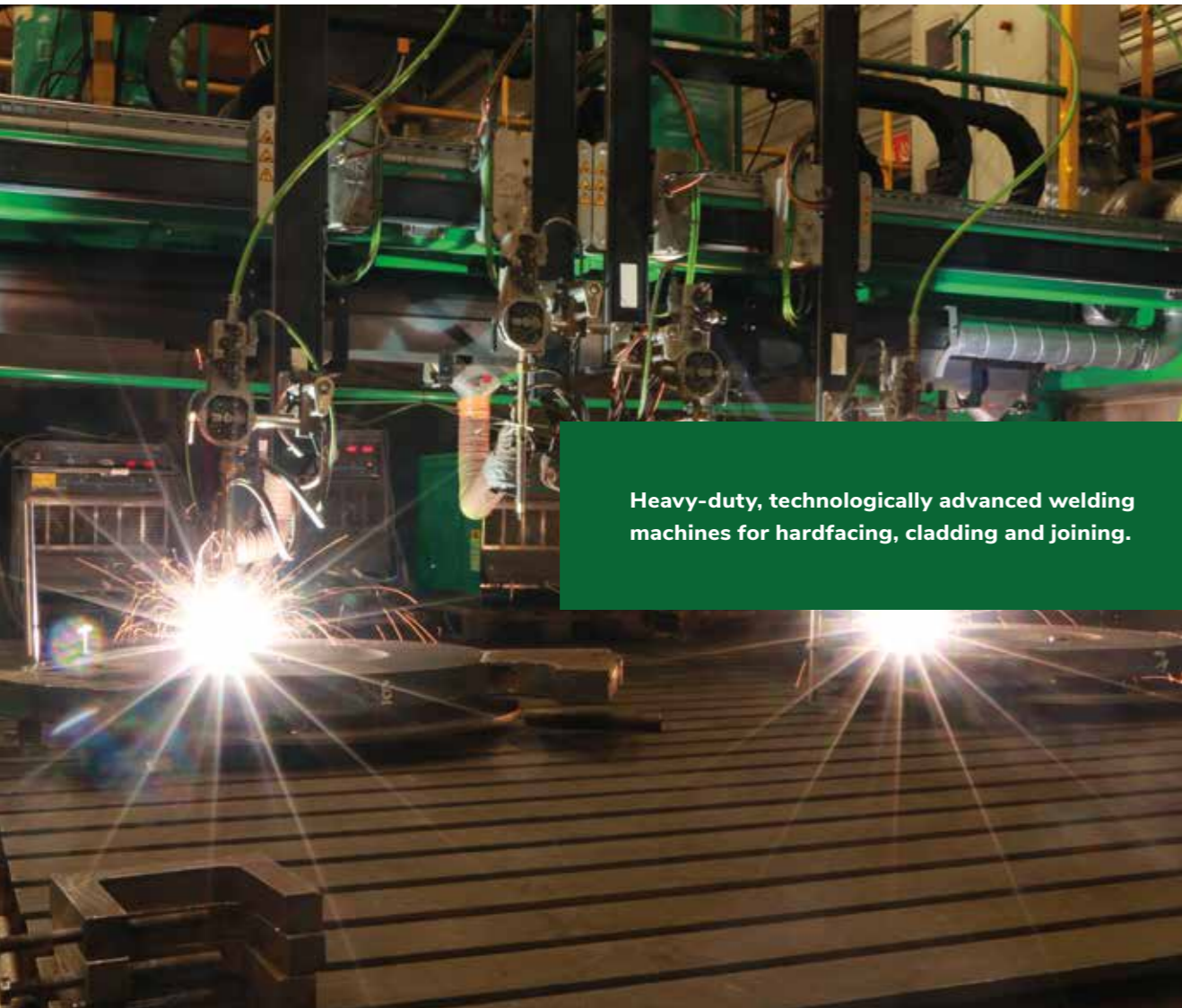
An extensive range of machines to increase welding efficiency, quality and productivity.



Fixed installation welding machines

Our range of fixed installation welding machines offers heavy-duty hardware driven by the latest technology. Engineered to perfection, our equipment sets the industry standard by delivering unmatched quality and reproducibility in the most challenging hardfacing, cladding, and rebuilding welding applications.

