

## Automated through-hole components assembly

Flexible system tailored to your production needs

### MARKET CHALLENGE

Manual assembly is known to be tedious and error-prone work. Inconsistent component forming, placement and mis-orientation are prime causes of most defects made in the

process. That is why ensuring proper orientation of polarized components or integrated circuits, can significantly reduce assembly defects and increase yield.

### OUR SOLUTION

#### We automate processes that cannot be automated in a classic approach

To address the problem with increasing workforce costs and large margin of errors in manual assembly, we built a robotic solution for handling through-hole component forming and assembly process. Not only does it form and assemble odd-form components, but improves overall process efficiency and reduces operational costs.

- Automates time-consuming manual process of component forming and assembly
- Monitors whether a component has been successfully assembled and repeats a process if needed

### KEY FEATURES

- Assembly of components packed in trays, tubes, tapes or bulk
- Assembly of components that need to be pre-formed
- Assembly of components of non-standard shape and dimension
- Short change over time
- Quick and easy programming

### MARKET ADVANTAGES

#### Automation instead of manual operation

Our THT assembly station is designed to automate a monotonous manual assembly process, usually performed by an operator. Our solution not only automates the process but also handles its variables such as formed or unformed components, various leg spacing or non-standard packaging.

#### Easy programming

Functional and intuitive Process Program Generator is a huge advantage of our solution. Programming skills are not required since the graphical interface allows an operator to easily implement or edit an assembly sequence for new PCBs.

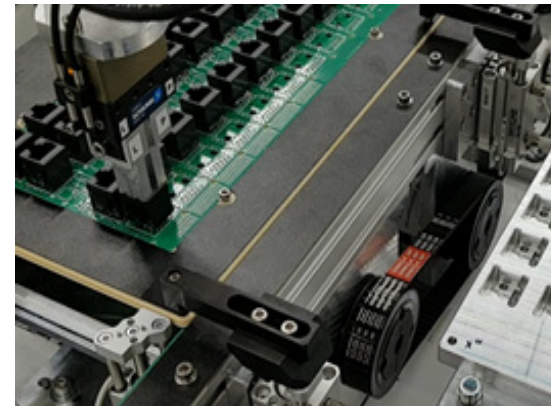
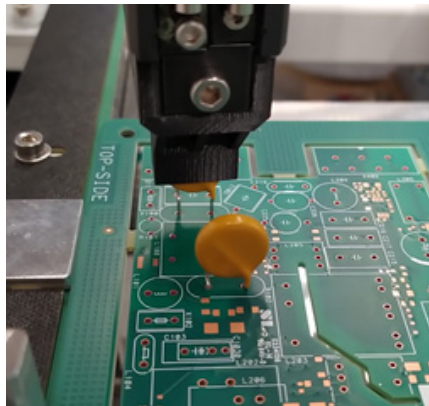
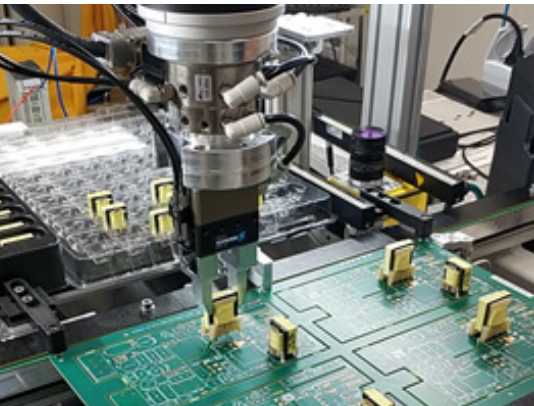
## Flexibility

Our station, depending on request, can be configured for full or partial convert of THT assembly process: from manual - performed by the operator, to automatic - performed by the robotic arm.

## Customization

To extend the basic functionality of our solution, we offer additional options:

- standard module enabling assembly of many elements with one reinforcement,
- wide range of gripping, cutting, forming tools,
- feeders for various types of THT components,
- vision system for the assembly process inspection



## KEY FACTS

### 100% product Yield

all products leave the station only when all the elements included in the assembly sequence are correctly assembled.

### Quality

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### Efficiency

high efficiency is achieved due to the continuous use of the machine and constant assembly cycle time.

### Versatility & flexibility

the station can be quickly adapted to mount other components and PCBs. The station can work inline as a standalone or it can work in a technological line with other stations of this type.

### Ease of use

the machine is easy to use on both the hardware and software levels; no engineering nor programming skills are required.

### Compact design

the footprint is comparable to that of the manual assembly station. The size of the stand allows for quick and easy rearrangement of the production layout.

## TECH PARAMETERS

- ABB IRB1200 – 6 axis robotic arm
- B&R PLC
- Modular mechanical and electrical construction
- High-precision 6 axis force/torque control
- Optional feeding system (tube, tray, radial or vibration feeders)
- Optional types of grippers
- Inline or standalone solution