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AXIS

QUARTERLY NEWSLETTER FROM AUTOMATED SOLUTIONS AUSTRALIA

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FROM THE DIRECTOR'S DESK

March marks the start of a new quarter and for many workshops and manufacturing floors, a fresh run of priorities as we edge closer to the end of the financial year.

It feels strange talking about EOFY when many of us are still shaking off the holiday period, but that's the rhythm of industry. Production rarely waits for anyone to catch up.

'Companies are dealing with the same pressures: tighter timelines, the need for more reliable processes, and the challenge of keeping production moving without adding unnecessary complexity.'

Over the past few weeks we've spoken with many of you across the country, and the conversations have been remarkably consistent. Companies are dealing with the same pressures: tighter timelines, the need for more reliable processes, and the challenge of keeping production moving without adding unnecessary complexity. This edition of AXIS is built around those very conversations and the practical solutions that have come from them.

One clear example is the Mitutoyo measuring machine we put on the line at IronBox Engineering. Moving measurement onto the shop floor stopped any wait time, sped up decisions at changeover and kept jobs moving through the shift. It's a simple idea on paper, but near or inline metrology like this often delivers a return far quicker than many expect.

In this edition of Axis, we also introduce you to Luke Merrett, our Technical Sales specialist. Many of you will remember Luke from his time with ASA as an Automation Engineer. His background in commissioning gives him a unique perspective, helping translate real shop-floor challenges into scopes that can actually be built and delivered without unnecessary complications. It's a skill that our customers value greatly.

On the technology front, we take a closer look at the FANUC P-40iA paint robot. For facilities working within tight booth spaces, this compact robot offers the reach and paint-specific functionality needed to maintain consistent finishes without the cost or disruption of redesigning an entire paint booth.

Inspection is another area where small improvements can make a significant difference. Systems such as the Mitutoyo MiSTAR 555 allow reliable measurement to happen within production itself, rather than waiting in a separate metrology lab. The result is clearer visibility, less rework, and better information for teams making decisions between shifts.

Behind every one of these technologies is our team of engineers, programmers and technicians who take ownership of commissioning, programming and ongoing support to you. It's the combination of the right kit and the right people that actually moves the needle.

