CAPABILITY STATEMENT

2024

AUTOA

ROBOTIC WELDING SIMPLIFIED

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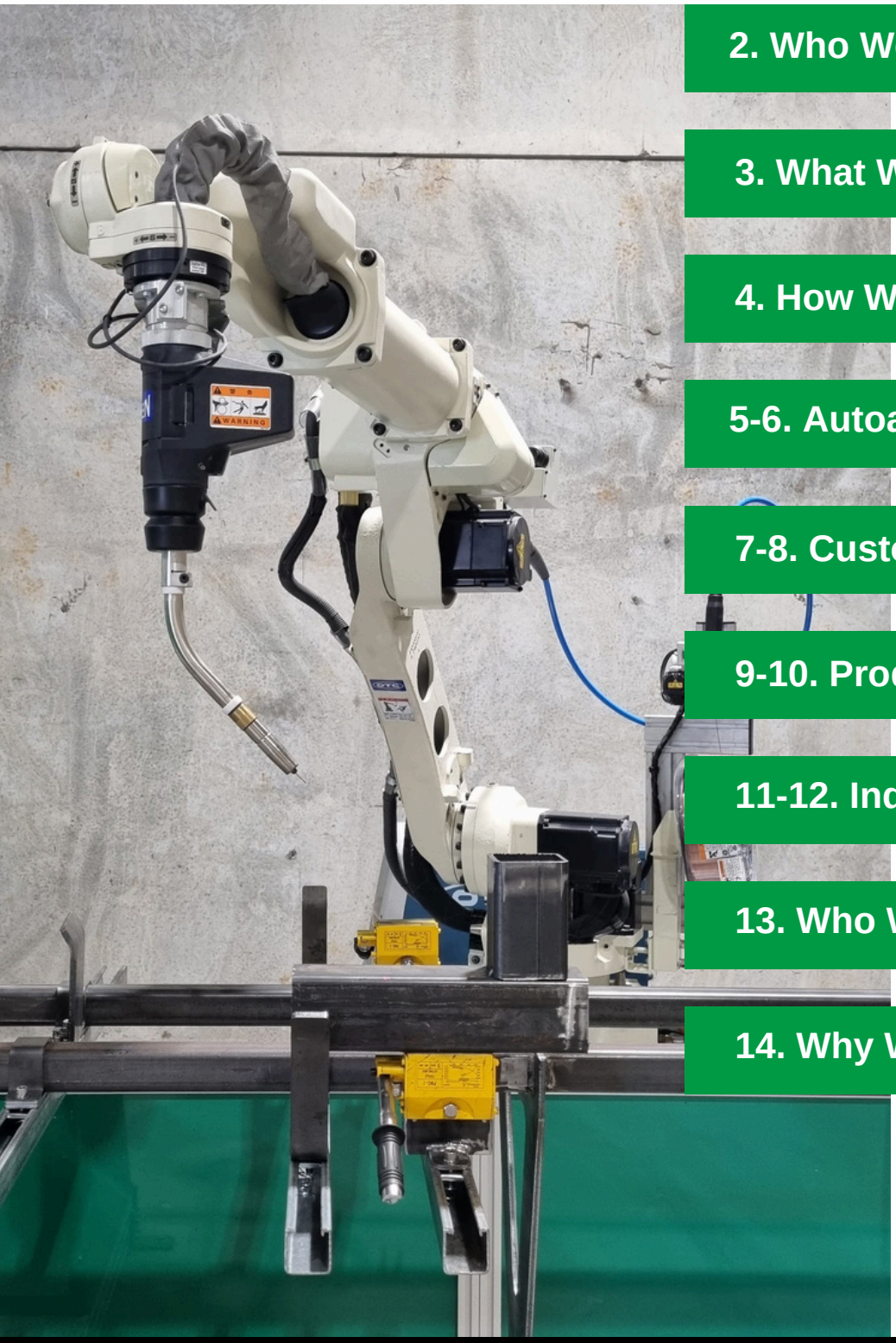

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AUSTRALASIA'S LARGEST ROBOT WELDING INTEGRATOR.

WHO WE ARE

100% Family Owned.

We are a 100% family-owned and operated business, proudly founded in New Zealand, dedicated to simplifying robotic welding.

Representing Global Brands.

We proudly represent global brands such as OTC Daihen and Yaskawa, specialising in high-quality robot arms for advanced robotic welding applications.

We Simplify Robotic Welding.

With over 40 years of history in robot welding, we are dedicated to simplifying robotic welding with extensive experience in Australia and New Zealand, complemented by a global footprint. Established as a 100% family-owned and operated business, our journey spans over four decades, marked by the installation of over 370 robots across seven countries.

In 1980, Peter Carbines, a young and respected electrical engineer, began our journey, leading to the establishment of Carbines Engineering in 1984, specialising in robotic and automation systems in New Zealand. With milestones including our first exports to North America and Dubai in 1998, Australia exports from the early 2000's, and the acquisition by Autoline in 2017, we've continuously set the standard for excellence in robot welding innovation.

