

Fast and flexible: the new drylin SCARA robot is perfect for low-cost pick-and-place automation

Pick and place and simple assembly operations in medical labs and electronics production lines can now be engineered at low cost, with the latest robot from igus, the drylin SCARA.

One common barrier to automating a manufacturing process, certainly in the UK, has been cost. Motion plastic and cable technology pioneers igus devised the Low Cost Automation, or LCA, range of robots and devices to increase the productivity of tasks like electronic assembly and laboratory work while keeping the costs down. SCARA (Selective Compliance Articulated Robot Arm) is the latest drylin robot in the LCA range, joining the igus robolink, drylin Delta multi-axis and gantry linear robots designed to complete basic, high speed, low payload automated tasks.

Originally designed for fruit picking and handling, the simple design, four degrees of freedom, and small footprint but relatively large working area make drylin SCARA ideal for applications that include small parts assembly and joining in the electronics industry. Measuring and dispensing pharmaceutical doses in medical labs and other functions where repetitive, accurate, short travel pick-and-place type operations are needed, are also ideal for the drylin SCARA robot. Hundreds of pharmaceutical labs need to employ small, precise “take and deliver” movements for dispensing and sorting fluid and powder medication. Where a human does this currently, an LCA robot like drylin SCARA could take over, freeing up the employee for higher value tasks. In most cases, the robot is used for loads up to 2kg.

Drylin SCARA’s versatility brings new sectors to the door of igus

The LCA engineers at igus are excited by this launch. “The drylin SCARA robot’s main advantages are having a compact structure with a relatively large working area, for its vertical size, while being able to operate in a fast and flexible way,” says Adam Sanjurgo, LCA Product Manager at igus. “Adding

another robot kinematic into the range not only expands the range of applications possible but now new companies are coming to igus for their automation needs, for example from the electronics and medical industries.”

The robot is lightweight at just 20.6kg (RL-SCR-0100 model), features four degrees of freedom, uses stepper motor technology with an encoder to achieve the required accuracy and speed, and can complete a cycle in just three seconds. For customers with other igus robots, drylin SCARA robots are fully integrated into the igus Robot Control (IRC) software, which controls all igus automated systems. This integrated control system can be supplied in a control cabinet or in a DIN rail mounted version.

A splashproof IP-44 version drylin SCARA is available for applications using fluids or where water ingress may be a risk. The drylin SCARA robot is available in three models, with increasing functionality and weight: RL-SCR-0100, 0101 and 0102. The drylin SCARA robots can also be configured by igus for customised solutions.

Great engineering brings down the cost of automation

Automating an assembly process accurately with near human-levels of control at an affordable price has eluded sections of manufacturing – the car industry is fully automated, but it has deep pockets and high throughput to repay the capital. Small plant, laboratory, and tabletop industrial operations, like electronics and medical assembly, can benefit from the accuracy of robots but in the past these were either too big, too expensive or both. Both small and simple LCA-type robots and cobots – collaborative robots – have brought new automation powers to such operations, and the response has been huge.

“Both the videos and live demonstrations of the drylin Delta and now SCARA LCA robots have had a big effect on enquiries, people instantly see the potential to increase productivity,” says Sanjurjo. “We are talking to electronics manufacturers, food packers and medical companies who want to know how drylin SCARA can deliver their small scale but high-volume assembly work as they can see these are low cost. I think drylin SCARA and our robot range will be a game-changer in these industries.”

Come and see the drylin SCARA robot for yourself at the MACH show at the NEC from 4th-8th April 2022. We are in hall 6 stand number 6-652. Live demonstrations will be given by igus engineers on the stand.

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Image SCARA robot.jpg



Caption:

Low cost, efficient automation for small, delicate operations, the drylin SCARA is the latest in the line of igus robots, perfect for applications in medical and electronic assembly.

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