

Vitronics Soltec

Electronic Assembly Equipment

TW EAE

CENTURION⁺ A Reflow Soldering Solution for Heavy Solder Paste Users

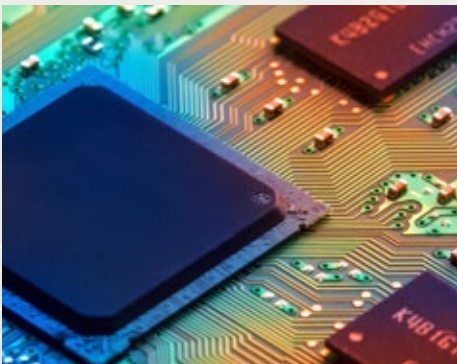
Proven Performance from a Century of Soldering Experience



CATHOX
CATALYTIC THERMAL OXIDIZER

Ultra CATHOX option for
>50kg of solder paste per week

A robust upgrade to the Centurion designed for heavy solder paste users with unique features that further minimize maintenance and keep the process chamber cleaner



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CENTURION⁺ Reflow Soldering Solutions

The Centurion+ is a robust upgrade to the Centurion designed for heavy solder paste users with unique features that further minimize maintenance and keep the process chamber cleaner. With the best heat transfer in the industry, the Centurion is able to run any profile at the lowest set point possible, which minimizes the thermal differences over the product and uses less energy.



Specifically designed to reduce maintenance downtime in high flux environments

Cost effective

Cost of Ownership

With an efficient heat transfer design, Centurion has a low energy consumption rate. Its reliable and robust design, backed by over 20 years of SMT experience and capability, ensures high uptime even with the toughest reflow requirements. Our patented CATHOX™ (Catalytic Thermal Oxidizer) further reduces cost of ownership by reducing the maintenance needs through cutting-edge flux treatment technology. The new 'idle mode' option will further reduce cost of operation.

Industry-leading Thermal Performance

With Centurion's new design backed by our experiences with its prior generations, we achieved better thermal transfer even with a wider process chamber. Our knowledge and experience in process control ensures the repeatability across the oven required by the most demanding customers and the most challenging process requirements in the world.

DUAL LANES WITH INDEPENDENT LANE SPEED CONTROL

Dual lanes with independent conveyor speed control doubles throughput and allows two different boards to run in parallel, a good value for high-mix low-volume manufacturers.



Conveyor Features

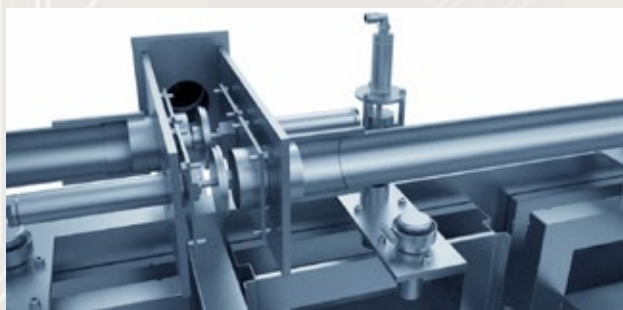
- ▶ Dual lane configurations up to 2 x 300 mm
- ▶ Optional continuous center board support for thin boards
- ▶ Optional combo belt/rail conveyors
- ▶ Single or dual board support systems

Reflow Soldering Solutions

Advanced Features and Options

AIR FLOW SYSTEM

The Centurion air flow system is designed to extract flux contaminated air out of the chamber of an air environment reflow oven. The system isolates the heating and cooling section of the tunnel with an additional venturi. It reduces refresh time and maintenance time, providing a much cleaner environment.



TRUE N₂/AIR SWITCH

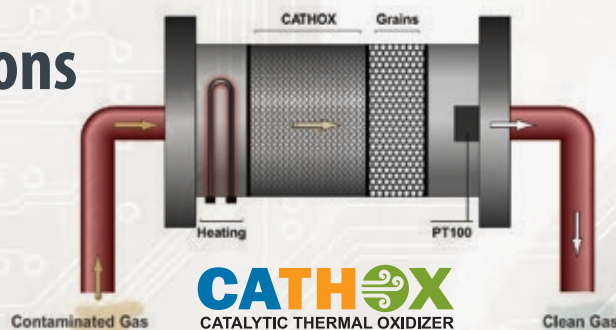
The True N₂/Air switch on a nitrogen machine allows the user to easily switch between air flow system and nitrogen flow system for different productions. In Nitrogen production, nitrogen is recirculated to save the operating cost, and in Air production, the new air flow system proactively extracts air out of the chamber to the exhaust box.

