

ISSUE 15 - NOVEMBER 2023

QUARTERLY NEWSLETTER FROM AUTOMATED SOLUTIONS AUSTRALIA

AXIS

MEET THE
ASA TEAM
**FRANKLIN
WRIGHT**

CUSTOMER
IN FOCUS:
MCHND

EMO 2023:
**DELIVERING
SMART TECH FOR
TOMORROW'S
PRODUCTION**



FROM THE **DIRECTOR'S DESK**



Welcome to the latest edition of Axis, the quarterly newsletter of Automated Solutions Australia (ASA).

In this issue, we are excited to share with you an array of stories and updates that highlight our commitment to innovation, exceptional customer experiences, and the incredible strides being made in the field of robotics.

Our General Manager for the Australian business unit, Nathan Jones, and myself had the privilege of attending EMO Hannover 2023, the world's premier trade fair for the manufacturing sector. Join us as we reflect on this remarkable event, its international significance, and the industry trends that continue to shape our vision at ASA.

We are delighted to showcase the success story of one of our esteemed customers, MCHND, based in Adelaide. Discover how they recently integrated a robotic solution into their CNC operations, revolutionising their production processes. This real-world example underscores our commitment to delivering bespoke automation solutions that drive efficiency and competitiveness for our clients.

Turning our focus to our most important point of differentiation, our people, we introduce you to one of our newest team members, Franklin Wright. As a recent graduate in mechanical engineering, Franklin brings fresh insights, enthusiasm, and expertise to our dynamic team. Learn more about Franklin's background, aspirations, and the valuable contributions he is making to ASA.

We delve into the exceptional capabilities of the FANUC M20iD/25, a robot that's been turning heads in the industry. Our feature article provides an in-depth look at how this cutting-edge automation solution is transforming manufacturing processes and enhancing productivity for our clients.

At ASA, we are passionate about innovation and excellence, and these stories exemplify our dedication to pushing the boundaries of what is possible in the world of automation. We hope you find this newsletter inspiring and informative.

Thank you for your continued support and interest in Automated Solutions Australia. We look forward to sharing more exciting updates and success stories with you in future editions of Axis. If you haven't already, be sure to follow us on Facebook, LinkedIn and Instagram for all the latest in automation.

Warm regards,

Pat Green, Director

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CUSTOMER IN FOCUS: MCHND

Renowned for its commitment to precision and quality, MCHND recently took on the challenge of revolutionising its production processes and increasing its output, allowing it to reduce the overhead cost associated with individual piece prices. For this complex journey, MCHND partnered with Automated Solutions Australia (ASA), introducing a FANUC R2000iC/210F robot into their CNC machine setup. The net result - MCHND has doubled its daily production output, reaching new heights of efficiency and consistency. We are excited to bring you an incredible success story in the landscape of Australian manufacturing.

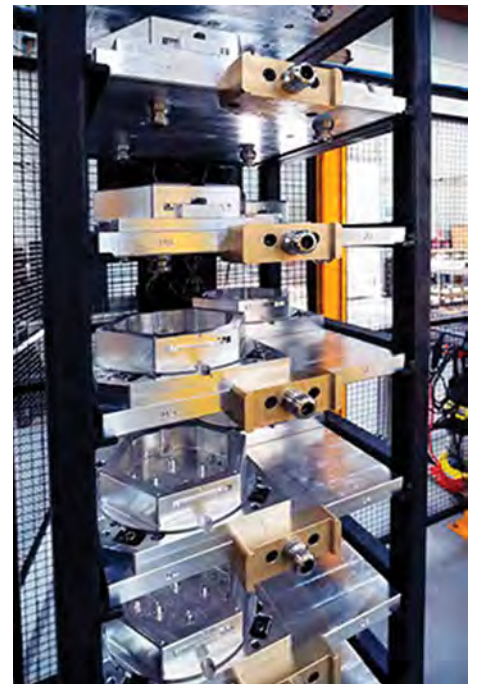
For nearly five years, MCHND has been a driving force in the world of precision CNC machining, setting a benchmark for excellence in Adelaide, South Australia. With a cumulative experience of over 35 years, they've established themselves as leaders in the field, specialising in 3D CAM machining. Their commitment to quality is unwavering, operating under the rigorous ISO9001:2015 quality system to deliver world-class products consistently. MCHND prides itself on ensuring every part is not only precise but also aesthetically pleasing.

