

TCM Series IR/Convection Cure Oven

For conformal coating applications in the Americas & Asia

Features and Benefits

- **Ideal for conformal coating applications**
- **Fast warm-up and cool-down**
- **Integrated board profiling capability, no external hardware required**
- **Comes with popular temperature profiling software tools**
- **Exhaust sensor prevents heaters from turning on without proper exhaust ventilation enabled**
- **Flat panel monitor**
- **Unique downdraft exhaust design provides an efficient path for VOC removal**



The in-line Thermal Cure Module (TCM) ovens from Nordson ASYMTEK are ideal for medium to high-volume production. They are easy to integrate with Century Series Conformal Coating systems.

Available in three different lengths, they provide the flexibility to match your production requirements and feature robust construction and a streamlined appearance.

The cure chamber achieves a thermally uniform atmosphere with IR heat panels and consequent convection by the induced exhaust draft. In a CE-compliant package, process uniformity is assured with precise, independent temperature-controlled heat zones. Rapid response times, a closed-loop conveyor and Windows 7-based software are an integral part of the thermal cure control process.

The oven is equipped with a unique downdraft exhaust design. Plenums below the conveyor rails, close to the coated substrate efficiently remove volatile organic compounds (VOCs), which are typically found in conformal coating applications. This provides a safe operating environment when coupled to your external exhaust system.

Designed for easy integration with Nordson ASYMTEK conformal coating systems, the TCM Series ovens include operation friendly features like: motorized width adjustment of the chain conveyor, SMEMA compatibility, and ample clearance above and below for tall and complex PCB architectures. In addition, the ovens come with two of the most popular temperature profiling software tools in the industry (KIC and ECD).

Specifications: IR/Convection Cure Oven

Dimension	TCM-2200	TCM-3300	TCM-4600
Heated length	2184 mm (86 in.)	3251 mm (128 in.)	4521 mm (178 in.)
Total length	3404 mm (134 in.)	4445 mm (175 in.)	5690 mm (224 in.)
Heating zones	7	10	13
Typical net weight (approximate)	1134 kg (2500 lb)	1588 kg (3500 lb)	1814 kg (4000 lb)
Run current at 480 VAC, 60 Hz	25 - 30 Amp	30 - 35 Amp	46 - 51 Amp

NOTE: Typical start-up current is 1.5 times maximum run current. Recommended breaker size is 100 Amp.

Heating Area

Heater temperature range: 25 to 350 °C (77 to 662 °F)

Heater control stability: ± 1 °C (± 1.8 °F)

Cross conveyor temperature tolerance: ± 5 °C (± 9 °F)

Profile change time: 5 to 15 minutes

Typical cold start heat-up time: 30 minutes

Conveyor

Speed: 100 to 600 mm/min (3.9 to 23.6 in./min)

Product width: 51 to 508 mm (2 to 20 in.)

Above-board clearance: 89 mm (3.5 in.)

Under-board clearance: 89 mm (3.5 in.)

Conveyor-edge clearance: 4.8 mm (0.187 in.)

Conveyor height: 940 mm \pm 51 mm (37 in. \pm 2 in.)

Direction: Left to right

Dimensions

Overall width: 1372 mm (54 in.)

Height (not including light tower): 1600 mm (63 in.)

Facilities Requirements

Voltage: 480 VAC, 3 phase, 50/60 Hz

(field configurable to 380/415/440/480 VAC)

Exhaust (customer supplied): 0.35 m³/sec @ 38.1 mm water column
(750 CFM @ 1.5-in. water column)

Safety Features

Standard safety features: exhaust monitoring sensor, start-up delay, and downdraft exhaust design

Other Standard Features

Pentium 4 Computer with Windows 7; KIC/ECD profiling software; 3-color light tower; auto-lubrication; SMEMA compatible; board drop sensor; board counter; casters (for easy maneuvering); entry and exit conveyor extensions with cooling module on exit side.

For more information, speak with your local representative or contact your regional office.

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