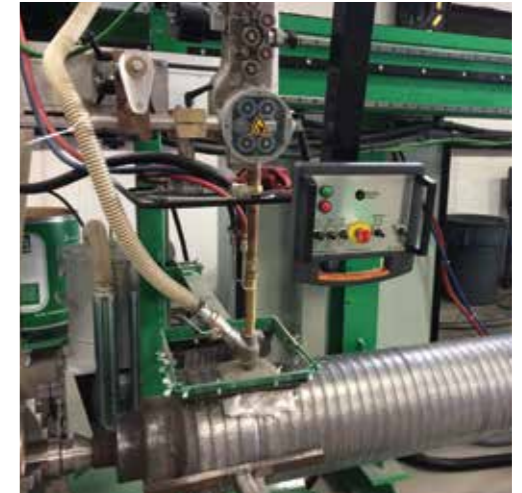
To achieve optimal performance, our fixed installation machines seamlessly integrate with our extensive range of cored welding wires. This combination ensures enhanced performance and exceptional results. Welding Alloys provide complete welding solutions to guarantee unparalleled performance, reliability, and efficiency for customers.



Heavy-duty, technologically advanced welding machines for hardfacing, cladding and joining.

Roll Cladder

Tailored to meet the demanding requirements of the steel industry, our Roll Cladder is purpose-built for precise cladding and hardfacing of rolls. With its robust hardware and exceptional performance, it sets new benchmarks for reliability and efficiency. Customers can expect flawless welds of impeccable quality, achieved effortlessly through our user-friendly advanced control system. The Roll Cladder stands out for its adaptability and productivity, capable of welding either one, two or multiple rolls with either one, two, or multiple welding heads at the same time.



This machine is engineered for cladding and hardfacing of:

- Continuous casting rolls
- Hot strip mill rolls
- Pinch rolls
- Coiler rolls



Scan the QR code for more information.

For optimum productivity, combine the Roll Cladder with one of our most suitable consumables and achieve a wire throughput of up to 15 kg per hour per head.



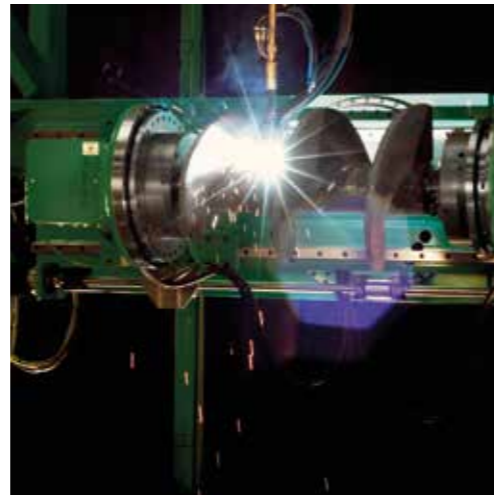
Suitable consumables:
CHROMECORE 414N-S
CHROMECORE 430N-S
STELLOY 21-G



Screwflight

As one of the most versatile fixed installation machines in our range, the Screwflight is meticulously designed to optimise cladding productivity for various screw parts. Its exceptional 5-axis movement combination, coupled with the machine's ability to maintain constant surface speeds, allows the screw to be oriented in any direction whilst still maintaining the highest weld quality, consistency and unparalleled accuracy.

With the Screwflight, customers benefit from seamless cladding of screws with utmost efficiency. This advanced machine unlocks new levels of welding precision.



This machine is suitable for the cladding of:

- Oil screws
- Drill stabilisers
- Process screws

For optimum productivity, combine the Screwflight with one of our most suitable consumables and achieve a wire throughput of up to 10 kg per hour per head.



Suitable consumables:

ROBODUR K 600-G
HARDFACE HC-O
HARDFACE NICARBW



Scan the QR code for more information.

Rotary Yoke Cladder

The Rotary Yoke Cladder holds a significant place in Welding Alloys' history as one of our initial machine innovations. Over the years, we have continuously evolved and upgraded this machine, incorporating the latest technology to ensure optimal performance. Today, the Rotary Yoke Cladder stands as a pinnacle of excellence, specifically engineered for heavy-duty operations that demand precise welding of components in various directions.

Our Rotary Yoke Cladder exemplifies complete control, allowing for meticulous management of the weld.