Their impressive CNC capabilities include turning up to 500mm diameter by 850mm long and milling at 1000 x 560 x 500. They cater to diverse needs, from short runs and prototyping to large-volume production. Their laser and rotary engraving capabilities span across various metals and plastics, and they serve a multitude of industries, with a primary focus on space, medical, aerospace, defence, food and beverage, agriculture, mining, and beyond.

MCHND's current roster of equipment includes cutting-edge machinery like the Okuma Genos M460-V 5-axis CNC machining centre and the Okuma Genos M560-V-E 4-axis CNC machining centre, both robot-fed with pallet pools.

MCHND's journey towards automation began with a desire to optimise their manufacturing process. The company, known for its dedication to excellence, was crafting products with meticulous attention to detail through manual labour. While their products were renowned for their superior quality, they faced the challenge of meeting growing demands without compromising their exacting standards.

The solution came in the form of a partnership with Automated Solutions Australia, together, they integrated a FANUC R2000iC/210F robot into their CNC machine setup. This innovative collaboration has led to remarkable improvements in production efficiency and output.



What's unique about this cell is that it uses a Schunk NSR robot pallet coupling to tend the two machines. This pallet arrangement allows for any unique combination of work holding to be installed on top of a standard pallet. Unlocking a fully flexible production solution for low quantity mixed production to high volume continuous unmanned operation.

To facilitate long unattended operation, The robot is surrounded by five pallet racks which hold ten pallets in each rack, giving a fifty pallet pool total. ASA's HMI system allows the operator to select the pallet they want to

Continued next page



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retrieve, and the robot presents it at a loading station where the operator can change the parts at an ergonomic working height before requesting the robot to return and store the pallet at an elevated height. This maximizes the amount of pallet spaces available whilst minimizing floor space.

One of the standout achievements of this partnership is the significant increase in daily production volumes. MCHND has made substantial strides in expanding their output, effectively doubling their manufacturing capacity. This boost in productivity has not only allowed them to meet growing customer demands but also to explore new markets and opportunities.

Nathan Jones, General Manager of the Australian business unit at ASA reflects ‘It was great working with Mike and Jimmy at MCHND helping them to realise their automation goals. They had a clear vision from the very start that the cell needed to be flexible and easy to use. I’m proud of our team at ASA for once again delivering that requirement beyond expectation.’

Perhaps the most remarkable feat is MCHND’s ability to achieve ‘lights out’



production for four consecutive days. The FANUC robot cell has proven to be faultless, ensuring a seamless production process even in the absence of human intervention. This achievement showcases the reliability and trustworthiness of the FANUC R2000iC/210F robot in a real-world manufacturing environment.

Another noteworthy aspect of MCHND’s success story is their ability to run two parts on two machines simultaneously, with a 26-hour run time. The FANUC robot efficiently unloads and reloads the machines, allowing for uninterrupted production. After 26 hours, the production process is paused for a short time to unload and reload the pallets, before this process is repeated. This level of automation has not only improved efficiency but has also reduced the risk of errors associated with manual operations.

The partnership between MCHND and Automated Solutions Australia, along with

the introduction of the FANUC R2000iC/210F robot, has not only doubled production output but also enhanced overall quality and consistency. By automating repetitive and time-consuming tasks, MCHND’s workforce can now focus on more value-added activities, such as quality control and product development.

MCHND’s success story serves as an inspiring example of how embracing automation can lead to remarkable improvements in manufacturing efficiency, productivity, and competitiveness. It demonstrates that companies committed to quality and innovation can continue to thrive in an increasingly automated world.

[MCHND - CNC Machining Adelaide](#)
[Automated Solutions Australia \[ASA\]](#)



EMO 2023: DELIVERING SMART TECH FOR TOMORROW'S PRODUCTION

EMO Hannover 2023, with its theme “smart technology driving tomorrow’s production,” marked a milestone for Automated Solutions Australia (ASA) as the company continued its tradition of aligning its solutions with cutting-edge industry trends. In this review, we delve into ASA’s perspective on EMO 2023, a premier event that showcased the transformative power of automation, digitization, and sustainability in manufacturing.

