

**THERMAL SYSTEMS**

# VisionXS

The flexible Reflow Soldering System with future



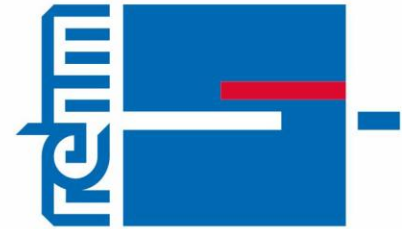


As a co-founder of modern Reflow-Convection-Soldering Systems the company Rehm has been established successfully since 1990 in the national market as well as worldwide. The know-how and experience in reflow technology of many years is now integrated in the **VisionXS**-series. Optimised for customer requirements the **VisionXS** stands for productivity and flexibility.



# VisionXS

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### **System advantages**

- **Process reliability meeting lead free requirements**
- **Optimal heat transfert**
- **Reduced maintenance expenses and reduced downtime**
- **Integrated Residue Management**
- **Lowest cost of ownership**
- **User-friendly software Visu2**

# The basic system of today retrofitable for the demands of tomorrow – VisionXS!

## The Transport System

Our flexible system saves you money. Maintenance and downtime are reduced by means of a continuous process based on an absolutely reliable conveyor, as well as an ingenious mechanical system.

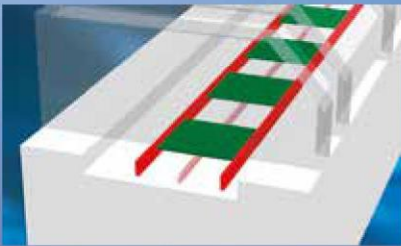
The conveyor system has been laid out in accordance with requirements specified for future placement

machines, and optional for a maximum width of 508 mm.

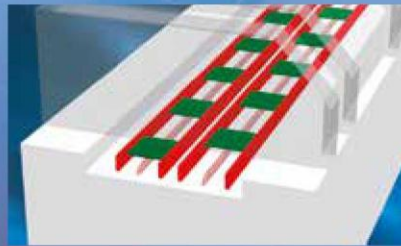
The optionally available centre support makes it possible to process large panel formats – an additional advantage for flexible manufacturing!

### Available options:

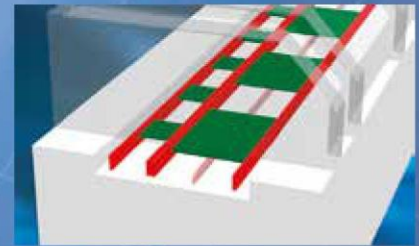
- Single-lane conveyor
- Dual-lane conveyor
- Multi-lane conveyor
- Other systems on request



Single-lane conveyor



Dual-lane conveyor



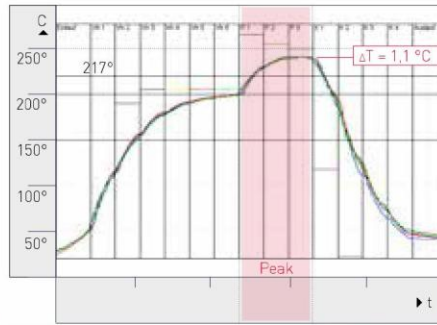
Multi-lane conveyor

## For each application the right transport system!

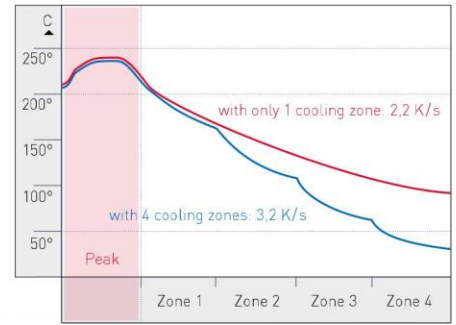


Single-lane conveyor  
with centre support

Temperature profile



Cooling gradient



**Smallest  $\Delta T$**

**The Cooling Zone**

## Ideal Heat Transfer

Heat transfer has been significantly optimized for the **VisionXS** through the use of two, three or four peak zones. Minimal distance between the nozzle panels and the conveyor, as well as separately adjustable flow rates for the upper and lower heating zones, assure that the PCBs are heated up in an extremely uniform fashion. Stressing within the PCBs is thus minimized, and related soldering defects are reduced.

