

## Next generation of development engineers use industrial robots from Mitsubishi Electric at WorldSkills

31 compact RV-2SDB industrial robots from Mitsubishi Electric were put through their paces at the recent WorldSkills international skills event held in London. Integrated into modular production systems (MPS) from Festo Didactic, a global market leader in industry-oriented training and vocational education and long-standing partner of Mitsubishi Electric, they were deployed in the 'Mechatronics' and 'Mobile Robotics' competitions.

WorldSkills is the world's biggest international skills competition in which skilled workers, specialists and trainees pit their talents against one another in over 40 occupational disciplines. Around 200,000 people visited the ExCeL exhibition and conference centre in London for the show. During the four days of the competition, a total of 950 participants from 51 countries battled it out in 46 different categories.

Festo Didactic is the exclusive distribution partner of Mitsubishi Electric for the training sector in the field of compact training robots. It provided the high profile WorldSkills event with modular production systems (MPS), the core element of which is a 6-axis RV-2SDB articulated robot from Mitsubishi Electric. Wolfram Zielke, Key Account Robot Systems, Industrial Automation, Mitsubishi Electric Europe B.V., outlines some of the advantages of the RV-2SDB: "The compact portable robot packs the power of a large system yet weighs just 19 kilograms. Advanced educational documentation and training software that's recognized by the educational market are also available. Our partner Adiro also supported the WorldSkills project by adapting e-terminals to the robot training system."

The WorldSkills event calls not only for technical expertise but also for the ability to work as a team. In the Mechatronics competition, the two teams from Brazil and Japan took first place, while Korea and Sweden shared third place. Gold went to the Korean team in the Mobile Robotics competition, with Japan taking the silver medal and Indonesia the bronze. Wolfram Zielke's enthusiasm is evident: "It was a huge event that attracted considerable interest globally. More than half of the systems used at the event were sold directly after the competition in London!"

The RV-2SDB industrial robot has an integral real-time interface with which, for example, dedicated robot controllers can be developed. Its compact design makes it exceptionally agile, even in confined work cells. This results in savings in material costs as well as space when designing new systems. The RV-2SDB can be mounted on the floor, wall or ceiling. Its gripper and positioning arm has an angle of rotation of  $\pm 240$  degrees, with a maximum reach of 504 millimetres. Carrying a load of two kilograms, or three kilograms in the wrist-down position, the compact robot attains a maximum speed of 4,400 millimetres per second. The pick-and-place cycle time is 0.6 seconds and a position repeatability of  $\pm 0.02$  millimetres means that the RV-2SDB still boasts a high level of precision. Integrated interfaces such as Ethernet and SSCNET III enable the robot to be linked easily to other automation components.

The close distribution partnership between Mitsubishi Electric and Festo Didactic has existed since the early 1990s. Dr Dirk Pensky, product manager at Festo Didactic, explains: "The product quality and price-performance ratio of Mitsubishi Electric are a convincing combination not only for us but also for our customers. Continuous product development is also especially important in the training and education sector in particular, where suppliers need to be constantly up to date. With Mitsubishi Electric we can always rely on getting the latest products."

The WorldSkills competitions are held every two years. In 2013 they will return to Germany for the first time in 40 years, taking place from 2 to 7 July in Leipzig. Products from Mitsubishi Electric were first used at the WorldSkills in Montreal, Canada, in 1999. The event was then staged in Seoul, South Korea, in 2001, St. Gallen, Switzerland, in 2003, Helsinki, Finland, in 2005, Shizuoka, Japan, in 2007, Calgary, Canada, in 2009 and London, UK, in 2011.

### Photo Captions:

Picture 1: The Japanese team is welcomed by Mitsubishi Electric. During the four days of the competition, a total of 950 participants from 51 countries battled it out in 46 different categories.

Picture 2: WorldSkills is the world's biggest international skills competition in which skilled workers, specialists and trainees pit their talents against one another in over 40 occupational disciplines. Around 200,000 people visited the ExCeL exhibition and conference centre in London for the show.

Picture 3: Festo Didactic provided the 2011 WorldSkills event with modular production systems (MPS), the core element of which is a 6-axis RV-2SDB articulated robot from Mitsubishi Electric.

### **About Festo Didactic**

A subsidiary of Festo AG & Co. KG, Festo Didactic is present in over 50 countries and is a market leader in automation technology training and education. As a supplier of learning systems, seminars and industrial consulting, the company's range has always been characterized by its identification with practical application and its proximity to industry. Its portfolio covers all control technologies from the basics to applications in production and process automation on the one hand, and training manuals and task collection via learning and simulation software up to complex learning factories on the other. Festo Didactic is also the main sponsor and organizer of the Mechatronics and Robotics competitions at the WorldSkills and of the new Logistics League, which forms part of the RoboCup.

With its first-choice partners including the Mitsubishi Electric Corporation, Festo Didactic is the leading supplier of learning factories with integrated robot systems, CNC machining centres, logistics concepts and virtual learning environments.

Further information: [www.festo-didactic.com](http://www.festo-didactic.com)

### **About Mitsubishi Electric**

With 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 114.000 employees the company recorded consolidated group sales of 32,2 billion Euro in the fiscal year ended March 31, 2011.

Our sales offices, research & development centres and manufacturing plants are located in over 30 countries.

Mitsubishi Electric Europe, 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 European region.

### **Further Information:**

[www.mitsubishi-automation.com](http://www.mitsubishi-automation.com)

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