

Mitsubishi Electric introduces range of high performance delta robots

Mitsubishi Electric has extended its MELFA articulated arm and SCARA robot offering to include a range of delta robots. These combine Mitsubishi Electric's award-winning servo technology with the latest mechanicals from e-F@ctory Alliance partner Codian Robotics.

With Mitsubishi Electric already one of the world's largest suppliers of light payload industrial robots and Codian a market leader in delta mechanics it's a combination that enables the user to achieve reliable performance in higher speed pick and place operations, with the advantage of simple set-up and programming from one of the market's main automation brands.

Codian Robotics has pioneered innovations in parallel kinematic (delta) robot technology and materials to produce one of the industry's broadest product ranges. The company has driven the use of materials such as carbon fibre, titanium and anodised aluminium, stainless steel and plastics delivering solutions that offer the optimum strength to weight ratio for any given application.

The lighter weight parts obviously benefit speed while the corrosion resistant options can meet the needs of more hygiene sensitive applications. The combination of Codian's interchangeable structural components with Mitsubishi Electric's highly developed servo motion packages provides users with a scalable solution that is easy and cost-effective to integrate with different formats of control platform.

Machine builders can choose to build a delta robot solution around either Mitsubishi Electric MELSEC PLCs or MELFA robot controllers.

Going down the PLC route means users can take advantage of the iQ Monozukuri Handling solution. This is a suite that combines Mitsubishi Electric iQ-R series PLC with servos, HMIs and a handling application package and control program. In this way, iQ Monozukuri Handling configures the mobility and functionality of the delta robot. This solution offers an economical and flexible system, as general automation components can be used and the delta robot control can be integrated with other parts of a given process.

On the other hand, machine builders can take advantage of Mitsubishi Electric's dedicated MELFA robot controllers and program the delta robot using the powerful Mitsubishi Electric RT-Toolbox software. This uses the same programming methodology as a traditional robot system, as it is the same platform tool used to program Mitsubishi Electric's ranges of articulated arm and SCARA robots.

Solutions can be based around the Codian D2 or D4 ranges of robots. D2 robots are offered in either two or three axes, with maximum speeds of 250 picks per minute, payloads up to 100kg and a maximum working envelope of 1500x430mm, depending on model. They are ideal for pick and place applications where high speed is required.

Where high performance pick and place needs to be combined with ultimate versatility, Codian D4 robots are offered in either three or four axes, with maximum speeds of 200 picks per minute, payloads up to 35kg and a working envelope of up to 1600x350mm.

Mitsubishi Electric Robot Product Manager Barry Weller comments: "Codian Robotics has been a member of the Mitsubishi Electric e-F@ctory Alliance for several years and is an acknowledged market leader in the design and manufacture of this type of robot. The products are well developed, and the innovative parallel kinematic technology is a perfect match for the precision and performance of the Mitsubishi Electric range of servo drives and motors. Interest has already been strong, particularly from established Mitsubishi Electric automation users as the system integration aspect is so straight forward."

Delivering low total cost of ownership, these delta robot solutions offer low noise levels of below 68dB(A), ensuring a comfortable working environment. They are sealed to IP65 as standard, preventing ingress of dust and water and offering protection from low pressure water jets from any direction with an option for IP69K for use in Food and Beverage applications.

Image captions:

Image 1: The high speed Codian Robotics pick-and-place solution is built on Mitsubishi Electric's proven servo technology that integrates seamlessly with a Mitsubishi Electric controller for fast and reliable operation.

[Source: Codian Robotics, Mitsubishi Electric Europe B.V.]

Image 2: Waterproof pick-and-place Delta robot solutions from Codian Robotics powered by Mitsubishi Electric are ideal for wash-down environments such as food & beverage, cosmetic and pharmaceutical applications.

[Source: Codian Robotics]

Image 3: Codian Robotics' delta robots are constructed using advanced light-weight materials such as carbon fibre, titanium, anodised aluminium, 316 stainless steel and plastics.

[Source: Codian Robotics]

Image 4: Delta robots combine Mitsubishi Electric's award-winning servo technology with the latest mechanicals from e-F@ctory Alliance partner Codian Robotics.

[Source: Mitsubishi Electric Europe B.V.]

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Note to Editor: if you would like the text in another language please contact Carolin Heel at DMA Europa – carolin@dmaeuropa.com.

About Mitsubishi Electric

With nearly 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) 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 approximately 40.7 billion dollars* in the fiscal year that ended on March 31, 2019.

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 the United Kingdom.

**At an exchange rate of 111 Yen = 1 US Dollars, last updated 31.03.2019 (Source: Tokyo Foreign Exchange Market)*

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