

Mitsubishi Electric demonstrates easy integration for new packaging machinery automation solutions



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With the aid of a ProSeal GT0 automatic in-line tray sealing system on its stand at the PPMA Show, Mitsubishi Electric is demonstrating how the most advanced high-speed heat sealing technology and robots are becoming far easier to deploy. The advanced functionality, simple integration and ease of programming of its automation technologies are being shown to deliver tangible benefits – both for machine builders looking to gain a competitive edge and for end users looking to increase productivity and flexibility.

The ProSeal GT0 tray sealing machine was designed to increase line speeds, cut labour costs and produce over 45 packs per minute. The machine meets requirements for rapid tool changes, simple operation and ease of integration with other production line equipment. The high accuracy tool alignment system ensures consistently accurate sealing and film cutting, while a servo-driven 'setting-free' automatic tray collation in-feed delivers increased performance. A pendant mounted colour touch screen HMI provides control for full double-sided operation, with menu-driven control offering step-by-step prompts, error and

status displays and a useful batch counter function, as well as providing recipe-driven auto machine set-up for tool change.

All of these benefits are delivered by Mitsubishi Electric automation equipment, including GOT series HMI for operator interaction, variable speed drives and servos for the demanding motion control requirements, control gear and an iQ-platform PLC for overall machine control. Adoption of a single, coherent automation platform ensures higher machine OEE (with faster throughput, faster product changeovers and less scrap), along with reduced total cost of ownership.

Further, highlighting how the integration of robotics onto the production line can dramatically increase line efficiency and productivity, the live ProSeal demonstration on the Mitsubishi Electric stand includes a MELFA articulated arm robot picking and placing trays to and from the GT0 tray sealer.

As well as enabling packaging sector machine builders to deliver operational benefits to their customers, the Mitsubishi Electric automation solution also offers significant advantages for the machine builders themselves. Adoption of a single automation platform ensures ease of integration for the various components, while the iQ Works engineering environment removes a significant burden from the machine builder or integrator. iQ Works offers full integration of PLC, variable speed drive, motion and robot programming environments including function blocks, a common tag database and simulation and monitoring across all these control disciplines.

All of this means machine builders can reduce development time, drive up reusability, reduce debugging time and simplify training.

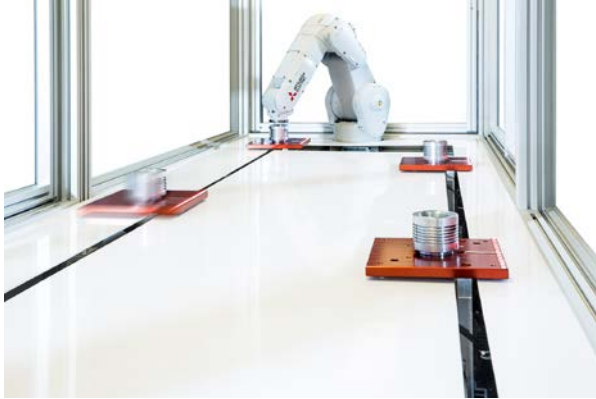
Having simplified design, Mitsubishi Electric is also demonstrating simplified line integration, particularly in a multi-vendor environment, by implementing the OMAC PackML standard. The result for end users is



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faster upgrades and machine implementation in addition to the ability to collect OEE data in a uniform way from multiple machines and lines, highlighting key performance indicators such as performance, quality and availability data across the whole facility.



The Smart Carriage is easy to integrate into a wider automation system including simple synchronisation with Mitsubishi Electric's MELFA robot range.

Visitors to the Mitsubishi Electric stand at PPMA also have their first opportunity in the UK to see the latest developments in Mitsubishi Electric's Smart Carriage technology, which has been developed in conjunction with the linear transfer system designed by e-F@ctory Alliance partner APT Automation. The Smart Carriage addresses industry challenges such as improved productivity, increased OEE and greater production line flexibility, with features and functions that make it the world's most advanced packaging and assembly conveyor – including on-board intelligence, real-time synchronisation with other processes, assured safety and the ability to switch between vertical as well as horizontal tracks.

By offering on-board intelligence and data memory, as well as integrated power for on-carriage devices such as sensors, the Smart Carriage can store product information and production data. It can then communicate information from one station to the next. This also allows the carriage to detect different products and then decide on optimum routes and destinations. This is supported by a high maximum speed of 4m/sec, plus acceleration / deceleration of 3g and a positioning accuracy of ± 0.01 mm. With this solution packaging conveyors for high value items are entering a new era of material flow. All of this

considerably increases the efficiency and flexibility of the packaging process.

In the most recent development, the Smart Carriages on the linear transfer system now support 3D Multi-layer motion, with carriages able to switch between both horizontal and vertical tracks on production lines. This means that different product related processes can be matched to the product, and at a later date merged again intelligently on the rails. The result is significantly higher plant utilisation, greatly increased flexibility and decreased redundancy.



The Smart Carriage also supports the ability to switch between parallel tracks on production lines allowing multiple operations on different products.

All of these capabilities are being highlighted in a working demonstration on the Mitsubishi Electric stand. Not only that but the company will have a full team of packaging industry experts on hand to discuss the wider issues of automation within the packaging sector.

Mitsubishi Electric can be found on stand C60 at the PPMA Show, NEC, Birmingham, from 26-28 September 2017.

About Mitsubishi Electric

With over 90 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation is a recognized world leader in the manufacture, marketing and sales of electrical and



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electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, as well as in products for the energy sector, water and waste water, transportation and building equipment.

With around 124.000 employees the company recorded consolidated group sales of 39.3 billion US Dollar* in the fiscal year ended March 31, 2014. Our sales offices, research & development centres and manufacturing plants are located in over 30 countries. Mitsubishi Electric Europe, Industrial Automation – UK Branch is located in Hatfield, United Kingdom. It is a part of the European Factory Automation Business Group based in Ratingen, Germany which in turn is part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

The role of Industrial Automation – UK Branch is to manage sales, service and support across its network of local branches and distributors throughout United Kingdom.

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