This machine is designed for precision overlay welding of:

- Marine pistons
- Forging dies
- Ball valves
- Idler wheels
- Combustion valves
- Process valves
- Profile rolls

For optimum productivity, combine the Rotary Yoke Cladder with one of our most suitable consumables and achieve a wire throughput of up to 10 kg per hour per head.



Suitable consumables:

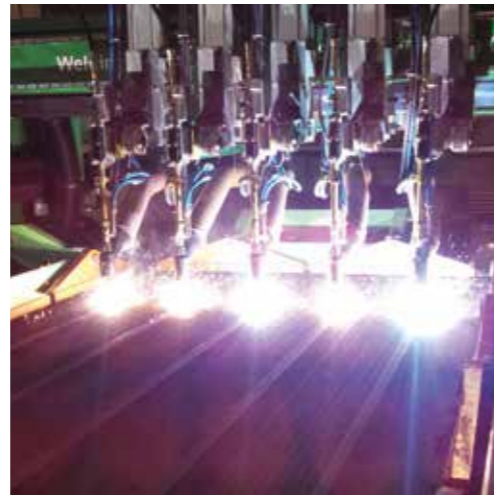
HARDFACE NICARBW
STELLOY 6-G
ROBODUR K 600-G



Scan the QR code for more information.

Flat Plate Cladder

The Flat Plate Cladder stands as a comprehensive solution for the production of hardfaced plates, offering a turnkey package designed to deliver unparalleled accuracy and reliability. With the Flat Plate Cladder, achieve impeccable bead geometry across a range of bead profiles consistently. This precision ensures minimal post-weld plate processing, streamlining operations and maximising efficiency.



This machine is engineered to produce plates suitable for:

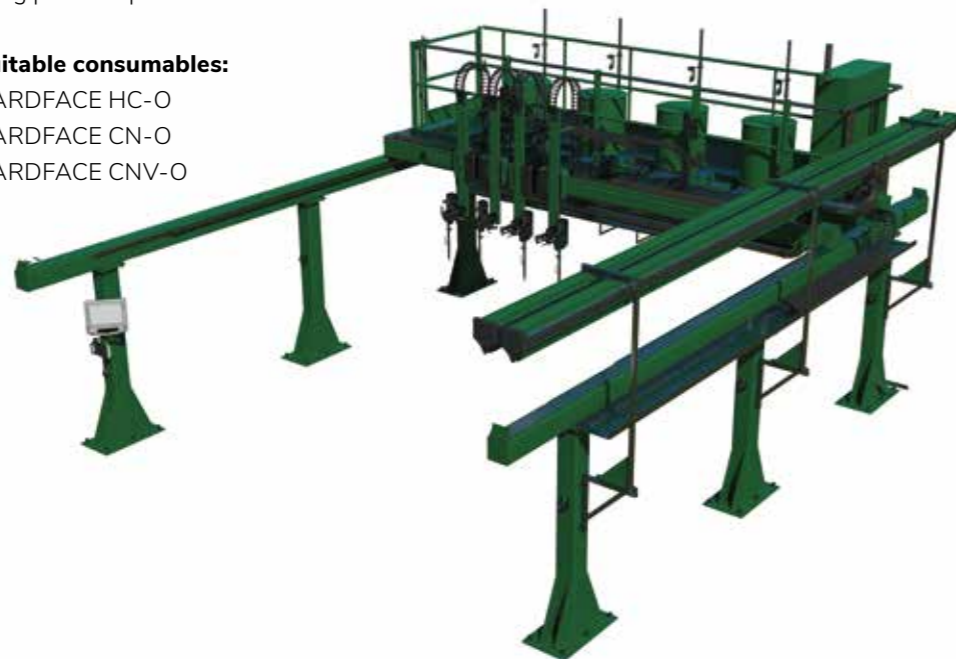
- Sieves
- Fans
- Cones
- Chutes
- Rotary valves

For optimum productivity, combine the Flat Plate Cladder with one of our most suitable consumables and achieve a wire throughput of up to 21 kg per hour per head.



Suitable consumables:

- HARDFACE HC-O
- HARDFACE CN-O
- HARDFACE CNV-O



Rotary Plate Cladder

The Rotary Plate Cladder, a variant of our Flat Plate Cladder, is designed to maximise plate cladding productivity. Benefit from all the exceptional features that the Flat Plate Cladder offers, but mounted on a robust drum up to 8 tons. This cutting-edge machine is capable of hardfacing single or double plates with minimal arc downtime, thanks to the seam jump facility.