## Stress-free below 50°

Depending upon the length of the system, the cooling tract in the **VisionXS** nitro is laid out in 2-, 3 or 4 stages. The fans in the individual zones, which can be controlled separately as an option, allow for accurate control, and cooling gradients can be correspondingly influenced. This assures stress-free cooling for your PCBs to below 50° C, for lead-free soldering as well.



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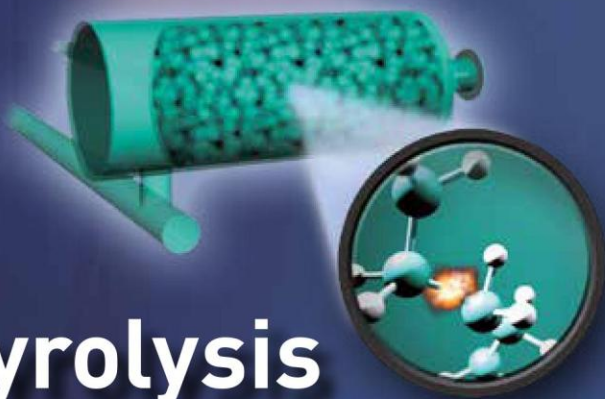
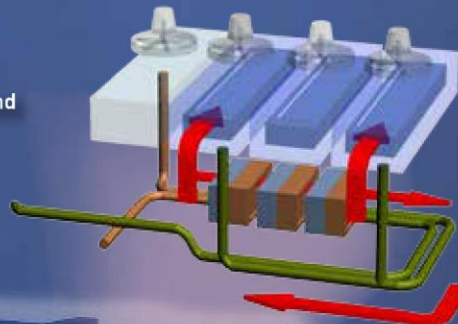
## Residue Management

### The Residue-Management-System

Residues which accumulate during soldering are separated by a new residue management system included in **VisionXS** systems. The 3-stage Residue-Management System is integrated in the oven. Each stage consists of a cooling and a filter unit.

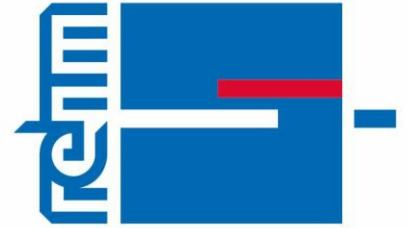
For processes with an extremely high amount of residues the extended Modular Residue-Management-System (MRS) or an integrated pyrolysis can be attached. This guarantees an absolute stable process and reduces down-time. Both systems are exchangeable for the existing machine.

flexible cooling- and filter units



- optimal cleaning
- easy to maintain
- good accessibility
- integrated in the oven
- can be upgraded on demand
- stable process

# Pyrolysis



## THERMAL SYSTEMS

### Process Atmosphere Control

#### Nitrogen Control

With the nitrogen control the desired ppm level is held constant by continuously measuring the residual oxygen value. This is accomplished by injecting nitrogen into the process chamber in a variable fashion depending upon the measured residual oxygen value. This results in varying nitrogen consumption levels depending upon the extent to which the reflow system is

loaded with PCBs and the selected conveyor width, allowing for reduced nitrogen consumption.

Nitrogen control is advisable for flexible SMD production lines with variable loading conditions and conveyor widths.

### Visu 2 - The user-friendly software

#### User friendliness

The menu of the Visu2-Software is clearly structured and intuitively. This avoids faulty operations and a better workflow can be achieved.

#### Online documentation

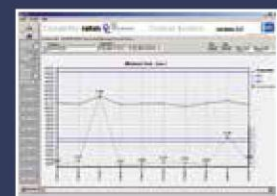
Extensive documentations (operating instructions, service instructions, wiring plan, etc.) are stored directly on the system computer and can be recalled in a comfortable and quick way.

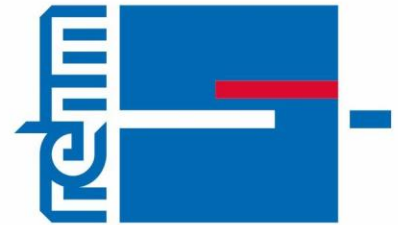
#### User Levels

With the Visu2-Software you can set optimally the rights for different user groups, e.g. for administrators, supervisors and users.