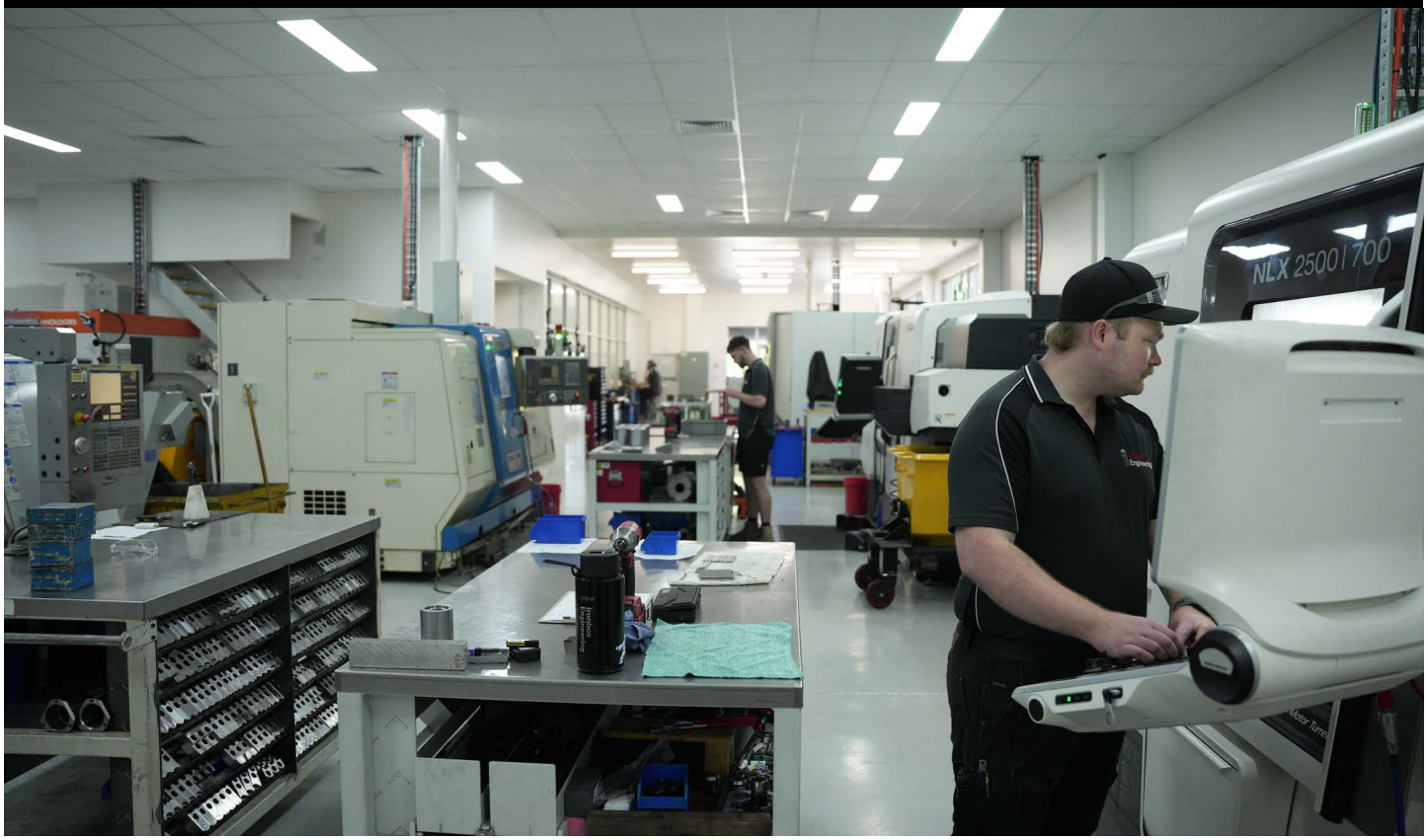
I hope this edition of AXIS gives you a few ideas as you plan the months ahead. If any of the topics resonate with the challenges on your floor, we'd be glad to talk them through with you.

From all of us at ASA, here's to a productive and steady quarter ahead.

Pat Green
Director, Automated Solutions Australia (ASA)

DELIVERING TOMORROW'S SOLUTIONS, TODAY

CUSTOMER IN FOCUS: **IRONBOX ENGINEERING**



Ironbox Engineering began in the small township of Chiltern, which is nestled in the middle of North East Victoria's Box-Ironbark forest. Their goal was to use the sound business principles learned while working for successful multi-national companies, to offer their customers innovative technical solutions, that could be delivered with sound project management.

A decade ago, Ironbox Engineering undertook a generational change, and with this expanded its offering of a Design Prototype and Manufacture service, while focusing its business principles to Accountability, Mutuality and Freedom. This transformation has been highly successful, maintaining the experience and strengths of the past, while engaging with the energy, enthusiasm and skill of the future. Ironbox now occupies more than 1,600 m^2 of workshop and manufacturing space, an expanding array of state-of-the-art equipment and processes, with a highly skilled and engaged workforce to bring it all to life.

A customer walks in with a battered housing full of broken pieces and the kind of worry that comes with a stopped production line. The team lays the parts on the bench and leans in, it's not just metal, but a problem to solve, a trust to be respected, test of skill and resourcefulness, and someone to help. A question follows: "How will it be used?" That single question reshapes the job. The pressing question is help the customer understand and explain what they really want and need. A machinist sketches a fix, another converts the sketch into a 3D model in Autodesk Inventor, the CNC machines are selected, CAM translates that model into precise toolpaths, material is found and cut, tools are loaded, and the material is turned into parts. But will they fit together, will it work? The parts are taken to the Mitutoyo CMM to test and validate, before a fitter puts all the pieces together for a relieved customer.

The relationship between Ironbox and Automated Solutions Australia didn't happen by accident. Ironbox began as a trusted supplier to ASA, delivering machined components as part of our integrated FANUC cells. Those early deliveries were fast, accurate and practical. Ironbox then added value to their supply offering, by installing a Mitutoyo CRYSTA-Apex V9166 Coordinate Measuring Machine (CMM) from ASA. This had an immediate impact, lifting their inspection capability and creating a shared standard for measurement. That exchange - parts for ASA, measurement capability from ASA - turned a supplier relationship into a strategic partnership.