Now, in 2024, we stand as the industry leader for robotic welding solutions, with the most extensive experience across Australia and New Zealand. **Autoa.**

> *"Drawing on our extensive expertise and commitment to innovation, we are dedicated to the success of your robot welding journey. From seamless integration to operator training and ongoing excellent customer support, we're with you every step of the way."*

Matthew Fisher
Managing Director

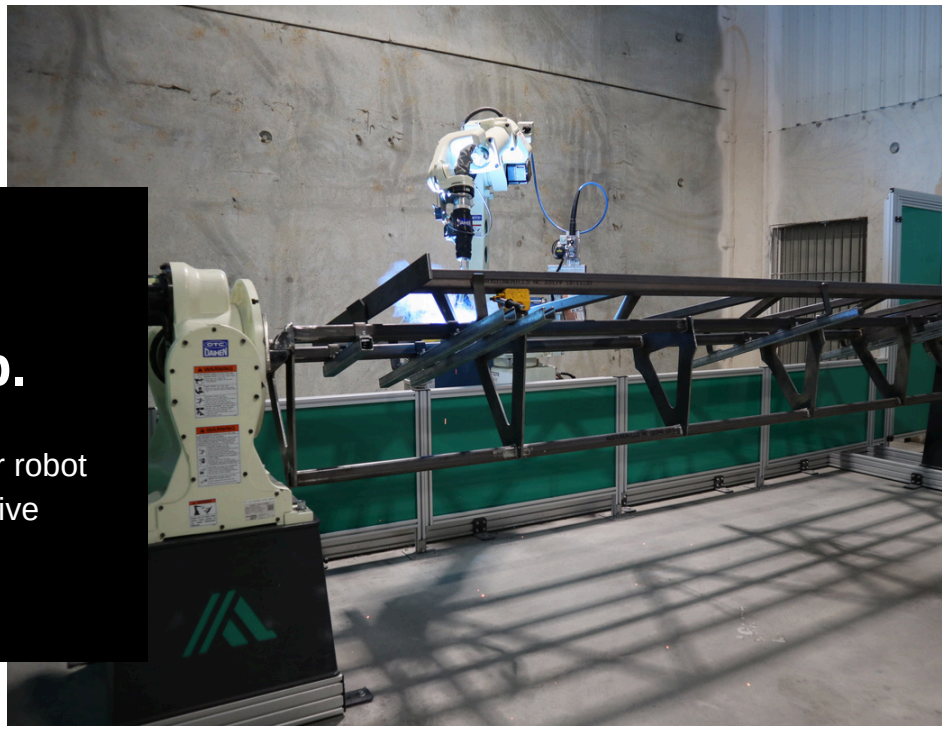
SINCE **1984**

ROBOTS **370+** INSTALLED

INSTALLS IN **7** COUNTRIES

YEARS OF **40** EXPERIENCE

WHAT WE DO



Your One-Stop Robot Welding Shop.

We are your one-stop shop for all your robot welding needs, providing comprehensive solutions for robotic welding.

Solutions.

We offer complete robotic welding solutions tailored to various industries and applications. Our portfolio includes turn-key solutions, pre-assembled robot configurations and robotic components such as welding power sources, positioners, sensors, and offline programming software. We focus on delivering solutions that cover a wide range of welding processes, including MIG/MAG, TIG and Laser Welding supported by dedicated hardware.

Industries.

We have a strong presence in providing robotic welding solutions to a wide array of industries, including agricultural, construction, and mining equipment manufacturers, as well as pipe, metal, structural steel, truss fabricators, and other sectors. We also work with aluminium smelters, providing turn-key robot solutions for superstructure and yoke repair processes. We specialise in tailored robot welding solutions to meet your unique welding needs.

- Increase Productivity
- Consumable Savings
- Lower Production Costs
- Increased Flexibility and Efficiency
- Improved Employee Health and Safety
- Quality Improvement

HOW WE WORK

Your Single-Source Solution.

Explore the simplicity of our single-source robotic welding solutions. We provide all components for your welding requirements, including the robot, welding power source, wire feeder, torch, and programming software.

Our services include installation, training, and ongoing servicing and support for optimal performance.

We streamline your processes and eliminating the complexity of coordinating multiple providers. This ensures a professional and seamless robotic welding experience for our customers.

Integrated Modular Cell Design.

Our integrated modular cell design is a key to our robotic welding solutions. Whether for small-scale or high-volume operations, our designs ensure flexibility and scalability for a competitive advantage. Each module is engineered with essential safety features, efficient cable management, and optimized for overall performance. Additionally, we adhere to safety standards including ISO 10218-1 and AS4024-1, ensuring that our solutions meet rigorous safety requirements.

World Class Testing Centre.

Experience our world class testing centre where we conduct real-life welding assessments on your products, ensuring the highest quality standards.

Business Case Calculator.

