

## ZEPHER Mixed convection/IR reflow system with 8 zones, 250mm or 400mm belt widths

In an ideal profile, preheat temperatures are maintained long enough to permit activation of fluxes, while exposure of the components to higher reflow temperatures is kept to a minimum. Full convection systems achieve these results with a fast belt speed through a long, multi-zone chamber. Shorter, lower cost systems require a different approach.

### Infinite profiling possibilities

The Zepher series offer the ideal combination of 30% IR heat and 70% forced air to maintain consistent edge to edge temperatures, regardless of component size or density. Infinite profiling possibilities are achieved by 8 independently controlled heating zones, with bottom side heating also adjustable to prevent overheating of inverted components on double sided boards. A dedicated LCD display permits continuous monitoring of the production run, with real time profiling shown in convenient graph format and board temperatures through each zone shown in real time.



### Up to 99 programs can be stored

The system's memory stores up to 99 different profiles. The RS232 port allows PC interface for entry and storage of additional programs as well as remote control of operating procedure, QC monitoring, and generation of hard copies as needed. Other features include an integral exhaust system that removes solder fumes while cooling the system exterior.

### Air Ionised controls static

The system is also designed to accommodate an inert gas purge. To eliminated the possibility of damage caused by static, the Zepher includes an air ioniser in the cool down zone as standard equipment.

### Console

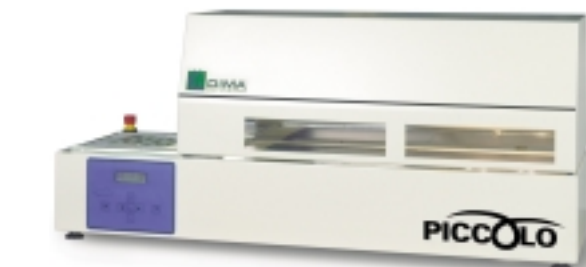
Add an optional stand with Locking Cabinets to Make it a Console Model

The built-in LCD display shows a plot of the actual substrate temperature profiles as measured by thermocouples attached to the substrate.

The Zepher can be floated with inert gas to reduce the amount of oxygen in the process chamber.

Emitter set values and actual temperatures are displayed on the conveyor speed, program number and convection ventilator status.

## PICCOLO Reflow System for Entry Level Applications



The Piccolo reflow is designed for soldering prototypes and small to medium runs of SMT assemblies. The Piccolo reflow oven eliminates the problems that normally occur when using small reflow systems.

The reflow issue for most small ovens is that the short process chambers force too rapid ramp, to process temperatures. The reflow allows temperature rise rates of less than 4°C per second if required, whilst maintaining a small overall foot print.

Construction of the oven is based on a two chamber system: one chamber is used as a pre-heat zone and the other as a soldering zone. PCB's are processed fully automatically by placing them on the carrier at the left side of the oven and pressing the start button.

The carrier moves to the right of the system into the preheat chamber where it remains until pre-heat is completed. After pre-heating, the carrier moves left to the soldering zone where it remains until the soldering cycle is finished. After soldering, the carrier is cooled as it returns to the start position.

A microprocessor controls pre-heat temperature, pre-heat time, solder temperature and soldering time. Each parameter can be set independently, and up to ten profiles can be stored in memory. A unique feature of this oven is the self learning mode. In this mode the required profile is given to the microprocessor. The microprocessor then monitors the process using feedback from an external thermocouple and machine sensors. The system settings are automatically adjusted to obtain the desired process and are stored. The profile can then be recalled for subsequent processing of similar boards without external monitoring.

Large view windows make this oven very suitable of testing and training operations. The oven is equipped with an active carbon filter so no external extraction is required.

### Features

- Microprocessor control with unique self learning mode
- Combined Long and Shortwave IR heating from Quarts and Hotplate
- Stainless Steel mesh carrier for doublesided processing
- Integrated carbon filter
- View windows allow full process observation

### SCIROCCO



**Article Nr.**  
SMRO-4000

**Dimensions**  
3500L x 800W x 1300H

**Conveyor**  
400mm stainless steel mesh belt, adjustable from 50mm - 800mm per min.

**Controller**  
Microprocessor controller for heating and cooling zone. Speed and temperature profiling, controlled via LCD display or by optional PC.

**Heating System**  
Full convection oven with top and bottom forced air circulation. 10 heating zones, 2 cool down zones.

**Cooling**  
By circulated air cooled by a refrigerating unit. Cooling medium R22 (CFC Free).

**Heating Power**  
18000 Watt

**Software Included**  
Evaluation oven manager software.

**Tunnel Length**  
2500mm

**Options**  
Edge Conveyor  
Light Tower  
Monitor Stand  
Computer  
Oven Manager (Windows 95)  
Refrigerating unit  
U.P.S.

**Weight**  
658Kg

**Power Requirements**  
3 Phase 380/415 Volt  
60 Amp

### PASSAAT



**Article Nr.**  
SMRO-0405

**Dimensions**  
2500L x 900W x 550H

**Conveyor**  
400mm stainless steel mesh belt, adjustable from 50mm - 800mm per min.

**Controller**  
Microprocessor controller with RS-232 interface for heating and cooling zones. Speed and temperature profiling controlled via LCD display or by optional PC.

