

THERMAL SYSTEMS

Rehm Thermal Systems Dongguan

锐德东莞



International Management Team:
Ralf Wagenführ, Titan Huang, Johnson Ma

The main strategy of establishing production facilities in China was to combine the quality and technology from Germany with the manpower and market potential in China. With the factory in Dongguan, Rehm Thermal Systems can support its latest technology in thermal systems for the SMT market with the highest quality standard and short delivery times for a competitive price.

锐德热力设备有限公司在中国建立工厂的主要战略是：将中国的人力资源和市场潜力与德国的品质和技术有力地相结合。以东莞工厂为中心，我们即可凭借顶级品质、快捷交付速度为SMT市场提供热力系统领域最新技术，同时可开出具备竞争力的价格。锐德热力设备（东莞）有限公司实施国际化管理，确保可提供高品质产品，同时可灵活、快速地应对客户需求。



Rehm Thermal Systems Headquarter Germany

锐德总部

Our strength lies in our innovative spirit and in-house R&D. We develop pioneering products for automotive applications, telecommunications, TV and video technology, computer electronics and industrial electronics by involving key customers, by collaborating with other companies and through partnerships with research

institutes and universities. Therefore Rehm Thermal Systems GmbH is setting new international standards in the development of inert gas reflow soldering systems and the design of customer-specific applications for economical electronic PCB manufacturing.

我们的优势在于创新精神和内部研发能力。通过与主要客户互动、与伙伴公司合作以及与研究所、大学紧密合作，我们得以不断研发出开拓性产品，产品涉及自动化应用、电信、电视和视频技术、计算机电子以及工业电子领域。



Rehm Global Coverage

服务网络

With Rehm as your partner, you're automatically linked to our worldwide service network. Our service engineers are placed at your disposal within 24 hours. And our experts are also available on the weekend via a service hotline which has been set up especially to this end.

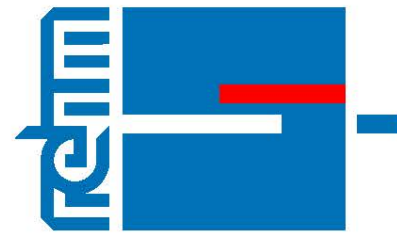
携手锐德，便与我们的全球服务网络自动对接。但凡您需要，我们的服务人员均可根据您的要求在24小时内上门服务。即便在周末，您也可以通过服务热线联系我们的专家，该热线专门为此开通。

www.rehm-group.com



锐德热力设备(东莞)有限公司
中国广东省东莞市长安镇横安东路4号平谦工业园栋
Zip: 523 851
Phone: +86 (769) 8238 0238
Fax: +86 (769) 8238 0239
E-Mail: info@rehm-group.com
Service Hotline: 800 999 8686

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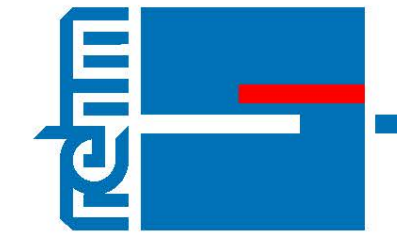
THERMAL SYSTEMS

VisionXC

Precise Process Control powered by Germany



designed for
LOW ENERGY
consumption
100% Eco Friendly
100% Efficiency



THERMAL SYSTEMS

Our Mission: Success for Our Customers!

The key to long-term, sustainable client relationships is the success of our customers. After all, the success of our customers is our success as well. Our goal is to further expand our technology leadership. This objective not only necessitates continuous R&D work, but rather intensive collaboration with our customers, and with research institutes as well.

As manufacturers, we have a high de-

gree of vertical integration, a comprehensive product range and optimized logistics. Thanks to many years of experience and know-how, we're the right partner for you.

客户的成功是我们能够保持长期、稳定客户关系的关键。毕竟，只有客户成功才能成就我们的成功。

我们的目标是进一步加强我们的技术领导地位。要实现该目标不仅需要持之以恒的研发工作，更离不开我们与客户和研究机构的紧密合作

作为制造商，我们拥有强大的纵向整合能力，全面的产品范围和优质的物流服务。凭借多年的积淀和专业经验，我们将成为您理想的合作伙伴。

Our Strategy: Expansion with Sustainability

Research / Development

Close co-operation with institutes and research facilities for customer oriented process optimization. Development of economic solutions in dialog with our customers and partners.

