Success story

asyril Experts in Flexible Feeding Systems

Precise pick & place of micro parts with an automated machine

Automated filling of miniature ceramic condensers palletized on trays, developed by Seiko Future Creation in Japan

Sector

Electronic & Semiconductors

Application

Palletizing

3-Axis Vibration Technology
Innovation by asyril

System Integrator

セイコーフューチャークリエーション株式会社
SEIKO FUTURE CREATION INC.

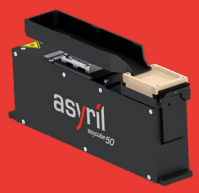
Responsible for the R&D and production technologies for the Seiko Group, Seiko Future Creation develops valuable products and services for customers outside the group, including in the developing industry of electronic and semiconductors. Seiko Future Creation is specialized in high-speed and high-precision transfer of micro parts by utilizing experience gathered in manufacturing watch assembly equipment.

End customer

Ceramic condensers manufacturers specialize in producing high-quality ceramic condensers, essential components in various electronic devices. These manufacturers offer superior performance, reliability, and durability, catering to industries such as telecommunications, automotive, and consumer electronics.

Integrated product

Asycube 50 flexible feeder



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Challenge

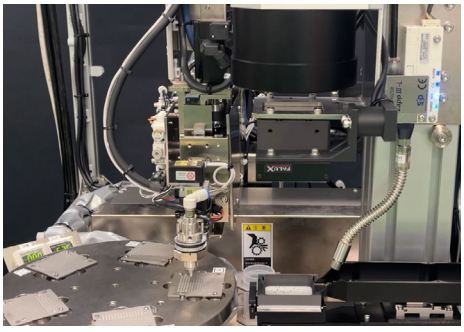
- Automate the alignment of delicate miniature ceramic condensers on trays realized by hand so far for the next steps of the production process
- Gentle handling of micro parts, such as of Ø 0.8 mm, and ranging in size from 0.3 to 1.6 mm
- Need to distinguish the front and back sides of the parts

Solution

- Development of a micro part transfer machine to precisely align the workpieces on several trays
- Separation of parts with the Asycube 50 flexible feeder using Asyril's patented 3-axis vibration technology with no need for part recirculation, combined with image processing equipment
- Filling of the tray at the speed of 2 seconds per piece
- Fast changeover of the trays created according to the shape and number of workpieces

Benefits

- Steady production thanks to the automatic filling
- Use of the automated system for a variety of products
- Part positioning precision of approximately 10 micrometers
- Fully reliable part picking independently the side, direction and color
- Unmanned operation of tray changers
- Reduced human intervention



Watch the video