



IN THIS BUMPER ISSUE:

- "Is Your Production Ready for the Recovery?"
- Gov. Investment Tax-break continues - 10%
- New MOTOMAN & OTC Robots Launched!
- RA excellence recognised with new Awards
- Last Chance Wrapper Offer!
- More RA & MOTOMAN videos
- Case Study - Robotic Assembly
- Fork-lifts Vs AGV's - videos

Spring / Summer Issue - September, 2009

Ready Production for the Recovery...

Message from the Director: "We're all happy to see consistent indicators that the economic tide has made a definite turn toward growth. Employment is stabilising and Business Confidence is at a six-year high".

Understandably, some companies delayed improvements to their production lines over the crisis period. However, the danger now is that delays can over-extend, that too much caution will see their production now unable to efficiently meet the demands of customers who are quickly replenishing their own stock after running them down over the same period.

Developed properly, an automated solution can take several months or more to scope, design, build and commission. Even a company that chooses to order right now might therefore not see much benefit from the solution within the 2009-10 financial year. Waiting until February could hold back benefits well into the 2010-11 financial year.

For this reason we encourage all manufacturers to review their production challenges with us as soon as possible and move forward to achieve full benefit from the recovery period ahead."



Best regards,



Colin Wells
Managing Director, RA Group

*Refer: September-released Surveys by the National Australia Bank and Dun & Bradstreet

Business 'CASH-SPLASH' Continues!...

10% Investment Tax Break

An important reminder: The Australian Government's tax-break incentive is being continued to help you maintain investment in your business as Australia bounces back from the 'Global Financial Crisis'. This tax-break applies to orders placed by December 31st so contact us with your automation needs now and together we'll develop a proposal that's right for you. Ask us (or your accountant) for details!

Even Better! - The Federal Budget announcement includes an increase in the tax-break to 50% for companies with turnover under \$2million.



Press the image above to view a full information sheet.

New from MOTOMAN...

DX100 Controller: Motoman's 7th Generation controller easily handles multiple tasks including control of up to eight robots (72 axes), as well as I/O devices and communication protocols. The energy-saving DX100 features faster processing speeds, advanced robot arm control, built-in collision avoidance and quicker I/O response. These advanced control functions take advantage of Yaskawa's new Sigma V motor technology to optimize acceleration characteristics and reduce cycle time.

The DX100 conserves power during robot idle time, providing up to 25 percent energy savings. All operator controls are located on the pendant, allowing the control cabinet to be mounted remotely.

MPK2 High-speed picking robot: The 5-axis MPK2 robot provides superior performance in food handling, picking, packing and other high-speed material handling applications. The MPK2 robot features an IP-67 rating that permits wash down (wrist and body) for applications where cleanliness is important. Its compact, slim arm design allows reach into confined spaces and the hollow arm allows cables and hoses to be run internally throughout the entire robot.

Its fast axial speeds and acceleration reduce cycle times and increase production output. The top wrist speed of 2,000 degrees per second provides maximum productivity, even when parts need to be rotated more than 90 degrees. The MPK2 can perform up to 133 picks per minute!

MH5 series handling robots: compact, powerful and economical, the new 6-axis MH5 and MH5L (long-arm) robots require minimal installation space and offer superior performance in a variety of applications such as packaging, material handling, machine tending and dispensing. Featuring a reach of up to 895mm and offering the widest work envelope in their class, the MH5-robots yield



The MH6 and MH5 above are two of the new MOTOMAN robots in the DX100 controller series.



The MOTOMAN MPK2 High-Speed Picking robot with 2kg payload.

Plus more DX100 models to come!

MOTOMAN robots are exclusively

extraordinary production results while requiring minimal investment.

MH6 & HP20D General Purpose robot: The upgraded design of MOTOMAN's popular 6kg and 20kg payload robots also use the new DX100 controller and boasts higher speeds that can reduce cycle-times by up to 15%!

represented by
Robotic Automation P/L
throughout Australia & NZ.
Contact us for full information.

New from OTC Daihen...

AII-V6L Welding Robot: OTC have achieved significant gains in robot axes speeds for greater productivity while interference detection sensitivity has been improved by 40% - reducing the potential for damage in a collision. The robot has an improved dust-proof & water-proof design with a completely sealed structure equivalent to IP54.

Improved RS Control provides a smoother approach to the weld and better performance / quality of the arc start point. The **AII's** new Shock-Sensor Torch now also features a liner clamping mechanism that reduces variance in the wire's position while the robot is changing posture.



RA Excellence - New Recognition...

In the last year, we've been pleased to receive the following local industry *pats-on-the-back* for recent automation projects. We wish to share this recognition & acknowledge our clients in choosing RA to partner in these projects...

Zenith Awards (Process Magazine) - *for leadership in engineering, technological excellence and innovation.*

Category: Mining, Minerals & Exploration

Project: BHP / Robotic Molten Nickel Handling

Result: Highly Commended Trophy (2nd place)

Zenith Awards (again)

Category: Manufacturing

Project: Kimberly Clark / 4-axis Twin Gripper Palletising

Result: Short-listed Finalist

Australian Bulk Handling Awards (ABH Magazine)

Category: Innovative Technology

Project: BHP / Robotic Molten Nickel Handling

Result: Short-listed Finalist

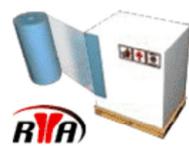
...but the year's not finished yet! At RA, we're delighted to have received nomination for several more up-coming awards...

*Watch this space for more results
- next issue!*



One of our award-nominated solutions, the 4-Axis Twin Gripper for Kimberly Clark Australia.

