

Mitsubishi Electric's iQ Platform: full automation on one rack

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Machine tool manufacturers have been successfully combining Mitsubishi Electric CNC and robot technology in their systems for years and consequently promoting unmanned production. The iQ Platform from Mitsubishi Electric permits not only the seamless combination of CNC and robot CPUs but also of PLC and Motion Control CPUs – an integrated solution that is unique throughout the industry. Intelligent automation can be realised quite easily using one single controller platform.

The iQ Platform provides a powerful and reliable automation solution for all automation disciplines such as discrete control and motion control as well as robot, CNC, batch and process control. Besides connecting points for I/O modules, the system has slots for different control modules which communicate with each other in real time, creating a highly synchronous system.

Thomas Lantermann, Senior Business Development Manager at Mitsubishi Electric Europe B.V., Factory Automation – European Business Group, explains: "The innovative combination of different technologies such as CNC and robotics via the iQ Platform has contributed towards the implementation of Industry 4.0. In addition, thanks to its open interfaces, the iQ Platform guarantees the easy and direct exchange of data from robots up to the ERP system. This enables the flexible planning and analysis of data required within Industry 4.0. The various specialist divisions within Mitsubishi Electric such as

Controllers, Robotics and Motion Control have been working closely together in order to create integrated complete solutions for a long time now. The result of this interdisciplinary development is the iQ Platform, the first of its type within the industry to date, offering an unparalleled level of integration."

Intelligent machine tools

müga Werkzeugmaschinen GmbH always uses Mitsubishi Electric products in its powerful, high-precision CNC machines. CNC and robot technology are combined to create ultramodern solutions for intelligent production. Helmut Müller, Managing Director at müga, explains: "We took the decision to use Mitsubishi Electric technology to build our production cells as we can get everything that we need from them as a single source, from drives through to CNC controllers and robots. With the help of Mitsubishi Electric, we can equip our machine tools with tools fed in and out by means of robots, enabling the realisation of integrated production."

For example, the iRobo müga-turn CNC turning and milling machine combines a Mitsubishi Electric MELFA RV-6SD robot with the MELDAS M70 CNC as well as drive technology from Mitsubishi Electric. Helmut Müller describes the system: "The iRobo is a CNC machine for the complete automated machining of insert parts. The RV-6SD 6-axis robot is also completely integrated in the machine which enables considerable savings on space to be made. There is no need for a protective enclosure to be installed around the machine which has a favourable effect on space and cost." The system has turning, milling and drilling functions so that it satisfies the customer's requirements for complete machining. The iRobo is currently being used as a standalone solution in a wide range of fields including life science, the automotive industry and the production of standard parts.

The RMV 250RT 5-axis machining centre also uses an MELFA RV-6SD as well as a Mitsubishi Electric M700 CNC. Complete machining of tools on five sides require only a very little rechucking, which enables a higher level of precision to be achieved. The Mitsubishi Electric robot is installed at the side of the machine and supplies the system automatically via the side door, thus ensuring that full accessibility to the work area is retained. The RMV 250RT can be used universally for applications including the production of parts for spinning machines. For life science, the requirements for precision and surface finish quality are particularly high. In this field, the system is used to mill surgical instruments, for example.

Photo captions:



Picture 1: Mitsubishi Electric's iQ Platform provides a powerful and reliable automation solution for all automation disciplines such as discrete control and motion control as well as robot, CNC, batch and process control.



Picture 2: The iRobo müga-turn CNC turning and milling machine is a CNC machine for the complete automated machining of insert parts. It combines a Mitsubishi Electric RV-6SD robot with the M70 CNC controller as well as drive technology from Mitsubishi Electric.



Picture 3: The RV-6SD 6-axis robot from Mitsubishi Electric is also completely integrated in the iRobo from müga which enables considerable savings on space to be made. The machine has turning, milling and drilling functions so that it satisfies the customer's requirements for complete machining.



Picture 4: The RMV 250RT 5-axis machining centre from müga also uses a Mitsubishi Electric RV-6SD as well as a Mitsubishi Electric M700 CNC controller.

About müga Werkzeugmaschinen GmbH

müga Werkzeugmaschinen GmbH originated from STEINEL Werkzeugmaschinen GmbH in 1999. The activities carried out by the experienced CNC specialists include the selling of machinery, tool application and the servicing of STEINEL machines.

Under the müga brand, the company supplies a complete range of vertical machining centres (müga-center) as well as CNC turning machines (müga-turn). These compact machines are characterised by their particularly favourable price-performance ratio. Almost all the models from the müga-center and müga-turn ranges are equipped with Mitsubishi Electric CNC controllers and drives.

müga can offer its customers a full service package for the CNC machine as well as competent advice on tool application and automation technology. müga attaches particular importance to the provision of professional expertise in the servicing and maintenance of machines and training.

Further information:

www.muega.de

Note to Editor: If you would like text in another language please contact Nicola Bigmore at DMA Europa – Nicola@dmaeuropa.com

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 121.000 employees the company recorded consolidated group sales of 29,5 billion Euro* in the fiscal year ended March 31, 2013. Our sales offices, research & development centres and manufacturing plants are located in over 30 countries.

Mitsubishi Electric Europe B.V., Factory Automation European Business Group (FA-EBG) has its European headquarters in Ratingen near Dusseldorf, Germany. It is a part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan. The role of FA-EBG is to manage sales, service and support across its network of local branches and distributors throughout the EMEA region.

**Exchange rate 120,69 Yen = 1 Euro, Stand 31.3.2013 (Source: Deutsche Bundesbank)*

Further Information:

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