加强同研究机构的亲密合作，实现客户导向的流程优化。与客户及合作伙伴沟通，致力于研发经济型解决方案。

Process Optimization

Continuous optimization of all business processes emphasizing on extremely high levels of quality management.

高度重视高级品质管理，不断优化各种业务流程。

Expansion

Expansion of production capacity, in order to sustainably fulfill the requirements of our customers in the long-term.

可扩展的生产能力，不断满足客户的长远需求。

Our Profile: High Quality by German Engineering

- Thermal Systems from 50 °C to 1000 °C
热力系统温度 50 °C 到 1000 °C
→ your single source supplier
您的唯一供应商
- 75 % of the systems installed in High-End Production
75%的系统应用于高端生产过程
→ Know-How for heaviest demands
拥有满足于最苛刻要求的专业知识
- High vertical integration
强大的纵向整合能力
→ 100 % quality controlled by Rehm
来自锐德总部的100%质量控制
- Global Presence
遍布全球
→ fast reaction time
快速反应

Consistently well thought-out technology and outstanding workmanship are standard features with our reflow soldering systems. Customer-specific process requirements and optimized manufacturing technology, together with the corresponding economic requirements, are implemented in an ideal fashion. And the systems are available for use with either an air or a nitrogen atmosphere.

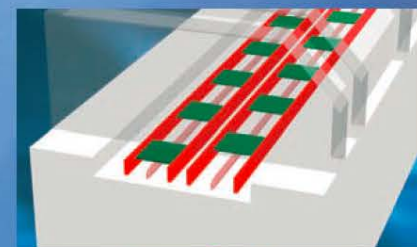
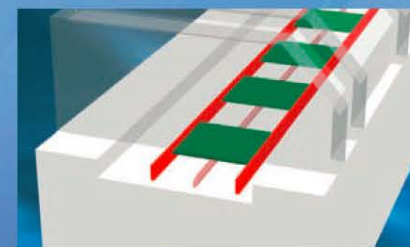
始终如一精湛技术和杰出的工艺是回流焊接系统的标准特征。此类模块化系统可为您提供稳定、重复精度高的焊接技术。将客户对过程的特定要求、最优的制造技术与相应的经济性需求完美的融合在一起。同时，该系统可采用空气或氮气工作。

Simply. More. Flexibility.

Transport System 传输系统

An absolutely parallel transport of the assembly groups through the oven is a prerequisite for a reliable, trouble-free production. The adjustment of the transport system is carried out by means of low-maintenance threaded spindles. The drive mechanism of the transport system is located outside the process chamber and thus is protected from thermal influence and also from contamination.

系统是绝对平行方式在炉膛中传输贴装组件，是确保生产稳定、无故障的前提。传输系统调整将通过低维护的螺纹主轴进行。增量传感器可确保高重复性、高精度定位，从而对所需轨道宽度进行准确设置。传输系统的驱动机制位于处理室外，避免受到热力影响或接触污染物。



Dual-lane conveyor

Asynchronous transport speed 同步传输速度

Flexibility for your production 灵活应对生产要求

Using our dual lane transport system with asynchronous transport speed enables you to produce different boards in one oven.

可异步控制的双导轨传输系统，可在同一炉膛内同时生产不同的电路板，增加了生产灵活性。

Accurate Transport System 精确的传输系统

Automatical transport control 自动运输控制

Incremental transmitters ensure high, repeatable accurate positioning and a precise setting of the required lane width.

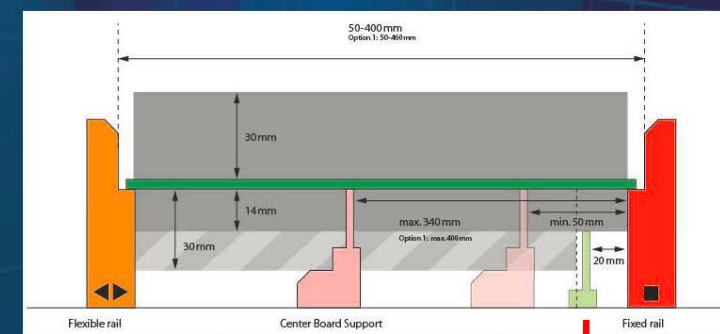
增量传感器可确保高重复性、高精度的定位，从而对所需轨道宽度进行准确设置。

Reliable Center Board Support 可靠的中央板支撑

Additional advantage for flexibility 灵活性的额外优势

The CBS option makes it possible to process large panel formats – an additional advantage for flexible manufacturing! The CBS can be easily placed in its parking position when it is not used for the running product.