This option provides the customer with the combination of a true N₂ machine and a true Air machine.



FAST COOL DOWN

Fast changeover time is a key factor for high-mix low volume manufacturers. Fast Cool Down (FCD) is a key option when there are multiple recipe changes in a day, especially when changing profiles from high to low temperature. Through computer program, FCD automatically controls individual zones to reach its specific temperature setpoint.



FLUX FILTRATION SYSTEM

The patented CATHOX™ (Catalytic Thermal Oxidizer) dramatically reduces maintenance requirements while keeping a clean process environment. It is very effective in removing volatile compounds from the process tunnel during reflow. In thermal oxidation, organic vapors are converted to hydrocarbons, which are captured by a filter. Maintenance is simple with easy access.

ULTRA CATHOX FOR HEAVY SOLDER PASTE

Ultra CATHOX, available for Centurion+ features an increased number of units capable of handling >50kg of solder paste per week.

CLOSED LOOP PPM CONTROL SYSTEM

The closed loop PPM control system is designed to be used in a nitrogen environment with CATHOX™ to maintain a precise PPM setpoint range. The closed loop system can maintain the setting from 200PPM to 2000PPM at ±100PPM tolerance from 200 to 500 and 20% tolerance from 500 to 2000. In Production Mode, the system ensures stable PCB quality. In Idle Mode, it reduces nitrogen consumption and automatically recovers to PPM setpoint before production resumes.

EASILY REMOVABLE BLOW BOXES

Centurion+ features easily removable blow boxes with removable side plates for increased accessibility to width adjustment spindles and improved ease of cleaning in cooling area.

EASILY REMOVABLE BAFFLE BOXES

Centurion+ offers easily removable baffle boxes on the infeed and outfeed to reduce downtime when cleaning baffle zones. This option is ideal for high paste applications where more frequent maintenance is required.

Reduced
maintenance

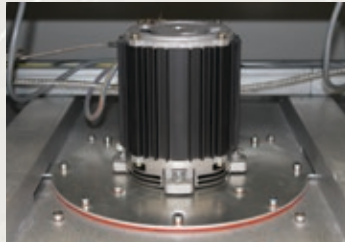
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Key standard features

- ▶ Easily removable blow boxes with removable side plates for increased accessibility to width adjustment spindles and improved ease of cleaning in cooling area
- ▶ Quick exchange heaters and motor fan combination
- ▶ Auto chain lubrication system
- ▶ Board tracking system
- ▶ Power management
- ▶ CE compliance

Motors and Heaters

- ▶ Lifetime warranty
- ▶ Highly reliable



Key optional features

- ▶ Ultra CATHOX to handle >50kg of solder paste per week
- ▶ Continuous center board support for thin/flimsy boards
- ▶ Easily removable baffle boxes (infeed and outfeed)
- ▶ Enhanced zone definition for large zone separation
- ▶ Advanced controlled cooling
- ▶ Dual lane with independent lane speed control
- ▶ True N2/Air Switch
- ▶ Easily Removable Exhaust Box with Temperature and Pressure Monitoring
- ▶ Fast Cool Down (FCD) option
- ▶ MCA (Machine Capability Analyses) test
- ▶ System performance verification system
- ▶ PC with Windows 10 Enterprise LTSC for higher stability

Centurion+ Specifications

Model Number	CT+ 930	CT+1040	CT+ 1240
Total zones	12	14	16
Heating zones	9	10	12
Cool zones	3	4	4
Total heating length	3195 mm (125.8 in)	3550 mm (139.8 in)	4260 mm (167.7 in)
System length (AIR)	4860 mm (191.3 in)	5570 mm (219.3 in)	6280 mm (247.2 in)
System length (N2)	5570 mm (219.3 in)	6280 mm (247.2 in)	6990 mm (275.2 in)
System width	1600 mm (62.9 in)		
System height	1542 mm (60.7 in)		
Max gas temperature setpoint	350°C		
Gas temperature control accuracy	± 1°C		
Gas thermal uniformity	± 2°C		
Max process width	610 mm (24 in)		
Max dual lane width	300 mm (11.81 in)		
Conveyor speed range	25 - 200 cm/min		
Conveyor speed accuracy	± 1%		
PPM level of N2 machine	<50 PPM		

ITW EAE is a division of Illinois Tool Works, Inc. It is a consolidation of all of its Electronic Assembly Equipment and Thermal Processing Technology. The group includes world-class products from MPM, Camalot, Electrovert, Vitronics Soltec and Despatch.