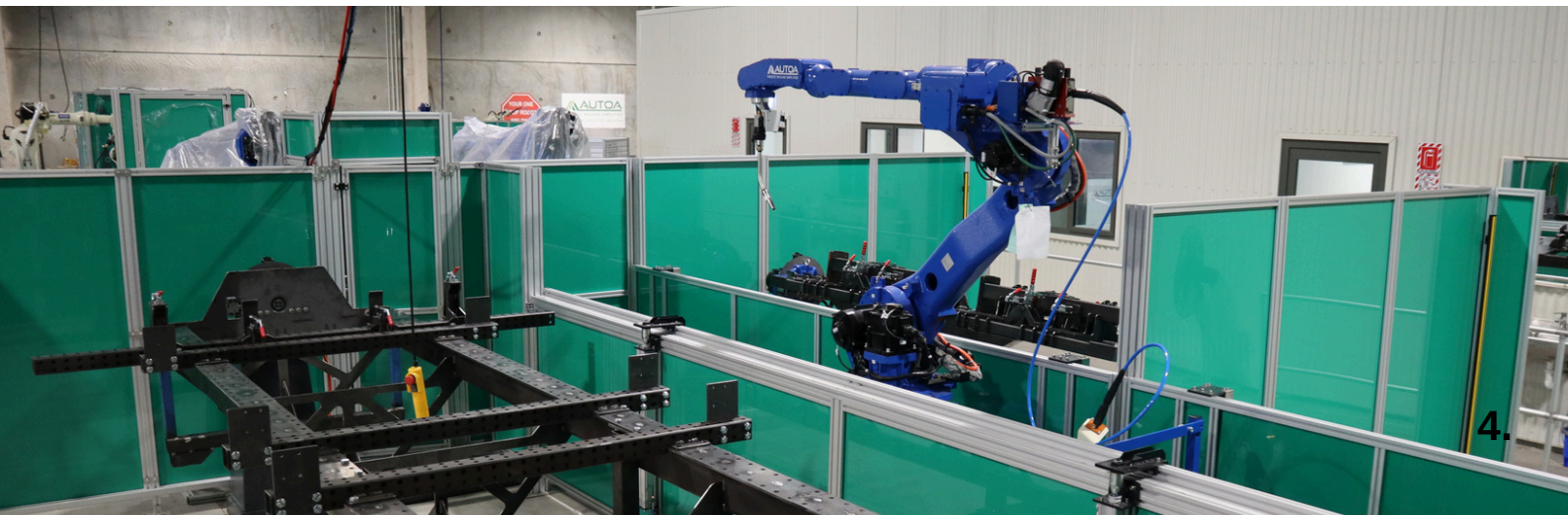
Let us do the sums with our business case calculator, helping ease the decision with key numbers for your robot welding investment.

In-House Robot Technicians.

Our in-house robot technicians deliver ongoing support, conduct regular services, provide comprehensive training, and work to ensure optimal returns on your investment.

Consumables Ex Stock.

We maintain a stock of welding consumables to ensure your operations run smoothly, minimizing downtime and maximizing productivity, eliminating the middleman altogether.



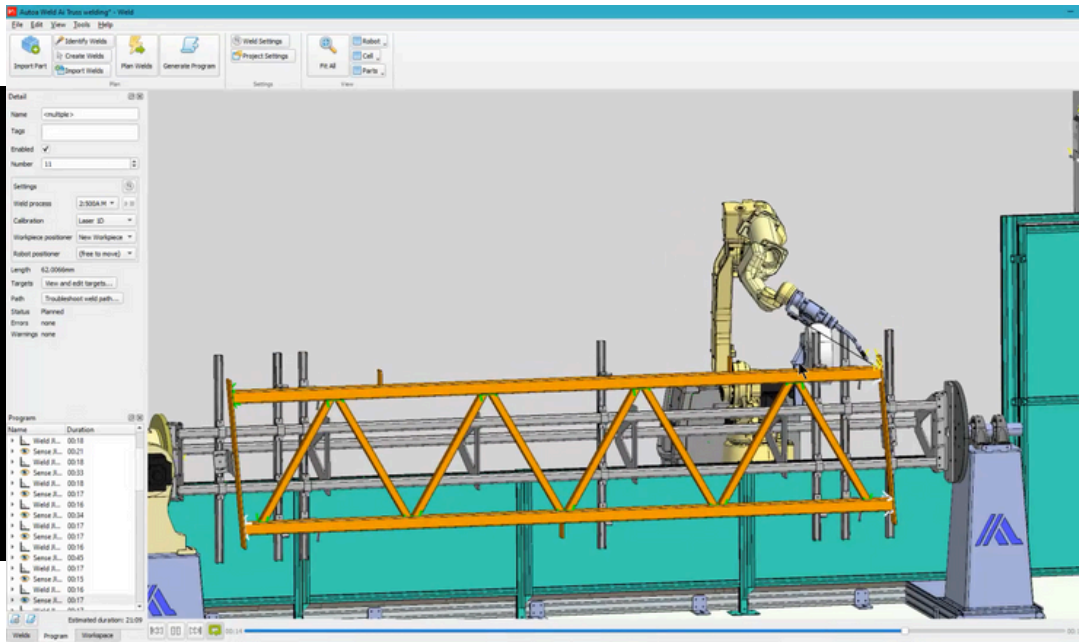
AUTOAWELD

Not your average Robot Programming Software.

Say goodbye to the complexities of traditional robot programming and embrace a simplified, efficient approach with our AI-powered solution. AutoaWeld Programming Software is a user-friendly application designed to automate the programming of your welding robots, eliminating the need for manual programming.

Our innovative AI path planning technology is what sets us apart. AutoaWeld is a straightforward desktop application equipped with features that significantly reduce the time and effort needed to program your welding robots. By simplifying the welding process, our software makes it easy to master robot programming, enabling you to program less and weld more.