凭借可选的中央支撑，您可处理大型电路板——这是确保生产灵活的又一优势！当生产的产品不需要中心板支撑时，可轻松将其置于右图所示停放位置。



Parking position CBS
CBS停放位置

Temperature profile



Smallest ΔT 最小温差 ΔT

Ideal Heat Transfer for all loading conditions 满足不同生产模式的理想热传导

All heating zones of the Vision[®] C are controlled individually, with an optimum thermal separation from each other, this minimizes thermal influence of adjacent zones. Thereby a flexible profile guidance and a stable reflow process are ensured. Special design of hole type nozzle fields provides a homogeneous heat input of the process gas over the entire process zone and thus an absolute homogeneous heating of the package. This results in best process stability with minimum ΔT

results in best process stability with minimum ΔT

VisionXC所有受热区域均可单独控制，每个区域之间保持最佳隔热距离，降低了相邻区域的热影响，从而确保了灵活的曲线控制和稳定的回流过程。孔型喷嘴区域的独特设计可使整个处理区域内的过程气体均匀受热，从而实现对元器件的绝对均匀加热。这便实现了具有最低温差ΔT的最佳过程稳定性。

Rehm Thermal Systems				
Item	Temp 1	Temp 2	Temp 3	Temp 4
unloading 1	251.1	251.1	250.6	251.1
unloading 2	251.1	251.1	250.6	250.6
unloading 3	251.7	251.1	250.0	250.0
Average	251.3	251.1	250.4	250.6
Full loading 1	251.1	251.7	250.6	250.0
Full loading 2	250.6	250.6	249.4	249.4
Full loading 3	251.1	251.1	249.4	249.4
Average	250.9	251.1	249.8	249.6
Average Delta T	0.4	0	0.6	1.0
Delta T Average	0.5			

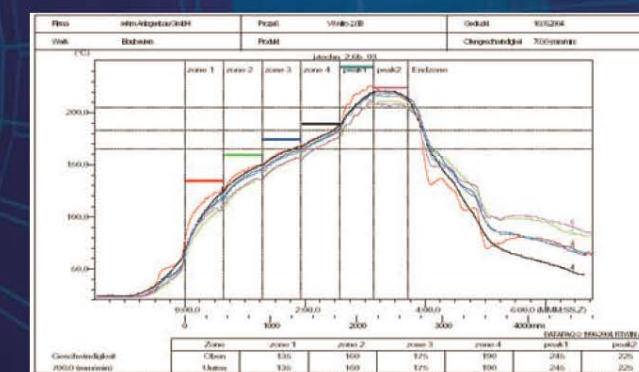
Best thermal performance - for lead and leadfree processes!

Best Profiling 最佳温度曲线

Absolutely reliable profiles 绝对可靠的温度曲线

The special design of our system and the optimal thermal performance guarantee reliable and reproducible profiles for lead and lead-free processes.

系统的独特设计和最优的热力性能确保了含铅和无铅制程的稳定性，同时具有重复精度高的温度曲线



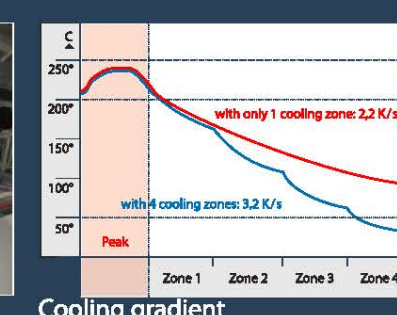
Simply. More. Experience.

