



SOFT ROBOTICS SOLUTIONS

Customer Application Notes

THE APPLICATION

Automate the pick and place process of delicate injection molded plastic clips.

CUSTOMER'S NEEDS

Micron Products is a contract manufacturer in Fitchburg, MA that specializes in precision machining, thermoplastic injection molding, mold making, and more. To reduce costs and improve quality, Micron wanted to automate the pick and place process of the delicate plastic clips it produces for a car seat manufacturer, without slowing down cycle times or damaging product. The goal was to save money by reducing labor costs through automation.

Micron Products manufacturing engineer Taylor Breau knew vacuum wouldn't be a great solution for their application. He says, "there's no easy way to vacuum the clips off the conveyor belt because because of the way they land. And damage is a no-go for our customer. Fixing the clips is a nightmare, so Soft Robotics saved us with never damaging any parts."

PRIOR PROCESS

Part of the clip production was already automated, however the pick and place process was not. There were two full time operators who were responsible for picking the clips off the conveyor and placing them into a box. Micron Products manufacturing engineer Taylor Breau says that the human operators would periodically damage the products. "They'd grab a handful at once, which can lead to a piece snapping on the bottom layer inside the box. If the end-user gets one that's broken, they have to stop the whole production line - and that issue comes straight back to us. But it has pretty much been completely eliminated as Soft Robotics is easy on the parts."

SOLUTION

Advanced Automation designed and integrated a high speed, pick and place system utilizing a Soft Robotics gripping system, ABB IRB 360 FlexPicker and Keyence vision system to effectively pick and place delicate plastic clips without damage, at a production rate of just over 100 parts per minute.

INDUSTRY

Advanced Manufacturing — Injection Molded Clips for the Automotive Industry

AUTOMATION CHALLENGE

High speed pick and place without damaging product

CUSTOMER

Micron Products, Inc.



Micron[®]
PRODUCTS, INC.

“ One of the biggest benefits from using the Soft Robotics gripper is never having to worry about any dent or other damage to the product when picked and placed into the box.

— Taylor Breau
Micron Products, Inc.
Fitchburg, MA

RETURN ON INVESTMENT

Micron's ROI on this solution was less than one year, as they were able to evolve the process from two full time operators to one part time operator (saving on salaries). Breau stresses that no employee lost their job, but were rather shifted to other tasks, and that sometimes the operator manning the clip production has time to work on another product in between packing boxes. While Breau notes that some Micron employees were initially scared about the robot replacing them altogether, they "definitely like the robot now because it takes the speed factor out of their hands and makes their job easier."