Ready to Simplify Your Robot Welding?



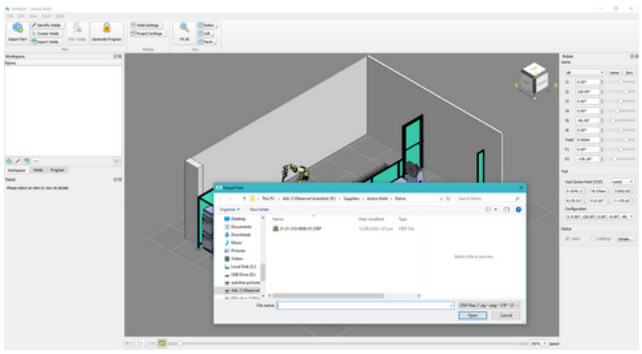
Key Features.

- **Simulation:** Simulate individual welds or the full programme within AutoaWeld to estimate cycle time.
- **Seam Finding:** Includes automatic touch or laser sensing to adjust for differences between the 3D CAD model and the real-world part.
- **Automatic Planning:** AutoaWeld automatically plans and optimizes the welding toolpath, approach, retreat, and intermediate motions offline.
- **High Welding Output:** Achieve between 100 – 350 meters of precise welding in a single 12-hour shift.
- **Editing Tools:** AutoaWeld simplifies editing welds, letting you reorder them based on position, change weld directions, and copy weld patterns.

AUTOAWELD

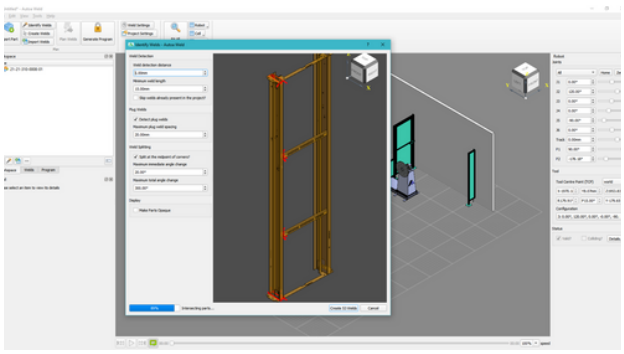
Programme Less, Weld More.

Powered by advanced algorithms, AutoaWeld Programming Software generates collision-free robot welding programs directly from CAD information. This automation removes the possibility of human error, ensuring consistent and reliable results even in the most challenging situations.



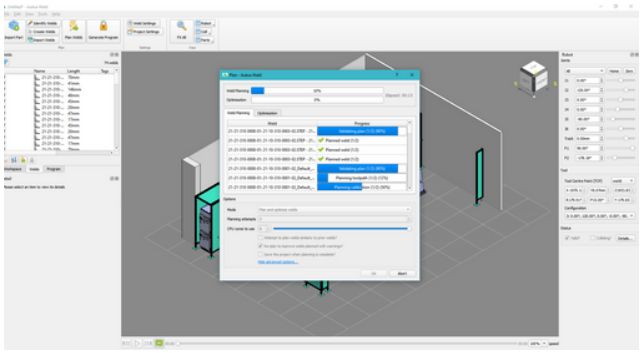
Step 1.

Import CAD: Simply import the CAD file to plan the welds for and then locate the parts in the welding cell.



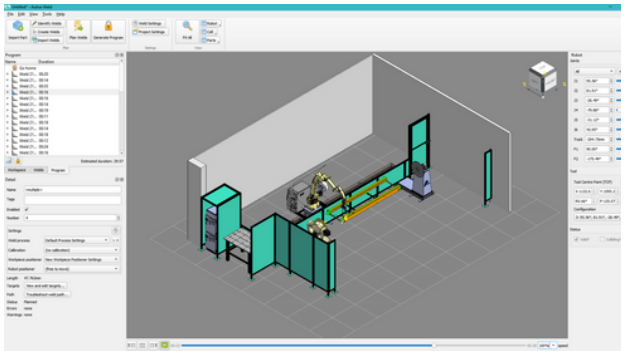
Step 2.

Identify Welds: Our built-in Ai technology swiftly identifies the optimal weld locations.



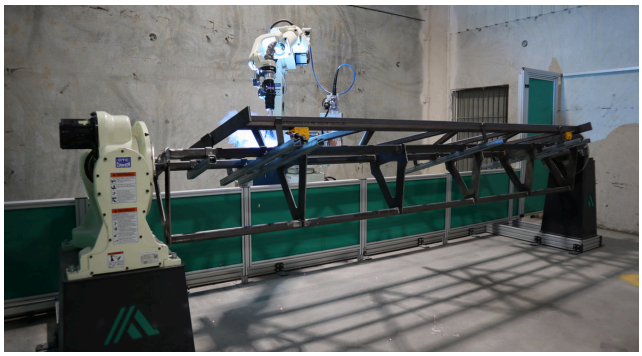
Step 3.

Plan Welds: AutoaWeld uses Ai to automatically plan robot paths with 100% collision avoidance.



Step 4.

Simulate Welds: Run simulations with confidence before exporting the finalised programme.