**Heating System**  
Full convection circulated hot air from the top and support plates at the underside. 8 heating zones, 2 cool down zones.

**Cooling**  
Axial ventilator with ioniser at the bottom and radial ventilator at the top.

**Heating Power**  
16500 Watt

**Software Included**  
Evaluation oven manager software

**Tunnel Length**  
1650mm

**Options**  
Edge Conveyor  
PCB Catch Tray  
Light Tower  
Monitor Stand  
Computer  
Oven Manager (Windows 95)  
Cabinet

**Weight**  
350Kg

**Power Requirements**  
3 Phase 380/415 Volt  
50 Amp

### BREEZE



**Article Nr.**  
SMRO-0253 / SMRO-0403

**Dimensions**  
1650L x 720 / 900W x 480H

**Conveyor**  
250 / 400mm stainless steel mesh belt, adjustable from 50mm - 800mm per min.

**Controller**  
Microprocessor controller with RS-232 interface for heating and cooling zones. Speed and temperature profiling controlled via LCD display or by optional PC.

**Heating System**  
Full convection circulated hot air from the top and support plates at the underside. 8 heating zones, 1 cool down zone.

**Cooling**  
Axial ventilator with integrated ionising unit blowing from underside.

**Heating Power**  
7700 / 8100 Watt

**Software Included**  
Evaluation oven manager software.

**Tunnel Length**  
950mm

**Options**  
PCB Catch Tray  
Light Tower  
Monitor Stand  
Computer  
Oven Manager (Windows 95)  
Cabinet

**Weight**  
145 / 190Kg

**Power Requirements**  
3 Phase 380/415 Volt  
32 Amp

### ZEPHER



**Article Nr.**  
SMRO-0252 / SMRO-0402

**Dimensions**  
1650L x 720 / 900W x 410H

**Conveyor**  
250 / 400mm stainless steel mesh belt, adjustable from 50mm - 800mm per min.

**Controller**  
Microprocessor controller with RS-232 interface for heating and cooling zones. Speed and temperature profiling controlled via LCD display or by optional PC.

**Heating System**  
Hot air combined with long wave infrared radiation. 8 heating zones 1 cool down zone.

**Cooling**  
Axial ventilator with integrated ionising unit blowing from underside.

**Heating Power**  
5400 / 6300 Watt

**Software Included**  
Evaluation oven manager software.

**Tunnel Length**  
950mm

**Options**  
PCB Catch Tray  
Light Tower  
Monitor Stand  
Computer  
Oven Manager (Windows 95)  
Cabinet

**Weight**  
115 / 150Kg

**Power Requirements**  
3 Phase 380/415 Volt  
32 Amp

### PICCOLO



**Article Nr.**  
SMRO-0170

**Dimensions**  
1000L x 330W x 450H

**Conveyor**  
Batch oven with maximum PCB size of 150 x 250mm

**Controller**  
Microprocessor controlled heating and cooling zones with LCD display and built-in learning modus.

**Heating System**  
Infrared heating system with quartz heaters at the top with heater plates at the underside.

**Cooling**  
Top cooling with Axial ventilator.

**Heating Power**  
3000 Watt

**Software Included**  
No PC software available.

**Tunnel Length**  
N/A

**Options**  
N/A

**Weight**  
53Kg

**Power Requirements**  
Single Phase 220/240 Volt  
16 Amp

Ovens are shown together with several optional items.

110/220 Volt version available on request.



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Your Agent



# PASSAAT

**Full convection reflow system ensures edge-to-edge thermal uniformity.**



Built-in LCD display is indispensable aid to production

This microprocessor-controlled full-convection system is living proof that you don't have to overspend to own a full-function, full-size reflow system.

The Passaat offers an all stainless steel interior and 8 individually controlled heating zones (4 top and 4 bottom), plus two additional zones for cool down. Convected hot air achieves more uniform thermal control and better heat balance at ideal lower temperatures. In the Passaat, air circulates at the recommended speed of 1 meter per second - fast enough to promote thermal uniformity without dislocating mounted chips. Top and bottom heat also makes it possible to reflow double-sided boards.

### **Ionising unit prevents static build-up**

The in-line Passaat is 2.7m long and includes an integrated ionising unit to prevent static build-up as reflowed boards exit the system. A digital encoder precisely controls belt speed, providing vibration-free belt movement - a must for double sided boards. A built-in process window is used to program, run and display each profile. PC software permits unlimited temperatures profiling in real time, continuous process status updates, overlay comparisons, and program storage. The Passaat offers a high degree of flexibility and profile control, enabling the user to run a large variety of boards with fewer profiles. Uniform heating and high repeatability will be maintained under all load conditions - including load / no load (i.e., "zero spacing").

