THT-ASSEMBLY

THT (Through Hole Technology) assembly is a core competency of our production.

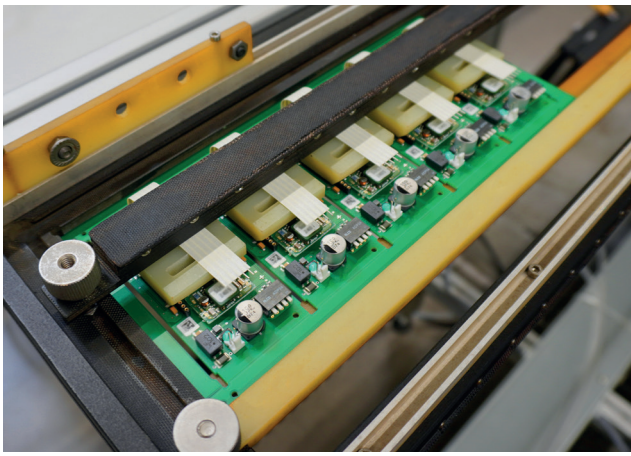
COMPONENT PREPARATION

In the first step prior to the actual THT assembly, most of the components must be processed accordingly during component preparation:

- component lead cutting, bending, and crimping
- masking off areas on the printed circuit board that are not to be soldered
- pre-assembly of heat sinks and connector headers

THT MANUFACTURING

- ERSA wave soldering system for lead-free solder
- ERSA wave soldering system for leaded solder
- ERSA 1-crucible selective soldering system incl. replacement crucible for leaded solder
- 2 ERSA 2-crucible selective soldering systems for lead-free solder



Key Specifications:

- Maximum PCB size for wave soldering: 430 x 330 mm
- Maximum PCB size for selective soldering: 508 x 505 mm
- Selective solder nozzle size: 2.5–14 mm
- Maximum component height for machine soldering: 90 mm incl. PCB; taller components hand-soldered.
- Maximum PCB thickness: 3.5 mm

SOLDERING METHODS

Wave Soldering	Selective Soldering
Printed circuit boards are clamped into soldering frames THT components are mounted by hand	
When the soldering frame enters the machine, the frame's transponder is read, and the soldering profile corresponding to the assembly is loaded onto the shaft	A fixed soldering program is loaded onto the machine
Fluxer: Areas to be soldered are coated with flux	
multiple preheating zones (the assembly passes through them at a constant speed)	a preheating zone (the assembly remains in the preheating zone for the required amount of time)
The entire assembly is coated with solder on the underside using a 400 x 80 mm soldering nozzle	The pins to be soldered are positioned one by one by the appropriate soldering nozzle and soldered
Assemblies are returned to their respective workstations via a cooling tunnel	

SIDE NOTE

How does a solder wave work?

The solder wave is the heart of wave and selective soldering systems. The solder wave is formed by a solder nozzle that is continuously fed with liquid solder from the crucible by a pump. This causes the solder at the nozzle to overflow, and the overflowing solder forms the solder wave.

The two processes differ in the way the assembly moves:

- In wave soldering, the pot containing the solder wave is stationary, and the assembly is moved at a constant speed over the solder wave.
- In selective soldering, the assembly remains stationary, and the pot moves with the solder wave toward the pins to be soldered.

THT REVIEW

During the THT inspection process, qualified employees visually inspect the machine-soldered joints and correct them if necessary. In addition, components that cannot be machine-soldered due to technical limitations are soldered here.