Step 5.

AutoaWelds: Transfer your programme to your robot welding cell and let the robot work its magic!

Robot Welding Made Easy with AutoaWeld.

CUSTOMER CASE STUDY

EQUIPMENT

- 1x OTC Daihen FD-B6L Through-Arm, Long-Reach Arc Welding Robot with FD19 Robot Controller and Teach Pendant.
- 1x OTC Daihen Welbee P500L Welding Power Source + 500A Water Cooled Torch and Water Cooler.
- 2x OTC Daihen 1PC1000 Positioner Headstocks.
- 2x OTC Daihen 2PF1000 Turn/Tilt Positioners.
- 1x Autoa Servo Controller Robot Slider, 5000mm Travel.
- 1x Autoa Tip Cleaning Station.
- Safety Componentry Integrated.

“The robotic welders have enabled us to control the accuracy and consistency of the weld to the point where we can now mount a hitch subassembly into the jigging on our welder, push a button and produce a repeatable outcome every time,”

Anthony Watt
Attach2 Equipment

TESTIMONIAL

The investment of robotic welders has notably enhanced weld consistency and quality at Attach2, a leading Australian producer of excavator attachments. Anthony Watt, Attach2's Special Projects and Innovation Manager, says they started looking into robotic welders as part of a company-wide strategy towards innovation and improvement. Autoa stood out for offering a comprehensive package, including the OTC Daihen machine, robot, welder, and positioner, all from one manufacturer.

"The biggest thing for us was, and still is, the whole package – the OTC Daihen machine, the robot, the welder, and the positioner – all come from the one manufacturer and one company," Anthony notes.

Attach2 produces complex, heavy-duty attachments for excavators and during the process are welding on to partially pre-assembled pieces of very heavy machinery, meaning the temperature control of the weld and positional accuracy was crucial to avoid defects and rework. "When challenges arose, support and training provided by Autoa has been excellent and very helpful," Anthony emphasizes.

"Now we’ve ironed out the creases, the main difference we’ve noticed is the ability of the robot and manipulators to maneuver the workpiece regardless of its mass which has helped improve accuracy and contributed to a substantial reduction in defects and rework," Anthony points out.

Attach2 is grateful for Autoa's positive impact on their business and looks forward to the continued success of our partnership.

CUSTOMER CASE STUDY

EQUIPMENT

- 1x Yaskawa AR3120 Through-Arm, Long-Reach Arc Welding Robot with YRC1000 Controller and Teach Pendant.
- 1x OTC Daihen Welbee P500L Welding Power Source + 350A Air Cooled Torch.
- 2x Yaskawa HM-1000D Positioner Headstocks.
- 2x Yaskawa TM-1000D Positioner Tailstocks.
- 1x Yaskawa TSL-1000 Robot Slider, 4000mm Travel.
- 1x Autoa Tip Cleaning Station.
- Safety Componentry Integrated.

“Our business has expanded exponentially with the use of robotics. They make the process more efficient, which means you get busier and integrate more robots and then need to employ more people to keep up with the increased workload downstream in assembly and dispatch.”

Nick Blampied
Te Pari Products

TESTIMONIAL

Using robotics in engineering manufacturing improves productivity and quality and drives business growth, says Nick Blampied of the revolutionary livestock management business, Te Pari. A third-generation Kiwi business that designs and manufactures cattle and sheep handling and hardware solutions.

Blampied says the Oamaru-based business invested in their first welding robot in 2007 and were so impressed with the results, continued to expand, and integrate more Autoa robots into its production line.

Welding robots provide a consistent high-quality finish and eliminate problems associated with manual welder fatigue, substantially improve worker health and safety, and reduce defect rates and waste. After the initial investment into robots and the associated jigging and programming, Autoa’s robot welders consistently and efficiently produce top quality results, he says.

“The secret to a robot welder working well is having accurate cut parts and jigs, once you complete that initial set up, you get very high output.” Most of the set-up has been done in-house by their own engineers, and Autoa provides the training for specific functions as required.

“Autoa has been great to deal with over the years. They provide excellent service and can supply a wide range of parts and welding consumables in a timely manner.”

PRODUCT CASE STUDY

M-1200

EQUIPMENT

- OTC Daihen or Yaskawa Model Through-Arm Welding Robot with 2000mm Reach.
- OTC Welbee P502L 500A Low Spatter Power Source Standard.
- 350A Air Cooled Welding Torch and Wire Feeder Standard. 500A Water Cooled Welding Torch available on request.
- Dual 1200 x 600mm Welding Jig Table.
- Enhanced Safety Guarding that is fully compliant with latest Robot Safety Standard (ISO 10218-1).