EMO Hannover 2023 lived up to its reputation as the world’s foremost trade fair for the manufacturing sector. Drawing over 1,850 exhibitors from 45 countries, including global giants like China, Italy, Taiwan, Switzerland, and Japan, the event presented an unrivalled platform for innovation. The event drew around 92,000 trade visitors, representing 130 countries. They flocked to the exhibition halls, reflecting the event’s international allure. ASA recognized the event’s potential for networking, identifying new opportunities, and exchanging ideas on a global scale.

ASA’s keen focus on automation aligned perfectly with EMO 2023’s emphasis on automation as a driving force for tomorrow’s solutions. Automation was a key concern for

the industry, with over one-third of visitors citing the shortage of skilled workers as a major issue. EMO 2023 showcased solutions for this challenge, including collaborative robots (cobots) equipped with sensors that mimic the human sense of touch. ASA noted the growing popularity of cobots, especially among smaller companies seeking to address labour shortages.

Digitisation and networking were also pivotal themes, and ASA found ample opportunities to explore the open exchange of data, particularly through OPC UA. The emphasis on transparent process data acquisition was critical for process monitoring and quality management,

underlining the industry’s drive toward increased efficiency.

Sustainability was also high on the agenda, with 68 percent of visitors expressing interest. ASA recognized the importance of efficiency in reducing carbon footprints and noted solutions such as Product Carbon Footprint measurements, energy-efficient spindle designs, and extended use of cooling lubricants through monitoring and filtering.

EMO 2023 offered ASA a comprehensive overview of global developments in the sector. The event’s international appeal provided a unique platform to engage with partners, identify emerging opportunities, and exchange insights. ASA’s commitment to bringing cutting-edge technology from around the world back to its Australian customers was strengthened at EMO 2023, reaffirming the company’s position as a forward-thinking leader in the field.

As EMO Hannover 2023 concluded its successful run, ASA looked forward to the future, recognizing the importance of events like EMO in shaping the landscape of manufacturing.

MEET THE **ASA TEAM** - FRANKLIN WRIGHT



In the ever-evolving landscape of automation, robotics has taken centre stage, transforming industries across the globe. To gain insights into this dynamic field, we sat down with Franklin Wright, a young and passionate professional working at Automated Solutions Australia (ASA). Franklin shared his experiences, challenges, and exciting developments in the world of robotic automation.

A Newcomer with a Bright Future

Franklin, who joined ASA in April, quickly made his mark in the Sealer process division. After graduating from university just last year, he embarked on a journey that led him to Michigan, USA, where he trained on projects for FANUC America and assisted original equipment manufacturers (OEM's) in applying sealant to their latest car models. "I only started with ASA in April this year after graduating from university last year. ASA provided all the required training, and I'm now part of the Sealer process division of ASA, where I work on projects for FANUC America. For the past 5 months, I've been working in Michigan, USA, on projects for one of the OEM car manufacturers, where I teach tool paths to apply sealant to their new car models," Franklin explained.

The Joy of Working with Robots

Franklin's enthusiasm for his work is contagious. He enjoys the hands-on aspect of his job, saying, "I just love being able to spend my days moving robots around –

they're literally just giant remote-controlled devices. It's also incredibly satisfying spending a day teaching various paths and then running it in automatic mode at the end of the day."

Overcoming Challenges and Achieving Milestones

One of Franklin's proudest moments came while working on a complex project: "Even in my first 6 months with ASA, I've been given cells which are my responsibility to ensure everything is completed by the deadline. Most recently, we were working on a hem flange sealer cell, which is considerably more complicated than most cells as it uses a lot of communication between robots to open doors. To further increase the complexity, it uses 16 cameras, which take images to tell the robots where parts of the car are, relative to the robot. I felt incredibly proud when this was complete after overcoming all the difficulties that this type of cell provides."