When COVID shut ports and shipments stopped, an Ironbox customer's Chinese supplier went quiet overnight and a production line hung in the balance. Ironbox didn't wait for paperwork or promises, they reverse engineered the parts from worn samples, validated the design on the bench and ran a local production batch at a cost that was similar to the offshore price. The job kept lines running and preserved local jobs. It also showed that sovereign capability isn't a slogan, it's a risk management strategy that pays in lead time, reliability and cost when global logistics wobble.

Walk the floor of Ironbox Engineering and the capability is obvious: the workshop is comfortable, bright, and clean, thanks to a carefully designed air handling and conditioning system, false ceiling, panel lighting and painted floors. Their CNC machines are typically high-end German or Japanese, with a strong emphasis on 3–5 axis milling, up to 4 axis turning, but also EDM, surface grinding, laser etching, laser welding, 3D printing, fabrication, painting and chromate conversion. They work mainly in metals, aluminium, mild and high tensile steels, tool steels, stainless steel, titanium, Inconel, Bisaloy, but also various plastics, and more exotic materials like Tungsten Carbide, Macor, Boron Nitride, Shapal and Alumina. They complement machining with fixture design, tooling optimisation and use finishing partners for anodising, plating and heat treatment. That mix of equipment

and materials lets Ironbox move from a one-off prototype to a production run without losing the detail that makes parts fit in an automated cell.

Their customers span food/beverage, mining, aerospace, construction, agriculture, forestry, transport/automotive, research/product development, defence, instrumentation, tooling, automation and component manufacturing. These sectors demand everything from rugged repeatability to traceable precision. For ASA that breadth is valuable, when we design and install automation, we need local suppliers who understand tolerances, assembly fit and the small details that stop a cell from running. The Mitutoyo CMM we installed at Ironbox made inspection part of the workflow: full CMM reports on demand, a lower barrier to ISO9001 work, and auditable results ASA can rely on during integration and commissioning. Measurement became the enabler for a stronger quality department and a shared language between our teams.

The practical value of that shared language is best said plainly. Nathan Jones, General Manager at ASA, puts it like this, "Ironbox consistently delivers precision parts and practical solutions on time and at a fair price. Their attention to detail and willingness to solve problems makes them a trusted partner for our automation projects."

And from the Ironbox side, Bart, Operations Manager, describes the partnership in shop floor terms, "When ASA brought the Mitutoyo in, it changed how we prove our work. We still trust our eyes and experience, but now we can back every critical feature with a report. That's what lets us move from prototype to production with confidence."

Why ASA chooses Ironbox comes down to three practical things: capability, value and service. They deliver parts that fit first time, back them with measurement when required, and offer cost effective solutions on short notice. That trust is practical with fewer reworks, shorter lead times and a supplier who understands the realities of automation integration.

Ironbox's business principles aren't just slogans on a wall, they show up in the way the team owns a part, in the honest conversations about lead times, and in the small improvements that save hours across a run. For customers who need speed, traceability and a partner who understands automation tolerances, Ironbox offers design and CAD/CAM, reverse engineering, prototyping and production prototype runs, with the assurance of ISO9001 certification. They make everything from a single part, production run of components, to whole machines as a turnkey solution.

Ironbox is the partner that turns late night fixes into production certainty: skilled machinists, smart tooling and on demand measurement that prove parts fit, perform and can be certified, fast. They rescued production lines during COVID, scaled prototypes into reliable runs, and back every delivery with judgement and evidence, not excuses. See their work for yourself, visit Ironbox's website to view the shop, explore capabilities and get in touch.

www.ironbox.com.au
www.automatedsolutions.com.au

MEET THE ASA TEAM: LUKE MERRETT

Luke Merrett is back at ASA as our Technical Sales specialist, and we're excited and grateful to have him return. He's not rejoining as a stranger but as someone who knows the team, the late nights that save a run, and the practical fixes that stop small problems becoming big ones.

