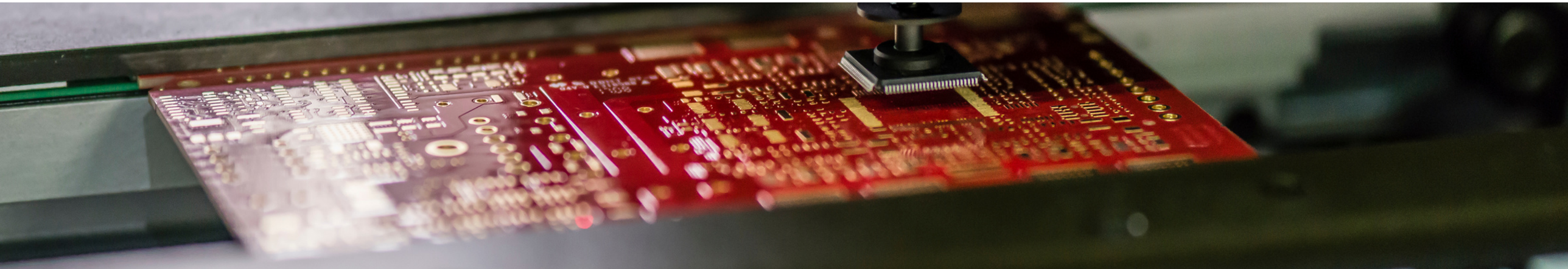
THE QUALITY OF EVER'S PRODUCTS IS THE RESULT OF A TECHNOLOGICALLY ADVANCED PRODUCTION PROCESS, CHECKED AT EVERY STAGE.
WHAT HAPPENS "BEHIND THE SCENES"?

HOW WE PRODUCE OUR DRIVES

ever ELETTRONICA
the clever drive




Internal production is
what distinguishes us
among many suppliers
who sell drives
but do not produce
them

PRODUCTION PROCESS
THE PHASES

1. Storage components in automatic warehouses
2. SMD Process
3. Automatic Optical Inspection
4. THT Process
5. Electronic boards washing
6. ICT Test
7. Mechanical assembly
8. FCT Test
9. Drives configuration

Automatic warehouses for storage components

Components storage occurs in ideal conditions with temperature and humidity under control, allowing a quick components preparation of production orders in a totally automated way.

We minimize assembly setup costs and we eliminate the risks of errors in the use of components.

Laser marker, Screen printer, SPI, Pick&Place and Reflow Oven

- Designed with CO2 technology, the **laser marker** allows you to engrave miniaturized data matrix on the PCBA, automatically and quickly obtaining the complete traceability of the product. Thanks to the high laser power of 30 W, it guarantees a high range of versatility in the engraving of the most complicated circuit boards.

- The precise, automatic, optical-controlled 2.5D **screen printer** ensures the correct deposition of the soldering paste for an optimal reflow.

