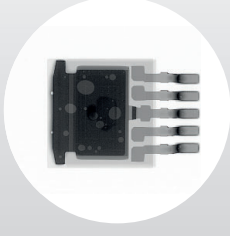
**QUALITY „MADE IN GERMANY“**
VACUUM REFLOW SOLDERING SYSTEM
SMT QUATTRO PEAK® VAC

# INLINE VACUUM REFLOW SOLDERING SYSTEM

WITH NEW SOFTWARE
**THERMAL TOOLS!**

**PROCESS WITHOUT VACUUM**

**PROCESS WITH VACUUM**

## Void-free soldering since 2009 !

- **Lowest Maintenance Effort**
- **Lowest Nitrogen Consumption**
- **Lowest Energy Consumption**

- Tool-free maintenance of all SMT systems
- CATalysis - process gas cleaning
- Sustainable energy and nitrogen saving concept
- Proven Vacuum Reflow Technology (since 2009)
- Individual fan control in all zones
- NEW Software Thermal Tools!

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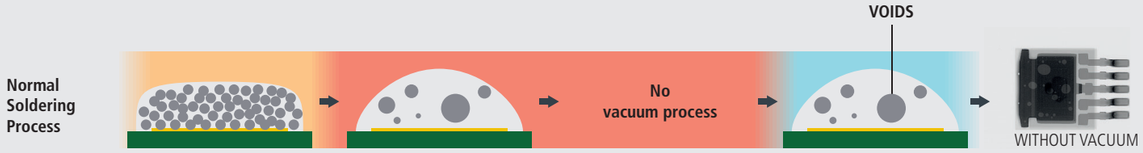
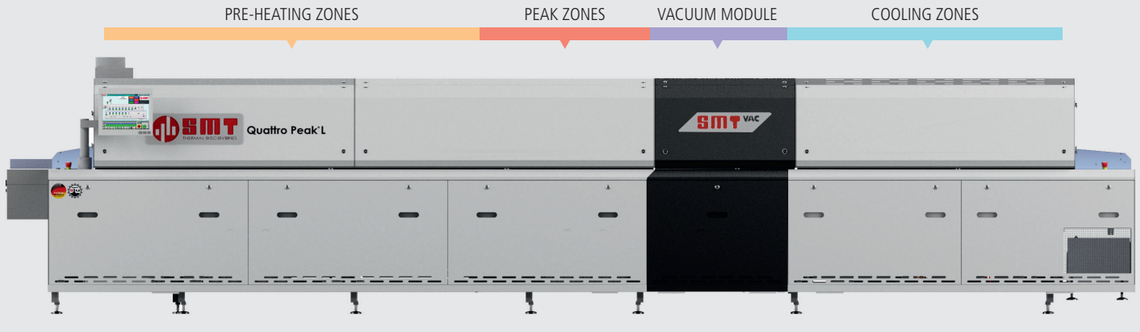
## VOID-FREE SOLDERING SINCE 2009

Void-free soldering is a basic requirement in the high-performance electronics. Life-sustaining devices, control systems on the plane and driving assistance systems in the automotive sector have one thing in common: They have to run completely safe and error-free over an extended period of time. Basic requirement for accomplishing this is an almost **void-free solder joint**. Voids in a solder joint have to be reduced to an acceptable minimum.


## SOLDERING PROCESS WITH AND WITHOUT VACUUM




## STRUCTURE OF A VACUUM REFLOW SYSTEM




- Vacuum module between peak and cooling zone
- Stainless steel vacuum chamber
- Inline system
- Nitrogen-capable
- Vacuum and non-vacuum process possible
- All vacuum parameters are individually adjustable

## VACUUM HIGHLIGHTS

**Optimized transfer**
→ increased process stability

Heavy load transport with optimized profile coating
→ up to 10 kg/m in the vacuum system

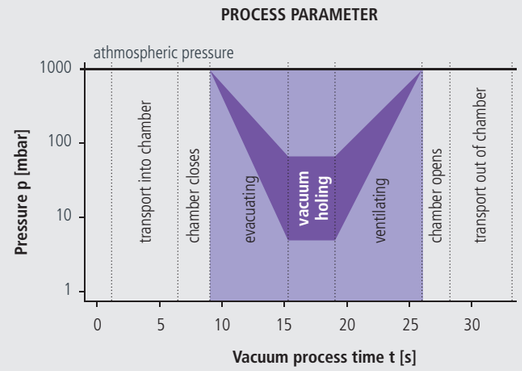
**Easy access** for maintenance

Product with a length of 100 mm possible

**Cycle evacuation** for complex components possible

Profiles can be set with or without vacuum

**Continuously center support** (plate link chain)




## REFLOW-HIGHLIGHTS

### Precise nitrogen control

By integrated lambda sensor technology and real-time continuous measurements of residual oxygen value

→ Less nitrogen consumption

→ Easy calibration (exchange can be done by customer)

### Gas-tight fan units

- Constant process gas flow, adjustable via frequency converter
- Encapsulated, maintenance-free fan motor, no slight leakiness

→ Energy and nitrogen savings

### CATalysis

Use of catalyst granulates

→ Better cleaning performance

Up to 4x CATalysis ABS (pyrolysis)


Infeed condensate trap

Condensate trap with multi-stage filter system

→ Stable cooling power

### Lowest operating costs

- Lowest energy and media consumption
- Lowest consumption of spare and wear parts (e.g. rails, chain, fan motors, heating elements)

### New software Thermal Tools

- Intuitive 2-click strategy

## YOUR BENEFIT

- **Voids will be reduced up to 99 %**
  → optimized solder joint quality
- 2- and 3-lane transport systems possible
- **Reliable transport transfer in the system**
- Suitable for PCBs, DCB, stamping grid and carrier
- Powerful vacuum pump (300 m³/h)
  → **fast and reliable vacuum process**
- **Parameter individually adjustable:** evacuation time; vacuum hold time; ventilation time, vacuum pressure
- Trainings from our vacuum process specialists possible

## TECHNICAL DATA

| VACUUM | Pre-heating zones | Peak zones | VAC | Cooling zones | Heating zones | ø Transport speed | Cycle time/per product | Active cooling length [1.)] | Energy consumption system at full load/ vacuum module [2.)] |
|---|---|---|---|---|---|---|---|---|---|
| S | ● ● ● | ● ● ● | | | 3.0 m | 0.80 m/min | 59 s | 1057 mm | approx. 10 kW h/7 kW h |
| M | ● ● ● | ● ● ● | | | 3.4 m | 0.95 m/min | 50 s | 1057 mm | approx. 10 kW h/7 kW h |
| L | ● ● ● | ● ● ● | ● | | 4.1 m | 1.15 m/min | 42 s | 1531 mm | approx. 11 kW h/7 kW h |
| L Plus | ● ● ● | ● ● ● | ● | ● ● | 4.6 m | 1.30 m/min | 37 s | 1531 mm | approx. 12 kW h/7 kW h |
| XL Plus | ● ● ● | ● ● ● | ● | ● ● ● | 5.6 m | 1.60 m/min | 30 s | 1531 mm | approx. 14 kW h/7 kW h |

● Vacuum time without holding time, 250 mm product size, 100 mbar, transport speed based on a 4 minutes reflow profile

1.) Up to 5 cooling zones possible. Each additional cooling zone: 474 mm
2.) Chain conveyor, 220 mm transport width, fan speed reduction and no other options

**The vacuum systems are individually configurable.** You can choose from different lengths for the heating zone, the vacuum module and the cooling zone. Additionally there is a choice between single, dual or triple lane.

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

Subject to change without notice, March 03, 2020

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