Luke's hands on commissioning background, from a fitting and turning apprenticeship at Holden to commissioning high speed packaging systems around the world, gives him the credibility customers value; he speaks engineering and operations in the same sentence.

His first real taste of robotics came in 2002, working with FANUC systems in the paint shop at Holden. That early mix of hands on trade work and path programming left him with a practical lens most salespeople don't have. "I can often relate with customers regarding their shop floor challenges, and also their expectations from automation," Luke says. He's comfortable talking PLCs and HMIs, but he's equally comfortable standing beside an operator and timing a cycle to find the real bottleneck.

What makes Luke useful to customers is how he blends technical depth with a systems view. He'll model payload, reach and cycle time to prove a concept on paper, but he also asks the bigger questions: how will higher throughput change warehouse movements, quality checks or staffing? That wider perspective helps ASA design solutions that fit the whole operation, not just the task in front of the robot.

Luke's experience spans food and beverage, FMCG and high speed packaging, and he's worked on installations from Australia to China to North America and beyond. He's pragmatic about the first step when a customer is unsure: "You know your operations inside and out, so it makes sense to directly hear more about the challenges you're experiencing." That conversational, floor level approach is how he turns uncertainty into a scoped, testable concept.

He's already working on projects that bring robotics and metrology together. Robotic loading and unloading of a Mitutoyo CMM is one example he's excited to share with customers soon, and he's unapologetically old school about his favourite FANUC robots: "If it doesn't have to be a current model, the FANUC P 200E is absolutely bullet proof. Otherwise, the FANUC R 2000's reliability and performance are hard to beat."

We're thankful Luke chose to come back because he strengthens the bridge between engineering and customer outcomes: clearer briefs, smoother installs and a higher chance that a cell will perform on day one.

MAXIMISE PERFORMANCE: SERVICE YOUR ROBOTS TODAY!

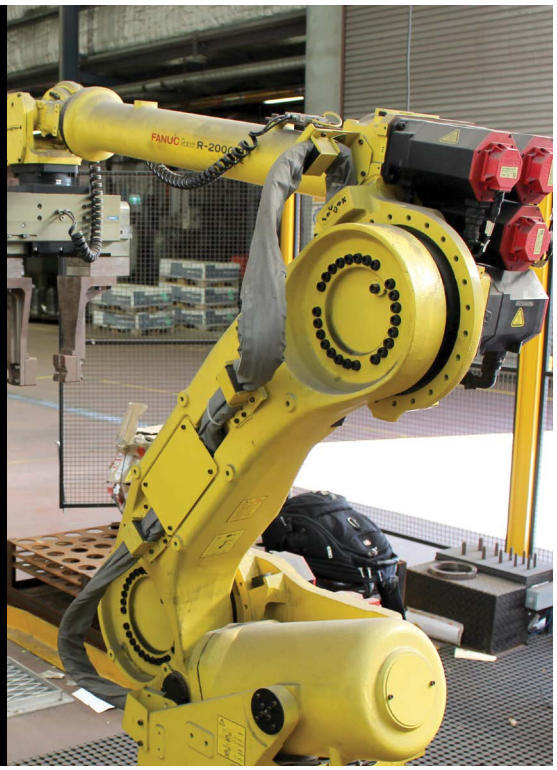
Your robots are the backbone of your manufacturing operations, tirelessly working around the clock to deliver precision, efficiency, and consistency. Like any high-performance machine—whether it's a car or a piece of advanced equipment—regular maintenance is essential to keep them running at their best.

Annual servicing ensures your FANUC robots stay in optimal condition, helping you avoid costly downtime and maintain the high standards your business depends on. Key maintenance tasks such as greasing, battery replacements, wear inspections, and backlash measurements safeguard motion repeatability and uphold the quality of your production processes.

Routine servicing doesn't just fix problems—it prevents them. By maintaining a high Mean Time Between Failures (MTBF) and detecting potential issues early, you can save time, money, and the hassle of unexpected disruptions.

Don't wait for a breakdown to act. Protect your investment, boost productivity, and keep your robots performing at their peak — schedule your service today!

Call ASA on 1800 ROBOTS to book.