Laser marker, Screen printer, SPI, Pick&Place and Reflow Oven

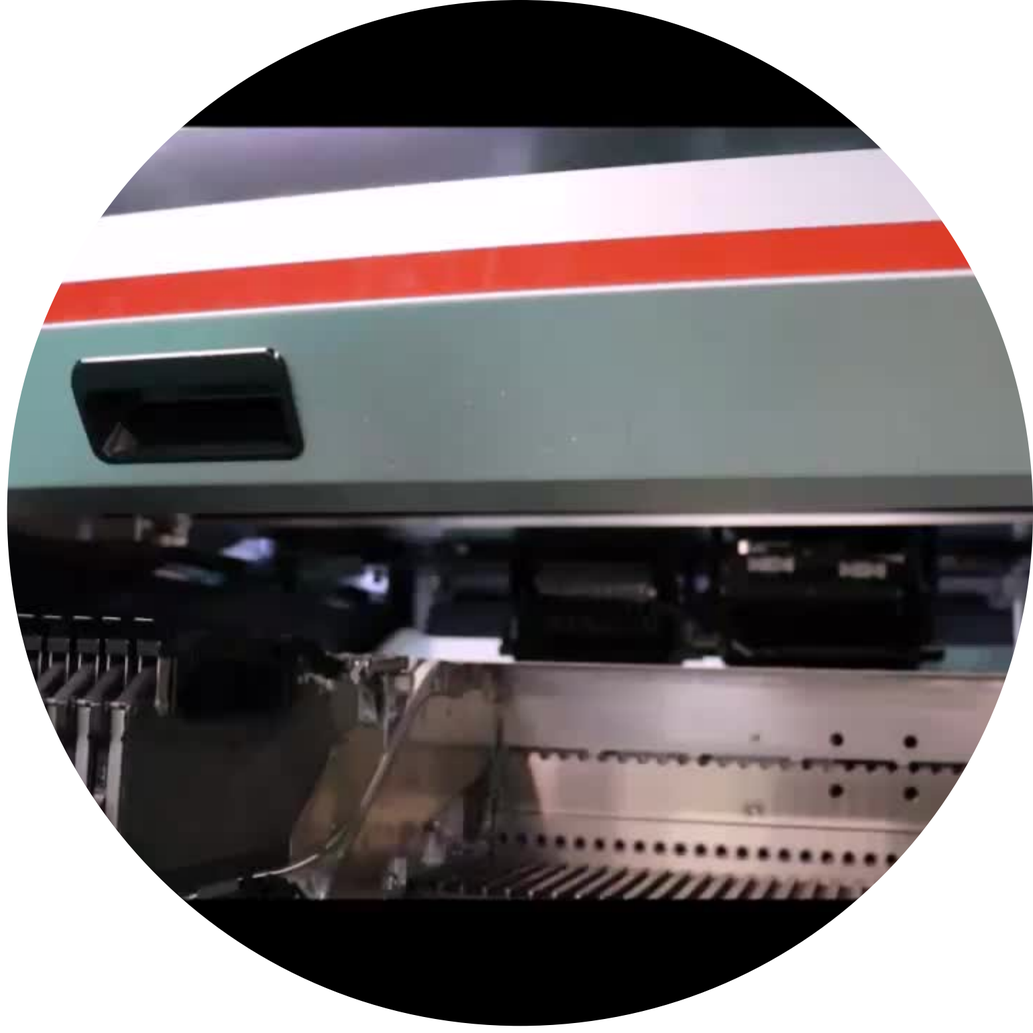
- The **SPI** (solder paste inspection) machine installed to keep under control the process as well as the quality of the soldering paste deposition, reconstructs in 3D the paste deposit on the PCBA and optimizes the deposition parameters by automatic feedback with the screen printer.

- The **Pick&Place "Chip shooter" machine** is great for placing small components in large quantities. It allows to speed up the assembly process with consequent benefit for the entire production cycle.

Laser marker, Screen printer, SPI, Pick&Place and Reflow Oven

- The second Pick&place allows **optimal positioning** of the remaining components on the electronic board.

- The **reflow oven** thanks to electronic temperature control ensures, with 16 heating zones and 2 cooling zones, the best solder joint.