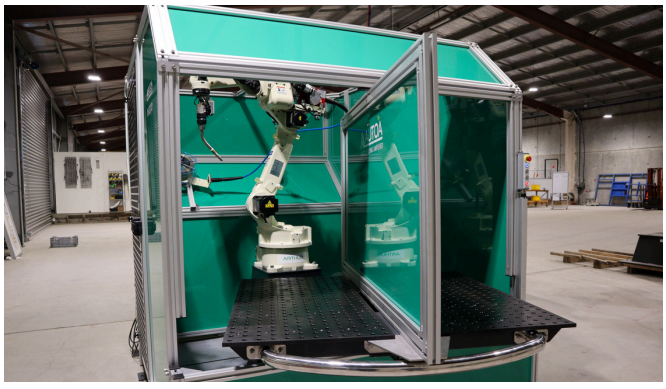
DESCRIPTION

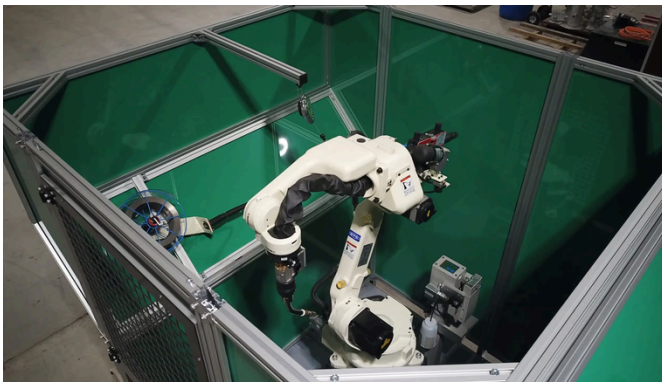
Introducing the M-1200 Robotic Welding Cell, a compact and versatile solution for enhanced productivity and consistent high-quality welds. With its innovative rotary station, this workcell offers dual-sided productivity in a compact, manually rotated workstation. Ideal for replacing or supplementing manual welding, the M-1200 Robotic Welding Cell features a high-speed arc welding robot that delivers efficient, precise welds.

Dual Sided

Manual Rotation

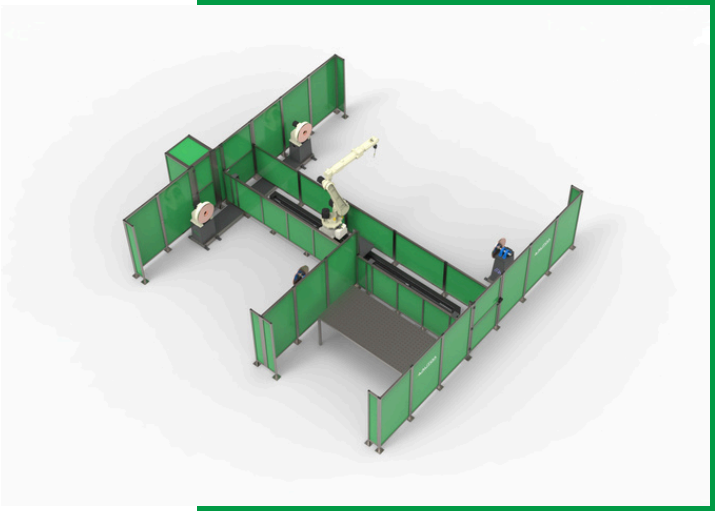
Compact Design





PRODUCT CASE STUDY

S-6000



EQUIPMENT

- OTC Daihen or Yaskawa Model Through-Arm Welding Robot with 2000mm Reach.
- OTC Welbee P502L 500A Low Spatter Power Source Standard.
- 350A Air Cooled Welding Torch and Wire Feeder Standard. 500A Water Cooled Welding Torch available on request.
- Dual 1200 x 600mm Welding Jig Table.
- Enhanced Safety Guarding that is fully compliant with latest Robot Safety Standard (ISO 10218-1).

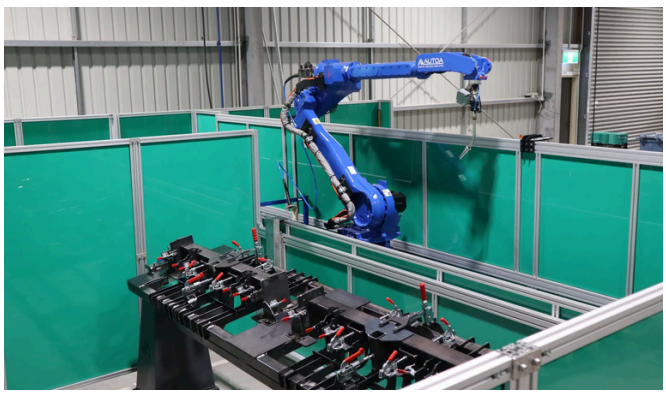
DESCRIPTION

The S-6000 Robotic Welding Cell is a cutting-edge solution designed for maximum productivity and quality in medium to larger parts manufacturing. With a robot slider track providing coordinated motion across eight axes and dual servo-controlled positioners in its dual-workstation H-cell design, the S-6000 ensures speed, precision, and efficiency. It offers scalability from two to four workstations, adapting to changing demands seamlessly.

Slider Track

Scalable

Extended Reach



Innovative Robotic Solutions for Aluminium Smelting.

Autoa has been a leader in advancing aluminium smelter operations globally, collaborating with industry giants like Rio Tinto.

“Since the mid-1990s, our innovative robotic welding solutions have transformed hazardous manual tasks into safe, automated processes,” says Matt Fisher, director of Autoa Robot Welding. “We’ve proudly worked with aluminium smelters worldwide, from Dubai to Argentina, helping to improve safety and efficiency.”