A Day in the Life of a Robotic Automation Specialist

Franklin's typical workday involves a fascinating mix of tasks: "I just drive robots all day. It's like being a big kid in a big toy shop. Each day also includes a lot of problem-solving, whether it is how to best teach the path or something major like figuring out how to get the robots to communicate to request a door to open and then wait until it's been fully open. There's rarely a moment where I'm not trying to find a solution for some kind of problem, and what I love is that it is something different every day."

Key Responsibilities and Constant Learning

Teaching robots and setting up various aspects of the cell are at the core of Franklin's responsibilities. He explained, "90% of my job is teaching paths to the robots. I

also am responsible for setting up various other aspects of the cell, like dispenser meters, vision cameras, and purge stations to applicator tips after a job."

Exciting Developments on the Horizon

Franklin is excited about the future of sealer technology, as new cells and means of dispensing are developed. These rely more and more heavily on vision technology due to its need for extreme accuracy. He finds the use of vision processes particularly fascinating and believes this technology holds immense potential in their field.

Teamwork Makes the Dream Work

The path to success is not always smooth, and Franklin shared a challenging experience: "On a hem flange sealing cell I mentioned above, myself, Dylan, & Lucas were working on the cell. As it was one of the last cells for the project, there was limited time to complete everything – made even more difficult by the added complexity of hem applications. However, through the synergy of teamwork and friendship, we were able to power through and get everything done in time. We encountered many hold-ups, but our team managed to cope with all of them to provide a polished end-product by the deadline. This was only possible due to the high work ethic of all three of us and our ability to pull together to help each other get the job done."

Dreaming of the M2000iA

Franklin's favourite robot model, the M2000iA, may be out of reach on the project he's on currently, but it represents his passion for automation. This massive robot, used for handling car units on assembly lines, captivates his imagination.

Advice for Future Automation Enthusiasts

Franklin encourages those interested in a career in robotic automation to pursue their passion and drive. His background in mechanical engineering didn't deter him from entering this exciting field, thanks to the comprehensive training and support and he was offered as part of the graduate program.

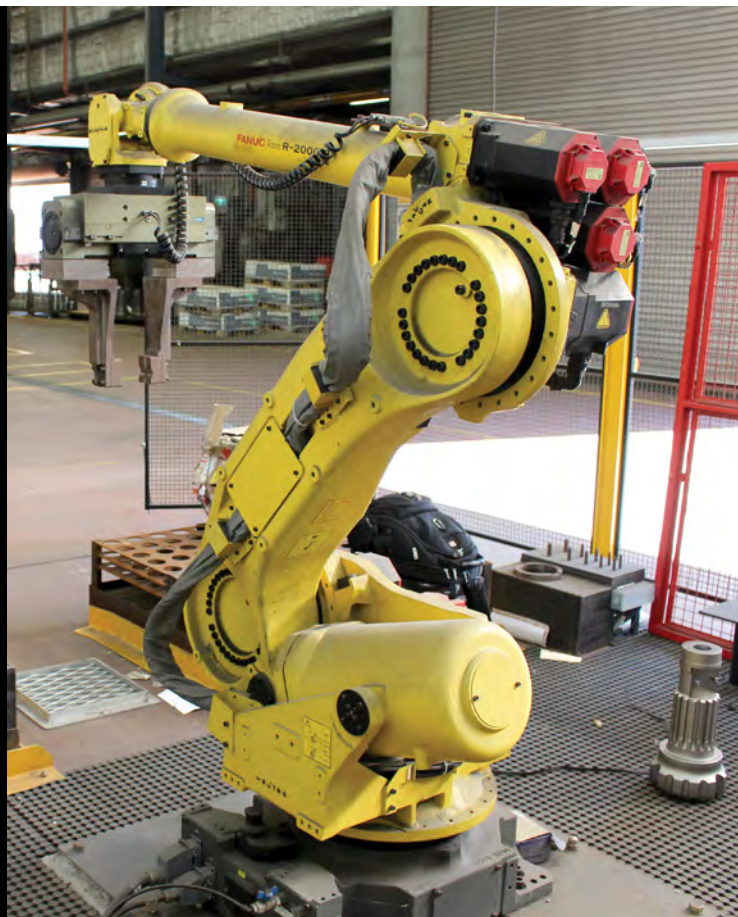
In the world of robotic automation, Franklin Wright's journey is a testament to the boundless opportunities and exciting challenges that lie ahead. As ASA continues to push the boundaries of automation, individuals like Franklin are at the forefront of shaping the future of this dynamic industry.