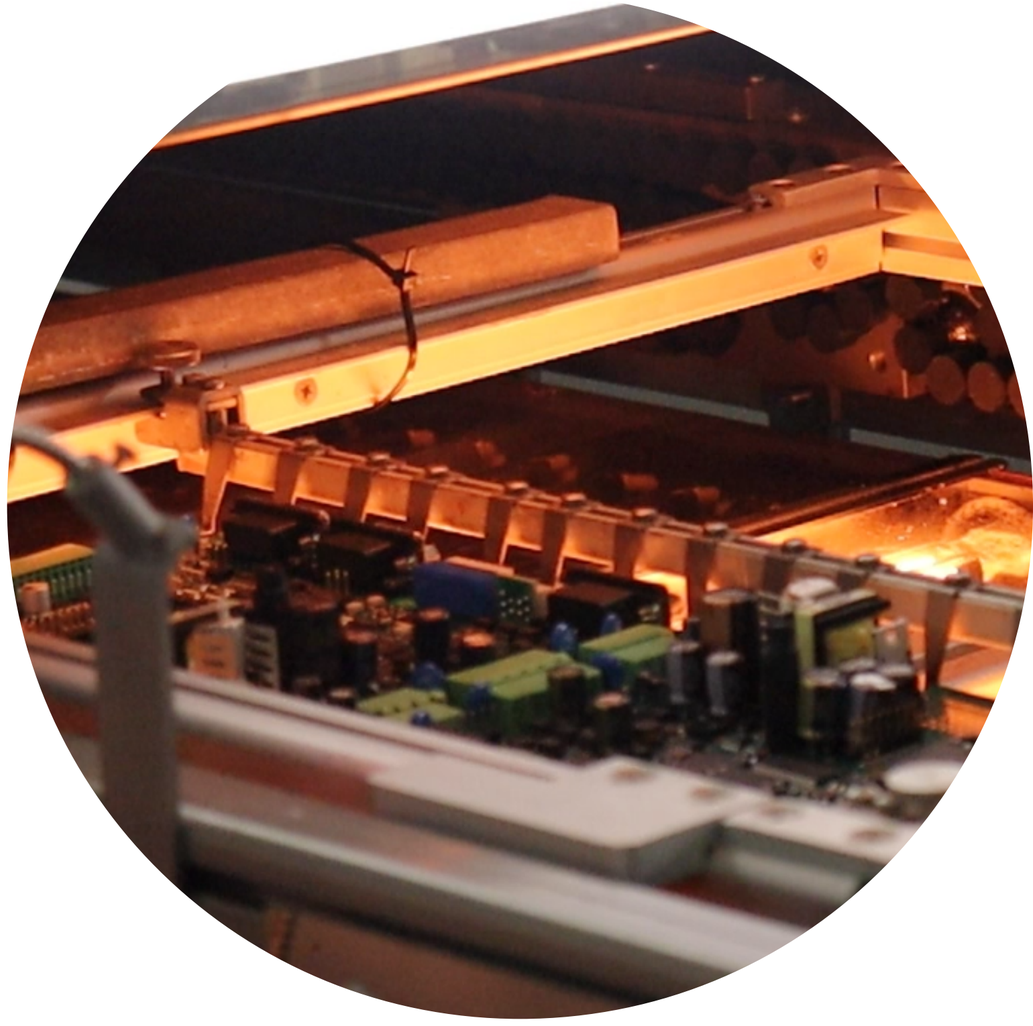


AOI (Automatic Optical Inspection)

The **automatic optical control** checks the screen printing and the quality of solder joints.
It ensures that all the components are **correctly mounted on the electronic board**.

Thanks to this check **any error can be corrected before the electronic board is completed**, limiting the extent of any corrective action.

Through Hole Technology Process



Thanks to a top quality **wave soldering machine** with electronic control of flux application and 5 infrared preheats plus 1 final quartz preheat, we assure the best preparation of electronic boards to solder process.

The soldering process involves two waves (Delta+Energy) **to weld even the most critical components.**

Regular chemical analysis assure **the best quality of solder alloy.**

Washing with water process

To ensure the best reliability results, the electronic boards are finally cleaned with water based process.

The process is further controlled by **regular ionic contamination analyses.**

ICT TEST
(In circuit Test)

The ICT test with flying probes is performed on **100%** of the production.

The electronic board, before test, is labeled with a serial number.

Post-processing analysis are easy to perform thanks to collected data; it is possible **to correct any critical issues optimizing the entire production process.**

Mechanical assembly

The electronic boards are carefully **mechanically assembled** to any support (e.g. heatsinks, chassis).

