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17 May 2019

Mitsubishi Electric presents for packaging sector high precision and speed automation technologies that are easily programmable that allow for reduced costs

Packaging Solutions that Allow for Problem-Free Production for Factories

Providing industrialists with energy efficient factory automation solutions equipped with advanced technology, Mitsubishi Electric also adds high added value to packaging sector with its products for packaging sector. Drawing attention with its iQ Automation Platform which forms the basis of e-F@ctory, the brand's answer to Industry 4.0 and advanced robotics technology, Mitsubishi Electric took the spotlight with its high precision and high speed packaging solutions that are easily programmable and provide cost savings which make problem-free production possible for factories.



Preferred by manufacturers around the world for its advanced automation systems, technology giant Mitsubishi Electric provides the smart factories of Industry 4.0 era with added value in terms of rapid integration, productivity, flexibility and efficiency. Operating in numerous sectors such as pharmaceutical industry, food, automotive, white

appliances and more, Mitsubishi Electric also stands out in packaging sector with its high-end products and engineering experience. Known for its high quality and variety in automation product range, Mitsubishi Electric provides solutions that encompass all

disciplines such as; filling, labeling, horizontal and vertical packaging, preparation for distribution. Wide product range of Mitsubishi Electric help industrialists reach the right solution for each type of application with ease. With numerous robotic solutions for sectors that require rapid manufacturing, dosing and packaging, Mitsubishi Electric takes the spotlight with our high precision and high speed packaging solutions that are easy to use and program and provide cost savings which make problem-free production possible for factories.

The umbrella platform for all automation components

iQ Automation Platform which made it possible to develop e-F@ctory, Mitsubishi Electric's answer to Industry 4.0, is one of the rare product families that combine all vital automation components under a single roof. The most important advantages of iQ Platform can be listed as; minimum TCO (total cost of ownership), full and trouble-free integration among factory automation management systems, maximum efficiency and fast communication. Thanks to this advanced technology, costs are reduced at each step of automation cycle and maximum return is gained from investments.

High precision and speed in bottle filling



For bottle filling operation, which required high precision and speed in packaging sector, fully synchronizing filler cap control with rotating conveyor and flow controller stands out as one of the hardest steps. While filling, the controller must be set to feed the bottle with the liquid at just the right rate and also flow rate and cap height must be controlled precisely to prevent frothing and overflow risk. At this point, iQ Platform based movement control CPU of Mitsubishi Electric provides great advantages. Alongside movement control, real transfer phases of the application can be kept under control using Mitsubishi Electric's smart and energy saving drivers. Bottles that are rapidly fed into the machine can be controlled over CC-Link network system using System Q at program speeds of milliseconds with 1 Gigabit high speed transmission speed.

Rapid and correct labeling

Sticking labels on target products correctly with minimum deviation is only possible with high speed labeling machines of today. To prevent flexing, wrinkles and cuts in label film layer, all layers need to be fed into the machine at a stable rate which allows for labels to be placed correctly on products. Labels that come in certain dimensions can be placed using numerous methods such as cold and warm glue, flexible film and wide wrapping. While designing a labeling machine, it is important to design the control architecture in a way to ensure minimal

stoppage in efficiency while supporting all different systems. Mitsubishi Electric's iQ Platform makes it possible to meet all these demands with ease. Q movements series make it possible to correctly place labels with its high speed recording functionality.

Technology that reduces costs in packaging

Alongside bottle filling applications, mostly used packaging machine type is the pillow packaging type machines used for packaging numerous products such as wafers, bread and drugs. Mitsubishi Electric's Q motion controller ensures high precision requirements of such machines with ease. In this system where packaging blades operate under perfect synchronization with feeding speed, high speed and precision cutting is provided. Eliminating companies' doubts for such systems and reducing costs, Mitsubishi Electric provides highly functional solutions.

Proper solutions for complex systems

Usually products require a final packaging step that involve cardboard or paper box. Packaging machines which are designed for speed also need to have a soft rhythm to prevent damage to products while placing main products in boxes or wrapping them with a hard material. Specially designed by Mitsubishi Electric for these requirements, Q series movement systems provide a proper solution for complex systems with numerous moving parts. These systems provide the necessary, high level of synchronization needed to prevent errors in machine processes such as unpacking, banding and transfer conveyors.

About Mitsubishi Electric Corporation

With over 95 years of experience in providing reliable, high-quality products, 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, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,444.4 billion yen (in accordance with IFRS; US\$ 41.9 billion) in the fiscal year ended March 31, 2018. For more information visit: www.MitsubishiElectric.com*

**At an exchange rate of 106 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2018.*

About Mitsubishi Electric's Activities in Turkey

Mitsubishi Electric's main fields of activity in Turkey are; air conditioning systems, industrial automation systems, advanced robot technologies, CNC mechatronics systems, elevator and escalator systems and visual data systems. Designating Turkey whose power and potential it believes in as a major production headquarter, Mitsubishi Electric produces energy efficient and environment-friendly air conditioners for Europe and Turkey in its digital factory in Manisa which is the brand's first room air conditioner factory in Europe. Working to integrate factories of Turkish industry into digital transformation period, Mitsubishi Electric also draws attention with its automation technologies in the world's deepest sunken tube tunnel, the Marmaray project. Operating in several fields in Turkey such as automotive components, semi-conductor devices, transportation and energy systems, Mitsubishi Electric applies its radar technology which is developed for airports to increase safety for airplanes and flights within its operations in public systems in Antalya Airport. One of the leading developers in space research and development systems, Mitsubishi Electric is also the manufacturer of Turksat 4A and 4B satellites which

contributes to Turkey's and neighboring countries' communication and broadcasting infrastructure. For detailed information; tr.mitsubishielectric.com

About Mitsubishi Electric Turkey Factory Automation Systems

Mitsubishi Electric Turkey Factory Automation Systems; provide added value in terms of rapid integration, productivity, flexibility and productivity to the leading industrial companies in Turkey in various fields such as automotive, food, packaging, metal and PVC processing machines. The new industry, also called "Industry 4.0", responds with e-F@ctory, i.e. the digital factory concept. For more information; tr3a.mitsubishielectric.com

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