# SCIROCCO

**11 zone convection system is ideal for all maximum-yield production applications.**

Exact control of all cells and total performance consistency even under varying loads are routine expectations for any top-of-the-line reflow. What makes Scirocco a most sought-after premium-level system are those capabilities, plus its singular ability to function as a full convection reflow. It's a fact that even the most sophisticated reflow systems will have some uneven heating due to unwanted IR energy emanating from areas of the process chamber that become hot. This can cause components with less density to heat up faster than larger ones.

The challenge is to minimise unwanted IR by eliminating its causes, such as heating chambers made of heavy aluminium castings with the heating elements inside.

### **Avoids IR emissions sources**

Another problem is interior walls that are non-reflective. The 3.7m Scirocco system has been ingeniously designed to avoid both of those potential IR emissions sources. Thin, lightweight sheets of mirror-like polished stainless steel line the entire interior, with heating elements positioned outside the chamber. These innovations cause heat to be deflected instead of absorbed and emitted. A most important criterion by which convection reflow systems are judged is the speed of circulating air, which should be fast enough to equalise its temperature to that of the components within each zone.



### **Air and component temperatures equalised**

This is achieved with Scirocco's circulating air speed of 1 to 1.3 meters per second. (Any faster could endanger chips from being misaligned or shifted.) However, many systems move the air at a much slower rate - 0.3 meters per second in some instances causing a substantial temperature imbalance between components and the air surrounding them. Faster air speeds are also ideal for densely populated and multi-layer boards, as well as in all other critical soldering applications.

### **Refrigerated cool down zone**

The process chamber consists of 4 pre-heating zones, 4 soak zones, 2 reflow zones and 1 cooling down zone. Cool down occurs with an exclusive integrated refrigeration unit which rotates air trapped within the process chamber. In this closed loop system, air is cooled by chilled water circulating inside a coil. Cool down takes place without use of tap water and outside air that can oxidise flux residues. A 400mm stainless steel mesh belt is standard. A digital encoder precisely controls belt speed, providing vibration-free movement - a must for double-sided boards.

### **Today's best buy**

From every parameter by which reflow systems are judged - heating uniformity, exacting and total process control, profiling flexibility and throughput - the Scirocco leaves nothing to be desired. As such, it is by far today's best buy in reflow!



# BREEZE

**Full Convection Reflow Oven Available as a Benchtop... or Add a Stand with Locking Cabinets to Make it a Console Model**

In an ideal profile, preheat temperatures are maintained long enough to permit activation of fluxes, while exposure of the components to higher reflow temperatures is kept to a minimum. These full convection reflow ovens with topside circulating hot air achieve perfect heating profiles despite their modest size.

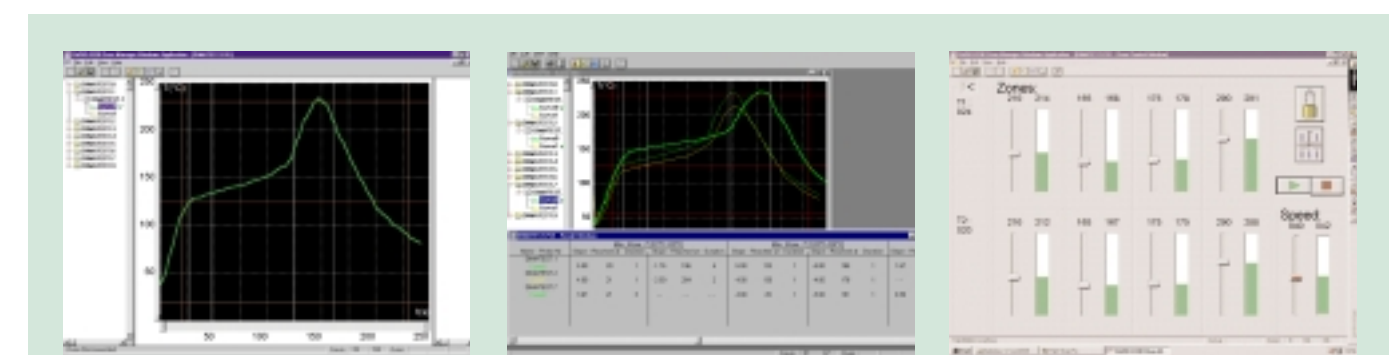


### **Infinite Profiling Possibilities**

The Breeze reflow oven offers full forced hot air heating to maintain consistent edge-to-edge temperatures, regardless of component size or density. Infinite profiling possibilities are achieved in this reflow oven through 8 independently-controlled heating zones, with bottom side heating also adjustable to prevent overheating of inverted components on double-sided boards. A dedicated LCD display permits continuous monitoring of the production run, with real time profiling shown in convenient graph format and board temperatures through each zone shown in real time.

### **Air Ioniser Controls Static**

To eliminate the possibility of damage caused by static, the Breeze includes an air ioniser in the cool down zone as standard equipment.



### **Store up to 99 Programs Alone... more with an added PC!**

The system's memory stores up to 99 different profiles. The RS-232 port on the reflow oven allows PC interface for entry and storage of additional programs as well as remote control of operating procedure, QC monitoring, and

generation of hard copies as needed. Oven Management software, compatible with Windows 95/98 operating systems, is optional available for most ovens. PC, monitor and monitor/keyboard stand sold separately.