FCT TEST (Functional Circuit Test)

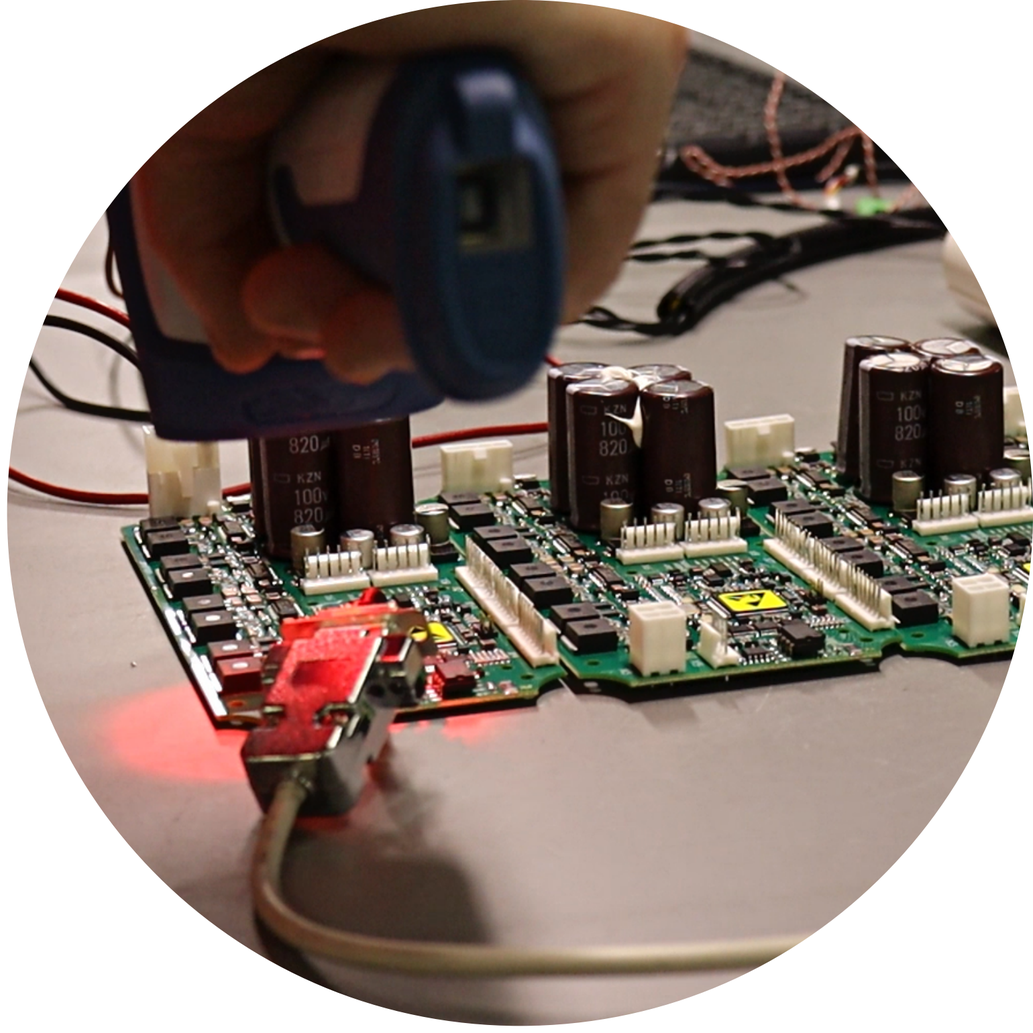
The functional test powers on and tests the electronic board.

All the hardware resources, inputs, outputs, motor's control, fieldbuses and any braking resistance are tested.

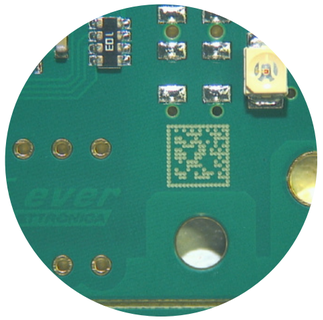
Automatic configuration

The drives are automatically configured by loading the parameters or program from a dedicated database before being shipped.

Even though we issue new firmware versions, each customer is matched only with the firmware version tested and approved by the customer itself.



Products traceability



Traceability of components

Each component mounted on our electronic board is traced by date code, supplier and batch number

Traceability of processes

All the production processes, including machine's recipes, machinery and operators involved in production, are saved and matched to the single electronic board

Testing database

In a single database are saved the results of ICT and functional tests performed on all our electronic boards, which can be consulted at any occasion in a simple and shared way

"A successful production owes everything to the attention paid to details."

ever ELETTRONICA
the clever drive