Autoa Robot Welding continues to innovate, developing new solutions to meet the evolving needs of the aluminium smelting industry, ensuring safety, efficiency, and precision in every project.

Automation Processes Developed by Autoa.

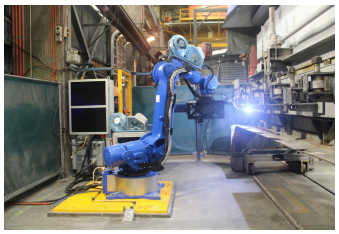
1. Super structure bus bar repair: This process is for the automated repair of the bus bar face. The company has developed a ‘jig-less’ solution where the robot takes precise measurements and then pre-mills the face back with a 200mm diameter milling cutter, followed by continuous welding at approximately 45 minutes per pass to build the contact face back, this is followed by further milling to provide a clean unpitted contact face for the yoke to be bolted to, ensuring a robust and efficient repair.

2. Automated stub repair: This process is for the automated repair of the stubs on the anode yokes. Automatic and manual loading solutions have been developed for three, four, and six-pin yokes. “Our unique water-cooled welding torch provides full access around the stub, accommodating yokes on an overhead conveyor or in a horizontal position off the chain,” says Fisher.

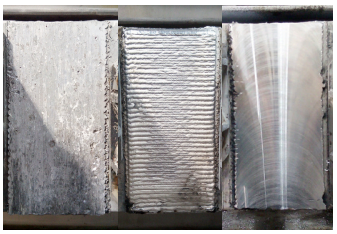
3. Yoke transition joint repair: Featuring dual robots with an aluminium and mild steel robot welder this process seamlessly welds the trimetallic clad (transition joint), removing the operator from this dangerous and dirty task.

Autoa welding robot in action, repairing a stub.

Finished weld result, between 7-9 passes, full penetration.



Autoa welding robot in action, repairing a super structure.



L-R: Before, Welded and After on a super structure repair.

INDUSTRY FEATURE

New Zealand's Only Aluminium Smelter Looks To A Settled Future In Southland.

RioTinto

According to Paul Cavanagh, a long-serving staff member, Rio Tinto's Tiwai Point has always been about its people, driving the recent upgrade and doubling of its robotic welding equipment. "It's about keeping people away from the load. People and safety first," he says.

Tiwai Point has used robotic welding since 1995, and this latest upgrade not only doubled the number of robots but also added a new one for loading heavy steel pins, a task previously done manually. Cavanagh, crew leader for the rodding process, notes that with a secure 20-year electricity supply deal, recent uncertainties are behind them.

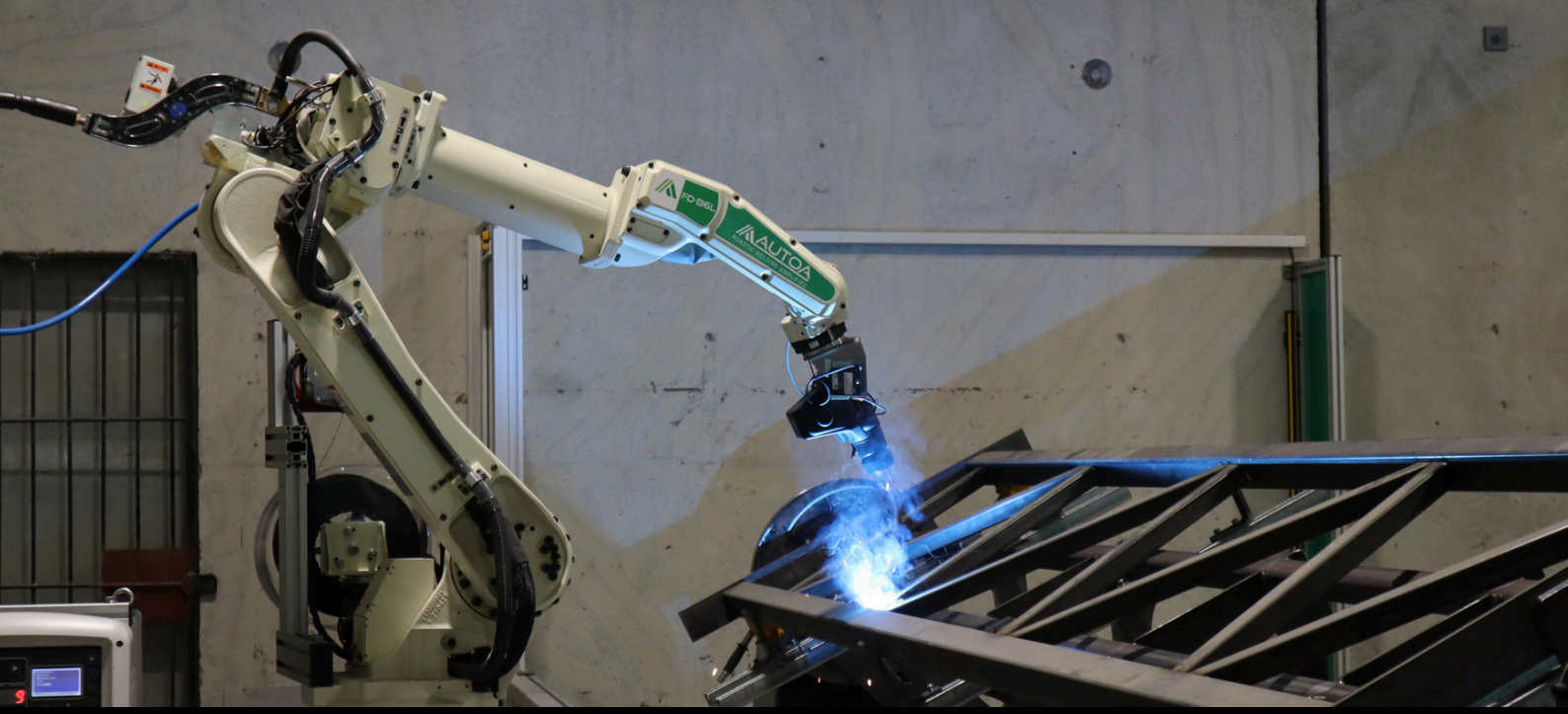
The need to replace the old system for welding anode rods, crucial in aluminium production, was clear. Around 550 rods are processed daily, and the new system allows robots to weld all four stubs on damaged rods, reducing staff risk by keeping them away from dangerous zones.