ASA – YOUR AUTOMATION SPECIALISTS

It usually starts the same way. A production line slows, then stops. The conveyor sits still. Someone presses reset. Someone else checks the part that never quite lines up the same way twice. A supervisor looks at the clock and quietly recalculates the day's targets.

Moments like that are where Automated Solutions Australia (ASA) has always begun. ASA wasn't built around robots. It was built around solving problems like these, the kind that happen quietly on factory floors every day. The repetitive job that wears down operators. The process that works well most of the time, but causes headaches when volumes increase. The bottleneck no one notices until production falls behind.

Long before a robot is shipped out of FANUC, you'll often find an ASA Automation Engineer standing beside the line, brought in to do a Needs Analysis. They watch how the work moves. They listen to the operators who know every sound and rhythm of the process. They time the cycles, follow the parts, and notice the small things - the awkward hand movement that adds seconds to every cycle, the handoff that causes rework, or the space where automation could remove a frustrating task entirely.

It's not unusual for the solution to appear only after hours of observation. That's because automation works best when it fits the real world of the factory, not the neat diagrams drawn in a meeting room. Once the problem is clear, the engineering begins. Payload calculations, reach envelopes and cycle-time modelling that prove a concept before anything is built.

Inside ASA's workshop in Elizabeth South and Brooklyn, those ideas start to take shape. Controls Engineers, software specialists, electricians and mechanical designers all work alongside Project Managers in the same building. It means the team who designs the system is also the team who builds it, tests it and commissions it. That continuity makes a difference. There are fewer surprises during installation and fewer late-night phone calls once production starts. The people responsible for the design are the same people standing beside the line when the robot moves for the first time.

Every ASA cell is built with its future home in mind. Some systems are destined for tight manufacturing footprints. Others must survive the dust of mining environments or the washdown conditions of food processing plants. Aerospace facilities demand an entirely different level of precision again. Reliable FANUC robots provide the motion, but it's the integration around them that makes the system work, be it conveyors, safety systems, vision technology or PLC control that allow every part of the cell to operate as one predictable machine.

When the system finally goes live, the benefits become obvious. Production managers see smoother ramp-ups and clearer returns. Operators step away from repetitive or hazardous tasks and into roles where their skills matter more. Processes become repeatable, consistent and easier to scale. And the production line moves again, steadily, predictably, and without the small interruptions that once slowed everything down.

ASA remains part of the story long after installation. Commissioning support, operator training and ongoing service ensure knowledge stays with the people who run the line every day. Over the years, projects delivered across Mexico, Brazil, Canada and the United States have shaped ASA's engineering approach. Each international project adds another layer of experience that feeds back into Australian manufacturing solutions, and increases our own sovereign capability.

At its heart, automation isn't about technology. It's about keeping production moving, protecting the people who run it, and giving manufacturers confidence that tomorrow's demand can be met just as reliably as today's.

If you'd like to explore how automation could improve throughput, quality and cost on your production line, ASA can prepare a short feasibility summary outlining likely cycle time and yield improvements.

Which production line should we assess first?

ROBOT IN FOCUS: **FANUC P40iA PAINT ROBOT**

The FANUC P-40iA is the kind of paint robot that quietly fixes the everyday problems you didn't know were costing you time. Slim, lightweight and surprisingly flexible, it slips into tight spray booths and compact cells without forcing a rebuild of your process. With a 5 kg wrist payload, 1,300 mm reach and six axes of motion, the P-40iA handles fine detail and small to medium assemblies while giving you the coverage you need in constrained spaces.

Because it can be mounted on the floor, ceiling, wall or at an angle, the P-40iA lets you design the cell around the work, not the other way round. That physical flexibility keeps fixtures, masking and part handling close together and reduces unnecessary movement between operations. Paired with FANUC's paint specific toolsets, PaintTool and HandlingTool for on line control and ROBOGUIDE® PaintPRO® for offline programming, the robot speeds commissioning and cuts the time spent tuning programs on the line.

Line tracking capability changes how you think about throughput. The P-40iA can apply coatings while parts are moving, expanding the effective working envelope and turning a manual bottleneck into a continuous, predictable step. That's especially valuable for high mix, low volume runs where changeovers are frequent and finish quality can't be compromised. Offline simulation means you can refine programs before they touch a part, reducing downtime and human error during changeovers.

