

Thermal Cure (TC) Oven

IR/convection oven for conformal coating applications in European regions

Features and Benefits

- Flexibility is increased with four different lengths available to match your production requirements
- Unique downdraft exhaust design provides an efficient, safe path for VOC's removal
- Control your process with individual heating zones that can be programmed for specific drying or curing profiles
- Increase productivity with a fast warm-up and cool-down
- Easy access to interior subassemblies aids preventive maintenance and cleaning
- CE-certified to ensure conformity to the safety and quality standards of the European Community

The in-line Thermal Cure oven is ideal for mid-to-high volume production and is designed for easy integration with all Nordson ASYMTEK conformal coating systems. The CE-compliant oven features precise control of conveyor speed and internal thermal environment. Infrared panels and exclusive heat dispersion plates transfer heat by convection.

The TC oven is equipped with a unique downdraft exhaust design. Plenums below the conveyor rails, close to the coated substrate remove volatile organic compounds (VOCs) efficiently. This provides a safe operating environment when coupled to an external, customer-supplied exhaust system.

A touch-screen monitor makes it convenient to operate the Windows®-based user interface, which includes multi-language support, alarm log, event history, auto-diagnostics, help files, and the ability to store over 100 profiles. In addition, the TC oven comes with two of the most popular temperature profiling software tools in the industry (KIC and ECD).



The oven accommodates substrates that contain tall components on both the top and bottom sides. The SMEMA-compatible chain conveyor allows double-sided board processing, and can be easily integrated into existing conformal coating lines. The conveyor's left-to-right workflow can be manually adjusted.

The TC oven's easy-access design makes it possible to dismantle and replace heating elements and convection units in under five minutes.

Thermal Cure (TC) Oven Specifications and Configurations

Thermal Environment

Maximum process temperature:	500 °C
Process profile repeatability:	±5 %
Heat-up time:	30 minutes (includes stabilization)

Conveyor

Board width ⁽¹⁾ :	50-450 mm (2-17.7 in.)
Board clearance (above and under):	100 mm (3.9 in.)
Standard speed ⁽²⁾ :	165-1100 mm/min. (6.5-43.3 in./min.)
Pin/chain conveyor:	5 mm (0.2 in.)
Conveyor height:	900-980 mm (35.4-38.6 in.)

Other Standard Features

Portable computer control system, touch screen, Windows® operating system, KIC/ECD profiling software, 3-color light tower, SMEMA compatible, CE compliant

Oven Configurations

Parameter	TC-2400	TC-3000	TC-3600	TC-4800	TC-6600
Number of heating zones	6	6	6	10	10
Heating length	2,400 mm (94.5 in.)	3,000 mm (118.0 in.)	3,600 mm (141.7 in.)	4,800 mm (189.0 in.)	6,600 mm (259.8 in.)
Overall length	3,600 mm (141.7 in.)	4,190 mm (165.0 in.)	4,740 mm (186.8 in.)	5,790 mm (228.0 in.)	7,850 mm (309.1 in.)
Overall width	1,640 mm (64.6 in.)	1,640 mm (64.6 in.)	1,640 mm (64.6 in.)	1,640 mm (64.6 in.)	1,650 mm (65.0 in.)
Height excluding monitor and light beacon	1,850 mm (72.8 in.)	1,850 mm (72.8 in.)	1,850 mm (72.8 in.)	1,850 mm (72.8 in.)	1,850 mm (72.8 in.)
Weight (without crate)	1,200 kg (2,640 lbs)	1,500 kg (3,300 lbs)	1,800 kg (3,960 lbs)	2,000 kg (4,400 lbs)	2,600 kg (5,720 lbs)
Voltage	400 VAC, 3-phase, 5-wire	400 VAC, 3-phase, 5-wire	400 VAC, 3-phase, 5-wire	400 VAC, 3-phase, 5-wire	400 VAC, 3-phase, 5-wire
Power input	33 kW	39 kW	45 kW	57 kW	75 kW
Exhaust requirements ⁽³⁾	600 m ³ /hr (353 CFM)	650 m ³ /hr (383 CFM)	700 m ³ /hr (412 CFM)	750 m ³ /hr (441 CFM)	800 m ³ /hr (471 CFM)

(1) Contact factory for widths up to 480 mm (18.9 in.)

(2) Contact factory for speeds of 80-480 mm/min. (3.2-18.9 in./min.), or 300-1800 mm/min. (11.8-70.9 in./min.)

(3) Customer-supplied exhaust requirements @ 40 mm (1.6 in.) water column, T= 90 °C

For more information, visit our website to locate the regional office near you, or contact us at:
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