#### More Tools

- + Multilingual Software
- + Data recording
- + Protocol Import/Export
- + Maintenance log

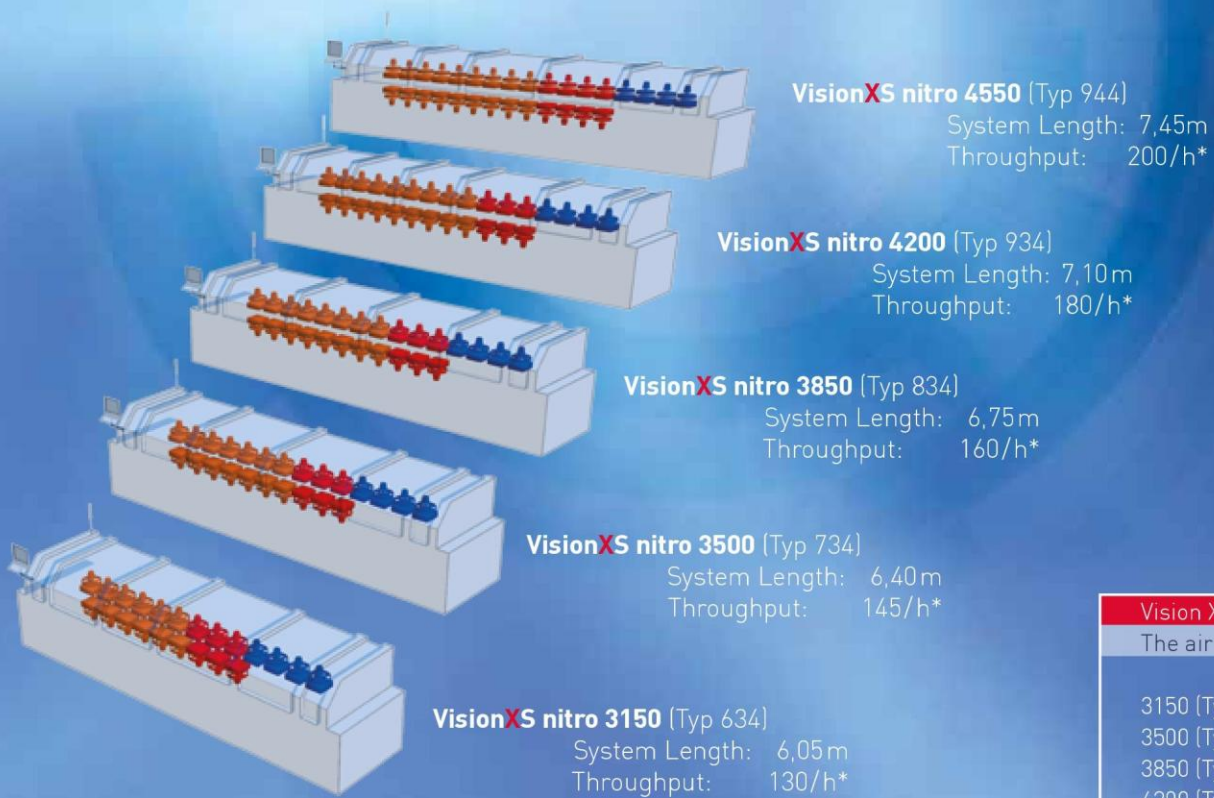




## THERMAL SYSTEMS

### Modular design

### The system types



**VisionXS nitro 4550** (Typ 944)  
System Length: 7,45m  
Throughput: 200/h\*

**VisionXS nitro 4200** (Typ 934)  
System Length: 7,10m  
Throughput: 180/h\*

**VisionXS nitro 3850** (Typ 834)  
System Length: 6,75m  
Throughput: 160/h\*

**VisionXS nitro 3500** (Typ 734)  
System Length: 6,40m  
Throughput: 145/h\*

**VisionXS nitro 3150** (Typ 634)  
System Length: 6,05m  
Throughput: 130/h\*

#### Vision XS Air \*\*

#### The air systems

3150 (Typ 633)  
3500 (Typ 733)  
3850 (Typ 833)  
4200 (Typ 933)  
4550 (Typ 943)

\*\* system length 700 mm shorter than nitro version

\*Approximate values at a PCB-length of 300mm and a distance of 100 mm.