Compared to machines with older technology, our Rotary and Flat Plate Cladder machines significantly reduce wire wastage by 770 kg per week for equivalent jobs. This substantial reduction in waste translates to improved efficiency, cost savings, and a more sustainable welding process.

This machine is engineered to produce plates suitable for:

- Sieves
- Fans
- Cones
- Chutes
- Rotary valves



For optimum productivity, combine the Rotary Plate Cladder with one of our most suitable consumables and achieve a wire throughput of up to 21 kg per hour per head.

Suitable consumables:

- HARDFACE HC-O
- HARDFACE CN-O
- HARDFACE CNV-O



H-Frame

The H-Frame, our most versatile fixed installation machine, is designed to deliver fast and effortless set-up for various components in hardfacing and cladding applications. With its adaptable nature, the H-Frame can be customised and configured to suit virtually any workshop environment, making it an ideal choice for diverse operational requirements.

This cost-effective machine is a reliable performer, consistently delivering flawless welds of impeccable quality. With the H-Frame, customers achieve maximum productivity across a wide range of applications.

This diverse, machine is suitable for cladding or hardfacing a range of parts including:

- Valves
- Screws
- Rolls
- Pipes

For optimum productivity, combine the H-Frame with one of our most suitable consumables. Wire throughput varies based on the custom configuration of the machine.



Suitable consumables:

HARDFACE HC-O
HARDFACE TIC-O
STELLOY 21-G



Scan the QR code for more information.



Cost-effective, versatile machines capable of carrying out a range of complex welds.

Portable welding machines

Discover our world-class range of portable machines, purpose-built to deliver cost-effective solutions and unparalleled flexibility for hardfacing, cladding, rebuilding, and joining applications. Each machine is designed to enhance efficiency while prioritising health and safety, surpassing the limitations of manual welding.

Our portable machines set the industry standard by combining exceptional performance with improved operational efficiency. When paired with our range of consumables, these machines achieve optimal performance, delivering outstanding results.



Lightweight, portable welding machines to reduce maintenance downtime.

Workshop Maintenance Kit (WMK)

Transitioning from manual welding to automation has never been easier with our Workshop Maintenance Kit. This portable machine is lightweight, yet robust, and capable of withstanding harsh environments. Enhance welding efficiency and ensure consistent, high-quality results in a range of applications with the WMK. Versatility is at the core of this machine, offering a range of configurations to suit specific requirements, and assembling the machine is effortless.

This versatile machine can be used for:

- Cone cladding
- Process flange cladding
- Beam welding
- V-Joints
- Saddle build-up
- Long fillet welds
- Pipe joints



To achieve maximum productivity and quality, combine the WMK with one of our below consumables:

- HARDFACE HC-O
- HARDFACE TIC-O
- GAMMA 182



Scan the QR code for more information.



Sugar Mill Kit (SMK)

The Sugar Mill Kit is specially designed for applications within the sugar industry. This lightweight machine, when combined with our high-performance flux cored welding wire, represents the ultimate solution for optimising crushing efficiency and extending the service life of sugar rolls. Experience unparalleled performance and cost savings with our SMK welding machine.

Seamless set-up and installation ensure effortless integration, whether in workshops or on-site. Our dedicated machine offers ease of use and exceptional welding results with minimal effort.

This lightweight machine is suitable for:

- Arcing
- Side cladding
- Rebuilding
- Teardrop welding



To achieve maximum productivity and quality, combine the SMK with one of our below consumables:

HARDFACE MAXEXTRACT
HARDFACE MAXEXTRACT PLUS
HARDFACE TIC-O



Scan the QR code for more information.



Optimise welding efficiency through automation for maximised uptime and unparalleled quality.

Custom welding machines

At Welding Alloys, we understand that every welding application is unique. That's why we go beyond our standard range of welding machines to offer flexibility through customisation. Our machines can be tailored to suit customers' specific and niche requirements, ensuring the perfect machine to get the job done.

With our customised welding solutions, customers can experience a seamless integration of cutting-edge technology and tailored functionalities.