ANNUAL ROBOT SERVICING

Has your Robot had its Annual Service?

Call ASA on 1800 ROBOTS to book.

Just like a car needs regular servicing, the same applies to your robots. Your robots work hard for your business, sometimes operating 24 hours a day for long periods, so annual servicing of your robots will ensure your FANUC robots remain in optimal condition. Greasing, battery replacements, checking for excessive wear and measuring back lash ensure motion repeatability, as well as continuing to provide you with a great consistent outcome for your manufacturing processes. Annual servicing helps maintain a high level of Mean Time Between Failures (MTBF), as well as potentially forecasting issues that may be developing.



ROBOT IN FOCUS: FANUC M-20iD/25

The **FANUC M-20iD/25** is perfect for loading and unloading machines as well as parts handling and placement in busy production situations due to its high performance, yet compact size. It has a small arm and wrist for optimal access and as a result of its new design and drive train, delivers much greater axis speeds and motion performance than previous generations. With a larger active stroke of 1831 mm, it provides a broad operating envelope, with greater repeatability of +/- 0.02 mm due to increased stiffness. Internal cable routing prevents tangling and increases dependability. As a result, the **FANUC M-20iD/25** optimises throughput, hence increasing profitability. Installation is simple, and operating expense is low.

FANUC M-20iD/25 Applications and Specifications

- Assembly
- Palletising
- Part Transfer
- Dispensing
- Material Removal

FANUC M-20iD/25 Features

The cabling on the **FANUC M-20iD/25** for the end of arm tooling may be routed via the robot's enormous 57 mm diameter hollow wrist and hollow arm, this lowers the propensity for snagging and cable wear.

The **FANUC M-20iD/25** has very smooth surfaces minimising dust and grime build up. Due to the IP67 protection on its arm and wrist axis, it suits harsh applications like grinding and deburring.

The **FANUC M-20iD/25** model forms part of ROBOGUIDE, FANUC's premier offline programming tool. ROBOGUIDE is a sophisticated tool that allows offline creation of cells, systems, and path development by integrators, planners, and users.

How can Automated Solutions Australia (ASA) Help?

Automated Solutions Australia (ASA) is your ideal FANUC industrial and FANUC collaborative robot integrator. Our industrial engineering team at ASA are FANUC robot specialists, from concept to system designs, installations, programming, and support. At Automated Solutions Australia (ASA), we love helping Australian businesses of all sizes reach their automation goals, and build their



PAYLOAD 25KG

REACH 1831MM

AXIS 6 AXIS

sovereign capability. This lets Australian manufacturers compete on the world stage. Automated Solutions Australia (ASA) is an industry-leading expert for all your FANUC industrial robot and FANUC collaborative robot needs. Phone Automated Solutions Australia (ASA) today on **1800-ROBOTS (1800-762-687)**.

If you're looking for a multifunctional robot, get in touch with us today to see if the FANUC M-20iD/25 is the right robot for your application.

UNDERSTANDING INDUSTRIAL AUTOMATION: AN ESSENTIAL INDUSTRY GUIDE

In today's rapidly growing industrial landscape, automation has emerged as a revolution that drives efficiency, precision, and productivity to heights never seen before. Common industry categories include manufacturing, technology, healthcare, finance, agriculture, transportation, and many more. Like industrial automation, various industries are constantly evolving. In this article, we walk you through industrial automation and its importance for such industries.

FANUC is a worldwide robot company that has undeniably played a huge role in the automation revolution. FANUC, a leading manufacturer of industrial robots and automation systems, operates in over 100 countries worldwide.

The Growing Significance of Industrial Automation

Industrial automation has changed manufacturing processes across various industries, from cars and electronics to healthcare and energy (just to name a few!).

With the adoption of cutting edge technologies such as artificial intelligence (AI), the Internet of Things (IoT), and robotics, businesses can achieve higher production speeds. This affects how quickly and efficiently goods and services are delivered to customers. Additionally, this can lower your operational costs. So, this puts manufacturers in a great position, in terms of giving them a competitive advantage. In addition to this, industrial automation also significantly improves quality control. Last but certainly not least, it also enhances worker safety.