Cooling Zone 冷却区

Adjustable cooling gradients 可调节的冷却梯度



Cooling zone



Cooling gradient

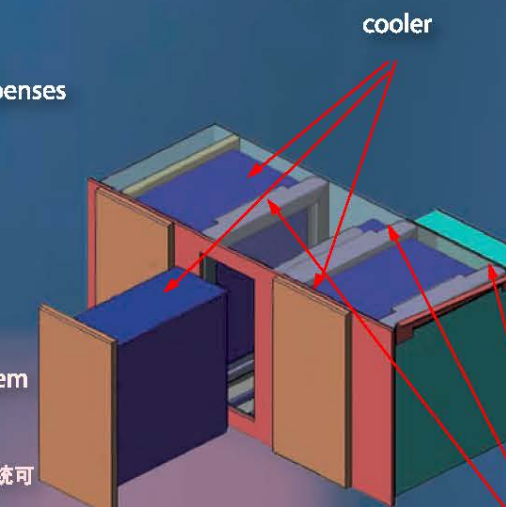
The cooling tract in the Vision[®] C nitro is laid out in 4 stages. The fans in the individual zones, which can be controlled separately as an option, allow for accurate control, and cooling gradients can be correspondingly adjusted. This assures stress-free cooling for your PCBs, for lead-free soldering as well. VisionXC配备4个冷却区。每个冷却区中的风扇可选择单独控制，可精确地控制冷却过程，进而控制相应的冷却梯度。这确保了冷却过程无应力作用。

Flux Management System 残渣处理系统

Modular concept for easy cleaning and reduced maintenance 易于清洗且维护量少的模块化概念

Residues which accumulate during soldering are separated by a new flux management system included in Vision[®] C systems. Therefore the residues are exhausted downwards to the integrated FMS. Depending on the system length, it is equipped with a 2 or 3-stage Flux Management System. Each stage consists of a cooling and a filter unit. With this combination liquid and crystalline residues can be drastically reduced. Out of this you gain the big advantage of a lower rate of maintenance intervals and a higher efficiency in working.

- optimal cleaning 最佳清洁效果
- reduced maintenance expenses 减少维护费用
- easy accessibility 易于操作
- integrated in the oven 集成于炉膛中
- the extended FMS can be attached 可扩展型FMS可接入扩展型FMS



cooler

flexible filter systems

新研制的残渣处理系统（VisionXC系统的一部分）将焊接过程中积攒的残渣分离出来，并进入集成的FMS系统中。根据不同机型系统的长度，可配备2或3段式残渣处理系统。每段回收单元包含一个冷却和过滤装置。可大幅减少液体和助焊剂结晶残留。使用此系统，您可减少维护频率及时间、提高生产效率及经济效益。

- optional: Gas washer system for extenden FMS for extremely crystalline Residues 可选：扩展型FMS气体清洗系统可用于难处理的结晶残渣

Energy Saving Concept 节能理念

Expandable systems with low energy consumption and minimal emissions are the basis of our company philosophy.

可扩展、低能耗和小排放是锐德的基本产品理念。



✓ Stand by Function 待机功能
Switching to the sleep mode allows for reduced operating costs. 转换为待机模式减少运行成本

✓ Nitrogen Control 氮气控制
Targeted regulation of the required amount of nitrogen is held at a constant level. 采用固定档次，对所需氮气量进行定向调节

✓ Better Insulation 更好的隔热效果
Our top class heat insulation of the process chamber saves up to 15% energy consumption. 工作舱的隔热效果可节省高达15%能源。

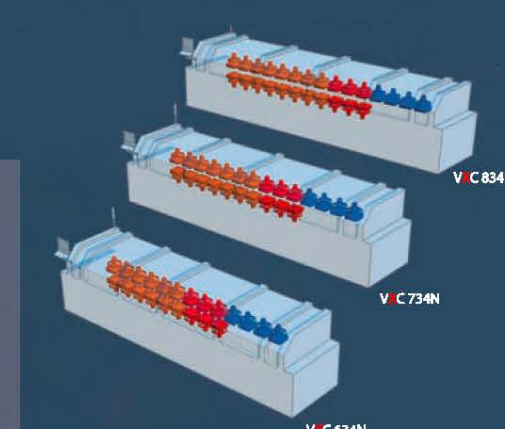
✓ Clean Process 清洁过程
By means of FMS our reflow systems achieve high particulate removal rates and can be operated without generating any hazardous waste. 凭借FMS，我们的回流系统可达到较高的颗粒清除率，且不会产生危险废弃物。



Modular Design 模块化设计

The system types 系统类型

VisionXC Series						
System type	634A	634N	734A	734N	834A	834N
Length	5340 mm	6040 mm	5690 mm	6390 mm	6040 mm	6740 mm
Width	1436 mm					
Height	1564 mm					
Number of zones	13	13	14	14	15	15
Heating zone length	3150 mm	3150 mm	3500 mm	3500 mm	3850 mm	3850 mm
Energy consumption standby-mode	8,5 kW	9 kW	9,4 kW	9,9 kW	10,3 kW	10,8 kW



V C 834N

V C 734N

V C 634N