



QUALITY „MADE IN GERMANY“
TEMPERATURE TREATMENT SYSTEMS
SMT HTT / VERTICAL / CUBE / UV



TEMPERATURE TREATMENT SYSTEMS

FLEXIBLE SOLUTIONS: FOR EACH APPLICATION A SUITABLE SYSTEM



Dashboards



Assistance systems



Medical Equipment



Control units



Communication systems

- ✓ Curing
- ✓ Drying
- ✓ Gluing

- ✓ Curing of conformal coating
- ✓ Temperature treatment for function tests

THE VARIABLES

Product-specific curing and drying of conformal coating and sealing compounds. Perfect pre-treatment for electronic components and modules for hot and cold function tests. Best reproducibility of temperature profiles. The highly accurate machine parameters and top process reliability make the tem-

perature treatment systems of SMT ideal equipment for the assembly and test section, especially in such sensitive industries as medical devices, dashboards, control units, support and communication systems.

TEMPERATURE TREATMENT HTT – HORIZONTAL



UV CURING SYSTEM



TEMPERATURE TREATMENT VERTICAL



TEMP. TREATMENT FOR FUNCTION TESTS



HTT / KTT – CURING AND TEMPERATURE TREATMENT PROCESSES – HORIZONTAL

Product-specific curing and drying of glues, lacquer, etc. as well as for temperature treatment for function tests.

- Customized solutions
- Modular system for each process (0.5 m steps)
- Multitrack system possible
- Up to two transport levels possible
- Heavy duty conveyor possible up to 50 kg/ m possible
- Low maintenance effort



- + HTT max. +200 °C
- + KTT max. -50 °C

FLEXIBLE HEATING CONCEPT

- Convection
- Convection AND IR-lamps
- Convection control via frequency converter



★ Combination of IR and Convection

To avoid effects „orange peel“ and „running“ in the warm-up phase and „burning“ in the holding phase.



HTT / KTT – CUSTOMIZED SOLUTIONS



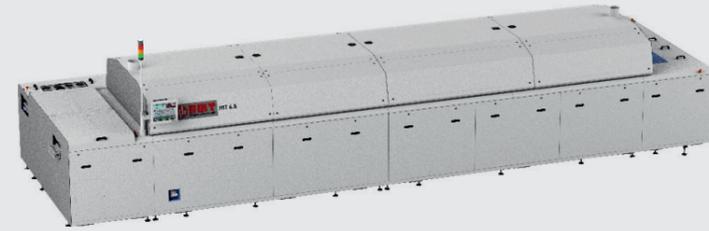
HTT system (+155 °C *) and KTT system (-45 °C *) with integrated tester
* application example

★ Benefit

Inline temperature treatment and testing in hot and cold process environment.

HTT – CUSTOMIZED SOLUTIONS

HTT system with transverse shuttle
Return transport (1 lane) incl. water cooling
Curing at 150 °C *
Cooling back to room temperature



★ **Benefit**

Temperature treatment, handling and return transport incl. cooling in one system

HTT system with special shuttle transport
15* loading positions per shuttle



★ **Benefit**

Customized transport solution for small products with integrated carrier

* application example:

UV CONFORMAL COATING SYSTEM

The modular, variable machine concept for UV curing of PCBs.
Short, compact machine design depending on pass through

height in order to avoid the emission of UV radiation at the in- and outlet.

★ **Benefits**

Constant process quality over a long production period

UV light source (UV microwave lamps): long life time, no loss of UV-power for > 6000 h

→ process reliability

Start-up time < 1 minute

Maintenance-free

Full integration in the SMT machine data system (management data system and MES)



VERTICAL – CURING AND TEMP. TREATMENT PROCESSES

Product-specific curing and drying of glues, lacquer, etc. as well as for temperature treatment for function tests.

Transport system is based on work piece carrier
Carrier size (400 x 400 mm)
3 or 4 zones „up“ and „down“

★ **Benefit**

Manually or automatically operated

Oil-free transport

Also with cooling zones available

Minimal footprint



+ Temperature +50 up to +200 °C

LAYOUT COMPARISON STANDARD HTT VS. VERTICAL SYSTEM

Cycle time: 17 s
Product length: 150 mm
Product width: 100 mm (on work piece carrier: 150 mm)
Product height: 50 mm
Heat-up time: 15 min.
Holding time: 30 min.
Cool-down time: 15 min.

+ Horizontal **HTT** 8.0 K3.0: 4 lane transport
= footprint approx. **25 m²**

+ Vertical **VH8**: 6 heating zones and 2 cooling zones
= footprint approx. **3.5 m²**

★ **VH8 = 86 % less footprint**



Transport system Vertical VH8

CUBE TEMPERATURE TREATMENT SYSTEMS

Perfect pre-treatment for electronic components and modules.

Cube Versions:

for Hot Function Tests 60 °C up to 155 °C

for Cooling to Room Temperature

for Cold Function Tests -50 °C up to -10 °C

★ Benefit

Small footprint

Loading/unloading on the same side, manually or automatically

Increase in product reliability via temperature function tests

High throughput: 15 sec cycle possible

Traceability and handling options



SPECIAL FEATURES OF THE SYSTEM

Vertical wheel, individually configurable (existing versions 16 or 20 clusters)