Our range of custom welding machines includes:

- **Frog Top Rail (FTR)** - designed for weld restoration of train rails and special trackwork contact surfaces, such as turnout frogs.
- **Gauge Corner Restoration (GCR)** - specifically designed for gauge corner restoration, a procedure used to rebuild the worn corner of the rail by welding, in order to increase its service life.
- **Column & Boom** - a fully customisable machine built for the hardfacing and cladding of large components rotated by a turntable or rotator set.

- **Box Beam** - an automated welding machine designed for joining heavy-duty structural steel box section fabrications.
- **Elbow Cladder** - a heavy-duty automated welding machine designed for the internal cladding of elbows subject to high wear.
- **Internal Pipe Cladder** - an automated machine that is fully customisable and designed for weld cladding of internal pipe bores.
- **Manipulator System** - designed for cladding of components such as valves, crusher rolls and other types of heavy-duty components. This machine is a versatile solution that can be used in several industries.
- **Profile Roll Cladder** - an automated welding machine that provides a dedicated solution for profile, forming and shaping roll cladding needs.
- **Flex e.bot (Cobot)** - this versatile robotic solution can be operated in semi-automatic or robotic modes to perform a range of weld surfacing jobs and complex weld overlays.



Control systems



All our machines are powered by the D3 Touch and D3 Pendant control technology, setting new standards in operational excellence.

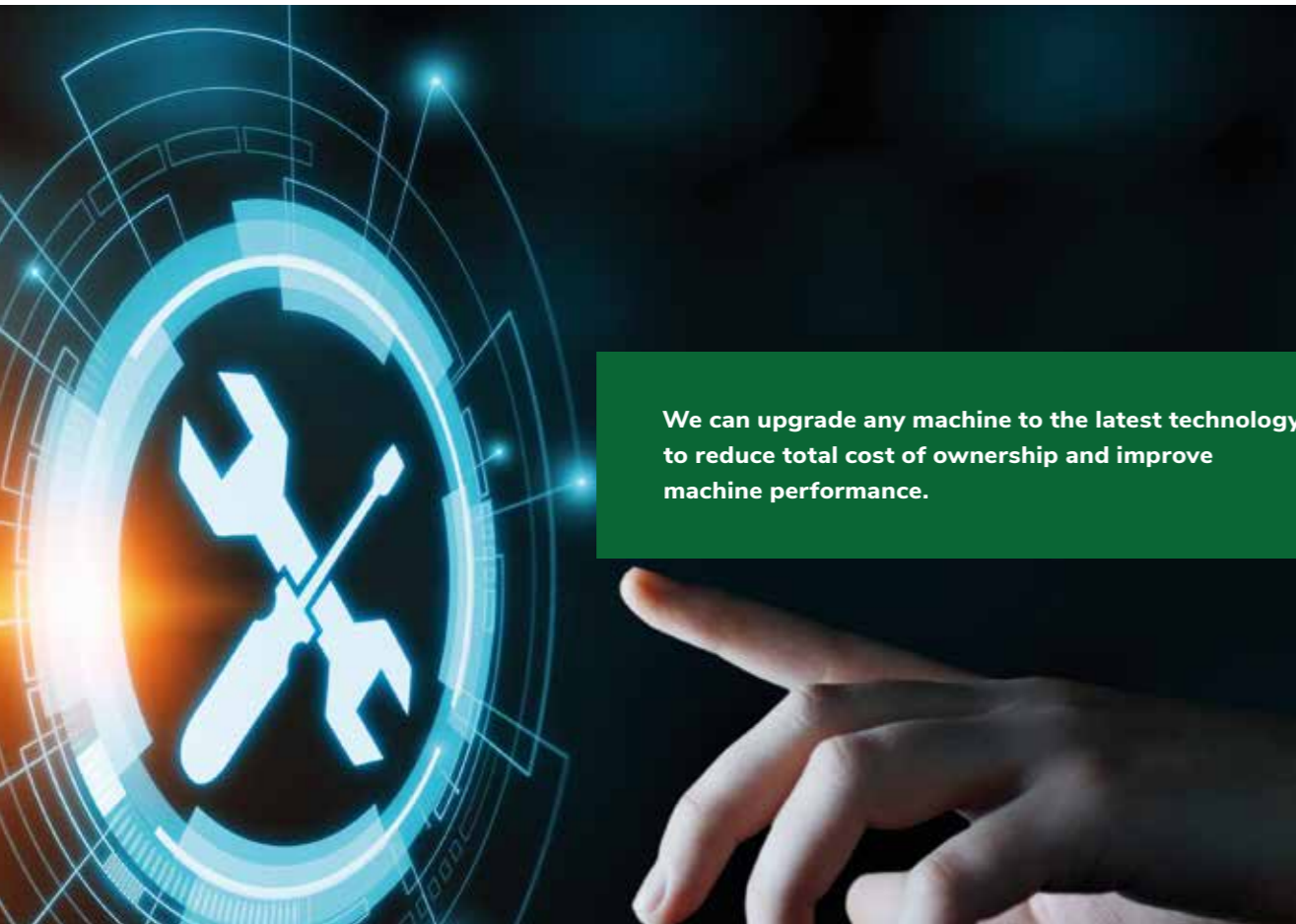
The D3 Pendant control box, using the latest generation D3 technology, serves as the primary control system for operating our portable welding machines. Designed to be compact, lightweight, and user-friendly, it encompasses all the essential features necessary for flawlessly executing even the most intricate welds.