LAST CHANCE Pallet-Wrapping Offer



Our discounted stock is running very low on Semi-auto Stretch Wrappers:

- **Only 2 'Robot Workers' left!**
- **Less than 10 'Starts' left!**

Quality pallet-wrapping systems from **ROBOPAC** (of Italy) and **RA Technologies P/L** -our packaging automation division.

Visit our '[Special Offers](#)' section of the **RA** website for full details of these & more great value buys - robots too!



Press on the images to view directly

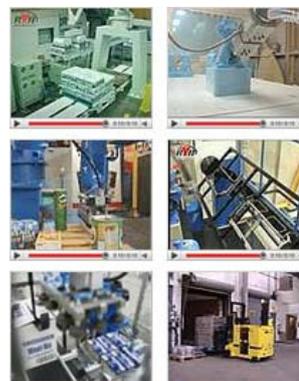
More RA Videos - Now Showing

RA's application videos on www.YouTube.com continue to grow and highlight our automation experience of the last 20+ years.

Now **MOTOMAN** has made a big splash with their own page containing **145** further videos of robotic applications. If you want the clearest idea of how our automated solutions can work at your site - we strongly suggest a visit. If a picture paints a thousand words ...then a video is a whole novel!

Are you missing out?

Have you had an audit of your site's automation potential? Our team is always happy to advise you over the phone or at your site - call us on **1300 552 333** to enquire or simply [reply](#) to this email.



Some of the RA videos on-line at YouTube now. Many varied automation applications.

Local Installation Case Study - Vision Assembly

RA's installation case-studies feature in selected industry magazines. Perhaps you'll recognise new automation potential in your own plant from the solutions you see here...

CLIENT: Automotive parts company

PROBLEM: Assembling the multi-layered valve body of

automatic transmission systems - 4 and 6 speed models. The client's staff had to perform this repetitive and monotonous task while maintaining full concentration - there is 0% margin for error but many points in the process for error to occur. Worse still, it is very easy for errors to be overlooked.

The valve body is the control centre of the transmission. It uses a system of hydraulic fluid directed over a baffle plate via a layered network of pathways, valves, check balls and servo pistons. This layered network is sandwiched with gaskets before being screwed together. During assembly, the operator is required to position a total of up to 6 springs and 7 check-balls of varying size at points in the maze-like pathways on each layer of the valve body. If just one of these is incorrectly placed, the final transmission unit will fail during testing and need to be disassembled - a wasteful and time-consuming exercise that cannot be afforded, particularly under the "lean manufacturing" methodology commonly required by the large automotive companies. Operators would also need to check that all other pathways were clear, that the springs operated freely and that each part was free of metal casting burrs. Working up to three shifts per day, six operators could be called upon to perform this repetitive yet exacting assembly procedure, with all the inherent potential for errors and repetitive strain injury.

SOLUTION: With this twin station solution, a single operator outside the cell can load the gaskets and baffle plates on one station while, inside the cell, the robot is completing assembly at the other station. The operator and robot then swap stations, with the operator removing a finished unit before loading new parts again. Production is continuous.

Beginning the automated process, the cell's integrated vision system checks the position of the loaded parts and identifies any burrs, blockages or deformations formed during the casting of the metal parts. The **Motoman HP50** robot now begins positioning springs and three sizes/colours of check-balls from its on-board magazines/dispensers into precise points on 2 baffle plates. The robot then retreats for a second to allow the vision system to confirm the balls & springs have all remained in place and no other material is blocking the pathways. The robot next checks that all 6 springs are performing freely to the correct specification by use of a position transducer on the gripper. The robot's grippers are then used to position gaskets on the baffle plate which will create a watertight seal to withstand the pressurised hydraulic fluid when the unit is finally installed.

Lastly, the robot engages its tool-change interface to connect to the jig holding the top layer baffle plate. The robot lifts this whole jig, with set of plate, check-balls and gaskets in situ, before flipping and positioning atop the first set and then engaging the jig's on-board screw drivers to lock the unit into final assembly. The finished unit is then ready to be unloaded while the robot immediately starts assembly of the next unit.

Take a look at some video of the system in action. Click the video image below to play the clip at www.YouTube.com



RA-designed camera above the Motoman HP50 robot with its multi-function gripper/dispensers.



Vision software checks valve body position, clearance & insertion.

EQUIPMENT:

- **MOTOMAN HP50** robot and **NX100** controller
- **RA** designed end-of-arm tooling with multiple dispensers & magazines, pneumatic grippers & automatic tool-change interface
- **RA** designed lightbox/camera unit. Image recognition software
- **RA** designed jiggling with screw driving system
- **RA** designed twin-station work cell with safety features: automatic screens, interlocks

BENEFITS:

- **Minimised failure rate in the final unit**
- **Labour saved in disassembly and reassembly after failure**
- **Increased staff safety and reduced repetitive strains, injuries, lost production time, potential claims and compensation**
- **Shorter assembly time on each valve body**
- **Greater productivity**
- **Saved labour & associated costs x 4**
- **Less break time & down time**
- **Increased reliability and continuity of "lean" production**
- **Increased competitiveness by reducing overall costs**

Automatic Guided Vehicles Vs Fork-lift Dangers...

While you're on www.YouTube.com, witness some of the incredible damage forklifts can do in your plant. Follow the links below...

- [Big mess from one weak link](#)
- [Pallets of beer rain from above](#)
- [Load + driver ejected](#)
- [The domino theory in action](#)

All good reasons to look at an **Automatic Guided Vehicle** solution in your plant. Contact us for more information or an appraisal of your site's potential.

Just Ask!



Our Melbourne facility (Knoxfield) has a permanent **Demonstration Area** - call us on (03) 9730 9000 or simply [reply](#) to this email and arrange a visit & demonstrations!