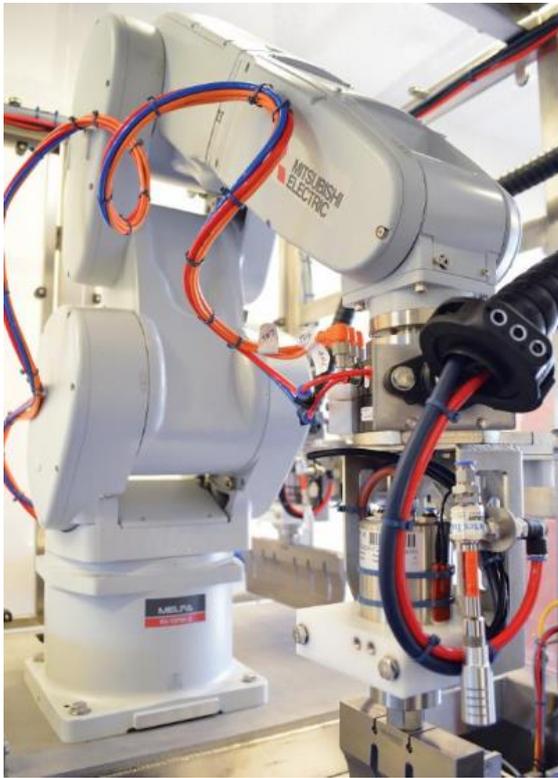


PRESS RELEASE

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The robotic revolution in life sciences



As the life sciences industry looks to address today's production challenges, Neal Welch of Mitsubishi Electric explains how in demanding applications such as the manipulating of live cultures, robots are in a league of their own.

Robots have become an established technology within the industry for precise and efficient processing and packaging of drugs and solutions, and that success is seeing the technology being steadily introduced further upstream, in the processing of live cultures and handling of cell tests. Helping to automate the research and development stages of new drugs, robots can boost accuracy and repeatability, increase production capacity without increasing floor space, and minimise the need for human intervention in physical production.

As life science companies and institutions look to develop new drugs and treatments, the key challenges when processing of vast numbers of live samples and cultures for production and screening

applications are volume, accuracy and repeatability. Traditionally accuracy and repeatability have been very dependent on human skills, while increasing production volume has meant increasing lab floor space.

Lab floor space, though comes at a premium, while the requisite numbers of people required in order to ramp up volume also come at a cost. And there are limits on how much people can do and how long they can concentrate and still maintain accuracy and repeatability. Thriving in a highly competitive market depends upon accelerating time to market, increasing production effectiveness and minimising costs.

With modern, small, articulated robotic technologies able to meet stringent hygiene requirements, whilst becoming easier to integrate and more affordable to purchase, life sciences facilities have the opportunity to dramatically increase production capacity without increasing floor space. Mitsubishi Electric, for example, offers MELFA robots certified for use in ISO class 7 and 8 cleanrooms, with compact designs that provide flexible automation even where space is restricted.

Increasingly used to carry out even very delicate handling tasks, robots enable high cycle rates to be achieved while maintaining a high level of precision, enabling line efficiency to be increased. There is a reduced need for human intervention in physical production, with the robots taking over tasks that previously would have been physically demanding or manually-intensive, and enabling existing personnel to devote time to more value-adding tasks.

Mitsubishi Electric has recently provided robots for a number of challenging tasks within the life sciences sector that demonstrate robotic advantages. These include the handling of stem cells, where the robots are delivering a higher degree of repeatability, and an automated primary antibody screening work cell for early stage development of potential new treatments for central nervous system and immunology disorders. The robots in this application are helping to speed up the process of antibody discovery by automating the screening of billions of antibody-producing B cells.

As the life sciences sector looks to move forward to address production and cost challenges, robotic automation is providing a solution, enabling flexible and efficient production while keeping the space



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required to a minimum. The ease of integration and the relative cost-competitiveness of today's robot products, combined with the ability to meet relevant cleanroom class requirements, mean that they offer a compelling argument for automation.

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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