MitsubishiElectric
demonstrates easy integration
for new packaging machinery
automation solutions

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increase line speeds, cut labour costs and produce over 45
packs per minute.

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
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 ±0.01mm. 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
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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