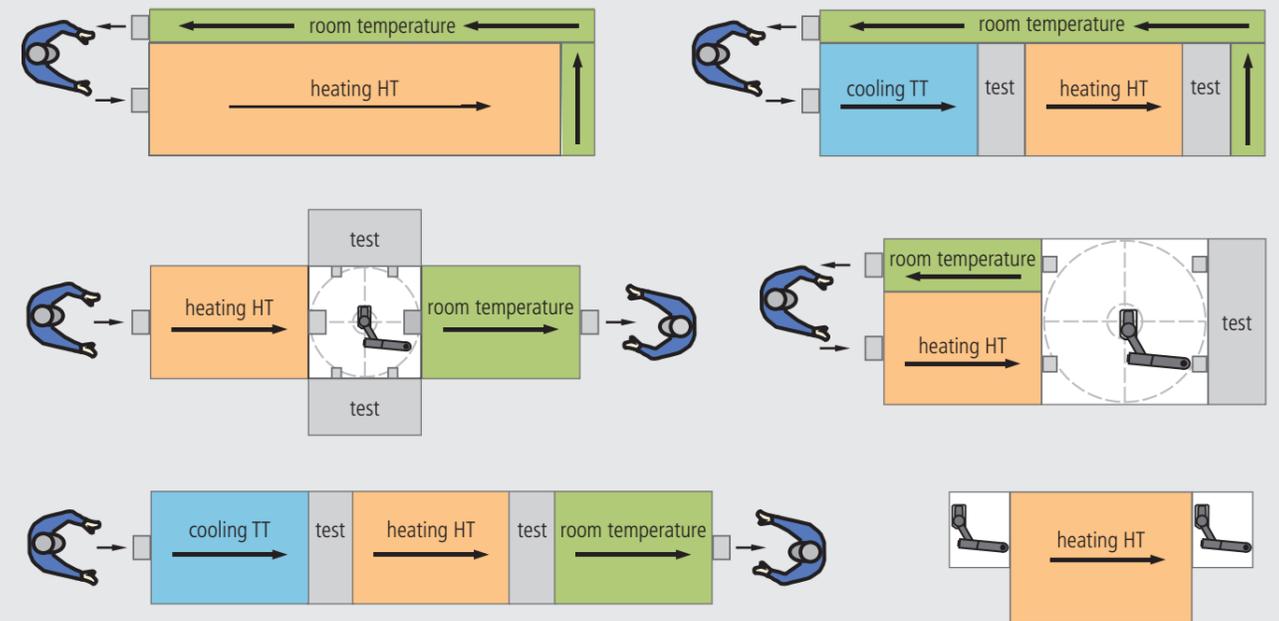
Loading and unloading position in one step

Manual or automatic opening / closing of the product door

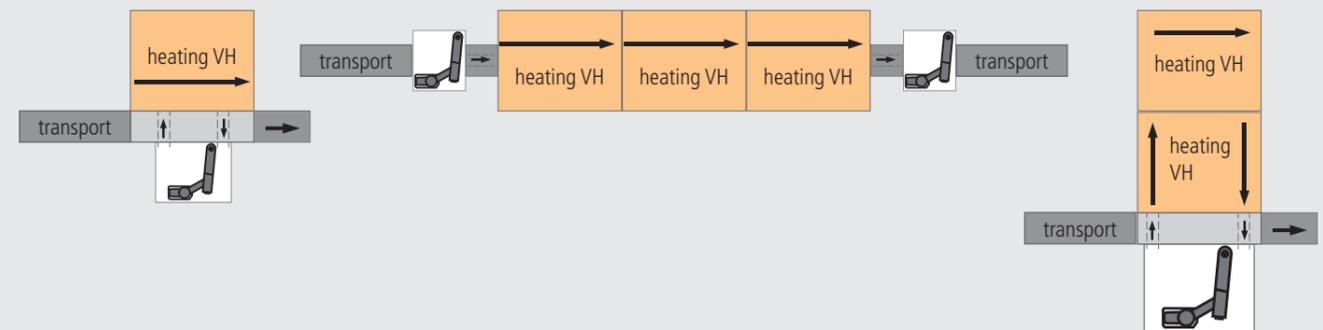


ASK US WE HAVE THE **PERFECT SOLUTION** FOR YOUR APPLICATION!

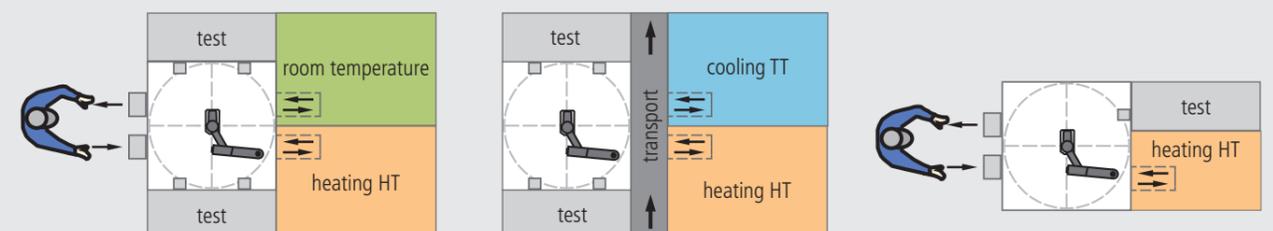
HTT / KTT



VERTICAL



CUBE



FLEXIBLE SOLUTIONS: A SUITABLE SYSTEM FOR EVERY APPLICATION

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SMT - Plant I and administration Building

The company SMT Thermal Discoveries is a recognized expert in the field of mechanical engineering for thermal processes since more than 30 years. The company has aligned itself worldwide in recent years with offices in Europe, North America and China and employs about 150 people in five plants at its headquarters in Wertheim, Germany. SMT is famous for their SMD reflow soldering systems and also provides voidfree soldering results in manufacturing processes with vacuum technology



since 2009. The company holds several patents and developed innovative machine features such as CATalysis process gas cleaning or an intelligent nitrogen control. Temperature treatments systems or systems for curing and drying are an ideal supplement to the proven reflow soldering systems.

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Machines for Thermal Processes from –50 °C up to +450 °C



reflow soldering



vacuum soldering



temperature treatment



customized solutions

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