Safety and compliance are practical concerns in solvent rich finishing environments, and the P-40iA is built with that reality in mind. It can be specified with hazardous area options and approvals, simplifying the engineering of explosion protected cells and easing the headaches of retrofitting compliant solutions. The robot also draws on proven design elements from FANUC's paint families, so you're choosing a platform refined for coating work.

Integration is where the P-40iA pays back. It slots into automated workflows; conveyors, robotic loaders, rotators and inspection systems, so masking, curing and measurement can be chained into a single, repeatable process. That reduces manual handoffs, shortens feedback loops and keeps finish quality consistent across shifts. Plan for service clearances and part handling paths early, and work with an experienced integrator to balance mounting, automation scope and hazardous area requirements.

'If you want a compact, reliable paint platform that fits into constrained cells, supports line tracking and scales into automated finishing, the FANUC P-40iA is a practical choice.'

Maintenance is straightforward when it's planned; regular purge checks, filter changes and periodic calibration keep motion and atomiser performance stable. Choosing ASA as a partner with paint cell experience shortens commissioning and keeps the robot tuned to the motion profiles and atomiser control that deliver the finish you expect.

If you want a compact, reliable paint platform that fits into constrained cells, supports line tracking and scales into automated finishing, the FANUC P-40iA is a practical choice. Contact Automated Solutions Australia to find out how it can be applied to your process and to arrange a demonstration or site review.

MITUTOYO IN FOCUS: **MISTAR 555**

Imagine a coordinate measuring machine that feels at home on the production line: fast enough to match tact time, tough enough for dust and washdown, and compact enough to sit where you need it. The MiSTAR 555 from Mitutoyo is built for that reality. It brings lab grade accuracy into the factory environment with drive speeds and acceleration that cut measurement time, a contamination resistant scale that keeps readings stable in harsh conditions, and a three-sided open layout that makes loading parts simple and safe.

The difference shows up in everyday work. Operators can move parts on and off the table without wrestling with awkward access; Quality Engineers get repeatable results without waiting for a climate-controlled room, and Production Managers see measurement cycles that no longer bottleneck throughput. Mitutoyo designed the MiSTAR 555 around practical constraints: a reduced footprint that frees valuable floor space, a symmetric structure and temperature compensation that hold accuracy across a wide operating range, and a table rated for real world loads so you can measure finished assemblies as easily as small components.

Performance matters when you're measuring at speed. The MiSTAR 555's high drive speed and rapid acceleration shorten probe paths and reduce idle time between measurements, so inspection routines finish faster without sacrificing precision. That speed, combined with Mitutoyo's newly developed absolute scale, gives the machine twice the contamination resistance of conventional models, a real advantage where dust, oil or particulate matter are part of the daily routine.

Practical features make life easier. The three-sided open architecture reduces handling time and operator fatigue. The single support moving bridge and compact controller storage shrink the installation footprint, and automation readiness means the MiSTAR 555 can be integrated into loading systems, conveyors or robotic cells for unattended, high throughput inspection. In short, it's built to slot into modern production lines and keep pace with them.

The technical specs includes a measuring range 570 x 500 x 500 mm; Drive speed: 606 mm/s (CNC) with a drive acceleration of 2695 mm/s^2; Table capacity: supports parts up to 660 mm tall and loads to 120 kg; guaranteed temperature accurate operation from 10 to 40 °C; Mitutoyo's environment resistant absolute scale gives roughly double the contamination resistance of conventional models; a compact, single support moving bridge and three sided open architecture reduce footprint and simplify loading; and the MiSTAR 555 is automation ready for integration with conveyors, robotic loaders or cell based inspection routines.

'For manufacturers who need measurement that's fast, robust and easy to automate, the MiSTAR 555 closes the gap between inspection and production.'

For manufacturers who need measurement that's fast, robust and easy to automate, the MiSTAR 555 closes the gap between inspection and production. It's not just a CMM you keep in a separate room, it's a tool that helps you catch issues earlier, shorten feedback loops and make quality part of the line rather than an afterthought.

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

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