D3 Touch provides touch screen based control technology for automation, capable of carrying out highly effective and efficient fully automated welding techniques and processes. This intuitive and advanced control system enables precise control and seamless integration.

Benefits of D3 Touch technology:

- Configure repeatable welding parameters to reduce set-up time
- Provides precision welding – reducing material/welding consumables used
- Improves productivity through high efficiency/low downtime
- System is simple to use and program with only the requirement for one operator
- Full traceability of materials and welding processes used with the data logging feature
- Minimises human interference during production
- Reduced costs

Retrofits & upgrades



We can upgrade any machine to the latest technology to reduce total cost of ownership and improve machine performance.

Keeping welding equipment and production at optimal levels, even with older or obsolete machines is essential. Welding Alloys offer comprehensive retrofit solutions that breathe new life into existing machinery, ensuring enhanced performance and productivity.

With our retrofit solutions, customers can retain the existing sturdy and reliable heavy-duty machine frame, while benefiting from the latest software advancements.

Experience a remarkable improvement in performance, all at a fraction of the cost of purchasing a new machine.

Our team of experts will assess the specific requirements and recommend mechanical retrofit options. We'll also address any worn mechanical parts, ensuring a seamless transition to the latest equipment for maximum efficiency.

Spare parts

At Welding Alloys, we are committed to delivering exceptional performance and ensuring the longevity of welding machines. That's why we offer a comprehensive global spare parts inventory and distribution service to keep customer operations running smoothly. Our warehouse in Colmar, France serves as a hub for managing extensive inventories of parts and accessories, catering to both current and discontinued machines, dating back to the 1970s.

Through meticulous archiving records, we have the ability to provide alternative solutions, even for parts that are no longer available elsewhere.

Different components are available in many sizes, materials and, for all welding processes.

Benefit from minimised machine downtime and maximised productivity with Welding Alloys spare parts.



Innovation



Innovation is at the core of everything we do, we never stop learning.

Innovation is an integral part of Welding Alloys' approach to industrial solutions, and we have consistently invested in this area since our inception in 1966.

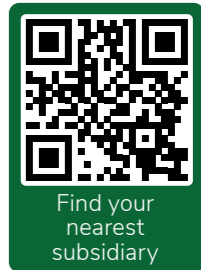
Our continuous development approach has aided the identification of new technologies for our welding machines and given birth to numerous innovative solutions, always with customer satisfaction as our focus. Our simple philosophy allows us to continue to deliver best-in-class products and services to every major industrial sector across the globe.

Our unique culture of continuous innovation forms the backbone of the company and our teams of engineers are constantly interacting to share knowledge, information and ideas. Collaboration across on-site operations and the consideration of customer requirements to improve existing products and develop new ones, are always based on sound scientific principles and engineering solutions.

Over the past three decades, Welding Alloys has built, and continues to grow, a global network of universities and research organisations. This allows us to remain at the forefront of the latest market trends and state-of-the-art technological innovations.

Our global footprint

Our specialists and industry experts are active in 150 countries across the world and have an in-depth understanding of the operating conditions and customer requirements across a wide range of sectors.



Welding Alloys Machines

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