Aluminium remains a key structural material, used in multiple industries around the world.

Made by Blenheim-based Autoa Robot Welding (formerly Autoline Automation), the new system is more precise, requires less maintenance, and has improved work quality. Cavanagh emphasizes the importance of the longstanding relationship between the smelter and Autoa, noting that the final system is a custom design born from collaboration and "a bit of Kiwi ingenuity." Challenges included programming, welding quality, and jig design, but Autoa's deep understanding of the process ensured a successful outcome. "If we go on a journey together, you get a better result," he says.

Beyond safety, the robotic process creates more skilled work, aligning with the company's focus on the future. Tiwai Point recruits from the local community, emphasizing upskilling and high-tech opportunities, which appeal to today's youth.

With over 40 years of experience, Cavanagh highlights the smelter's exciting transition to modern processes that attract more women and diverse staff. Fostering a family culture and safer, more engaging work environments is part of the mission as they look to the future, creating an attractive environment for apprentices, staff, and contractors alike.



YOU'RE IN GOOD COMPANY.

WHO WE WORK WITH

We work with local and global brands. Whether addressing weld quality, onshoring manufacturing, or improving employee health and safety, our robot welding solutions deliver the productivity of up to 8 manual welders.

OUR PARTNERS

We partner with world-renowned robot brands like OTC Daihen and Yaskawa Motoman, ensuring that our robotic welding cells are equipped with the most reliable and advanced technology for maximum efficiency and quality.

WHY WORK WITH US

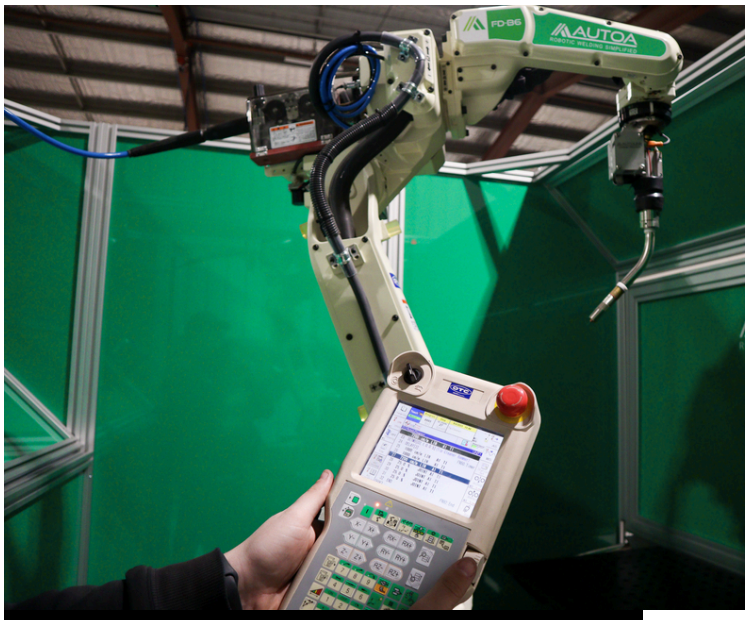
Choose Autoa for innovative solutions that increase productivity, reduce production costs, and deliver consistent quality, transforming the way you approach welding efficiency. With over 40 years of industry experience, we offer solutions with a compelling return on investment.

Our single-source approach simplifies your journey, from initial consultation to ongoing support. Partnering with top robot welding brands guarantees access to the latest technology. Experience robot welding simplified with Autoa.

Guaranteed Performance.
Guaranteed Support.
Guaranteed Results.

We’re here to make robotic welding simplified, bringing expertise in consulting through to technical welding, and robot programming. We believe robot welding is a journey, going beyond simple solutions to become your dedicated partner in success.

Let us help build a solid business case to demonstrate how our solutions can positively impact your business. Key factors include overhead, labour, consumable savings, productivity, and your current manufacturing process. As a 100% family-owned company, we're passionate about driving improvement. Our dedication extends to ensuring your satisfaction, and providing support throughout your entire robotic welding journey.



Start Your Robotic Welding Journey With Us Today.

AUTOA
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