When looking at robotics specifically, there has been a huge growth in numbers on a worldwide scale. According to the International Federation of Robotics (IFR), in 2022 there were around 3.5 million operational robots. They have been installed across the globe. Thus growing at 600,000 units per year. This data proves there is a growing need for integrating robots and automation into industries worldwide. In addition, their popularity highlights their effectiveness in transforming industries.

FANUC: A Pioneer in Industrial Automation and Robotics

Founded as a subsidiary of Fujitsu in Japan in 1958, FANUC has a well earned reputation. They serve as a global leader in industrial automation and robotics.

With over six decades of experience, FANUC has continued to push the boundaries

of innovation, offering a wide range of automation solutions tailored to meet the diverse needs of industries worldwide.

FANUC now proudly has over 1.0 M robots installed globally.

Key FANUC Robot Offerings

Industrial Robots: FANUC's industrial robots come in various configurations, including articulated robots, SCARA robots, delta robots, and collaborative robots (cobots). These robots are designed with a specific purpose in mind. Such purposes include materials handling, welding, painting, assembly, machine tending and palletising. Their precision and repeatability make them indispensable in industries where accuracy and efficiency are paramount.

Intelligent Controls: FANUC's intelligent control systems are powered by AI and machine learning. Thus enabling robots to adapt and optimise their performance in real-time. This capability enhances flexibility and adaptability in automation setups.

IoT Connectivity: FANUC's robots and automation systems are IoT-ready. This allows for simple connectivity and data exchange. This connectivity enables predictive maintenance, remote monitoring, and data-driven decision-making, leading to reduced downtime and increased overall equipment efficiency (OEE).

Benefits of FANUC Industrial Automation Solutions

Precision and Quality: FANUC robots are well known across the globe for their accuracy, repeatability, and high quality performance. This ensures consistent product quality, reducing defects and any required rework.

Productivity and Efficiency: FANUC's automation solutions significantly boost productivity by increasing production speeds, reducing cycle times, and optimising resource use.



Safety and Collaboration: FANUC's collaborative robots work alongside human operators safely. This collaborative approach enhances worker safety. Thus enabling the automation of tasks that were previously too dangerous or repetitive for humans.

Cost Savings: By automating repeated tasks and optimising processes, FANUC solutions help organisations reduce labour costs and minimise waste, leading to substantial savings in the long run. In an era where automation is driving the future of manufacturing and industrial processes, FANUC stands as a leading force. With their cutting edge robots and automation solutions, FANUC has become a trusted partner for businesses seeking to maximise efficiency, quality, and productivity.

Are you in automotive, aerospace, electronics, or other industries? FANUC's extensive range of automation offerings can cater to your specific needs. As you navigate the industrial automation landscape, consider the FANUC brand as your essential partner for a more automated and prosperous future. Embracing FANUC's technology can help you stay competitive, drive innovation, and achieve new heights in your industry. As a trusted integrator of FANUC robot systems, Automated Solutions Australia (ASA) can help you navigate the industrial automation landscape. Put simply, when you work with ASA, things quickly become easier and more efficient. From our many years of experience, we know how to save you money and help your business not only grow but shine on the world stage. Plus, we care about making sure you're happy with end-to-end support.

DELIVERING TOMORROW'S SOLUTIONS, **TODAY**

ASA is a privately owned, wholly Australian company specialising in the design, engineering and integration of flexible automation solutions for the Australian manufacturing sector.



Whether your application is pick and place, palletising, packaging, part transfer or assembly, the development of a robotic solution offers significant benefits in almost any industry that is operating at high levels of throughput.

- Achieve uninterrupted speed, saving valuable production time.
- Achieve maximum repeatability, reliability and accuracy
- Lower costs versus manual labour
- Eliminate health and safety risks related to repetitive, tiring or dangerous operations

Contact ASA for more information or visit our website
automatedsolutions.com.au

1800 ROBOTS (1800 762 687)





1800 ROBOTS (1800 762 687)
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