

# 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:	250 °C
Process profile repeatability:	±5 °C
Heat-up time:	30 minutes (includes stabilization)

## Conveyor

Board width <sup>(1)</sup> :	50-457 mm (2-18 in.)
Board clearance (above and under):	100 mm (3.9 in.)
Standard speed <sup>(2)</sup> :	165-825 mm/min. (6.5-32.5 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	3,200 mm (126.0 in.)	3,800 mm (149.6 in.)	4,400 mm (173.2 in.)	5,600 mm (220.5 in.)	7,400 mm (291.4 in.)
Overall width	1,250 mm (49.2 in.)	1,250 mm (49.2 in.)	1,250 mm (49.2 in.)	1,250 mm (49.2 in.)	1,250 mm (49.2 in.)
Height excluding monitor and light beacon	1,380 mm (54.3 in.)	1,380 mm (54.3 in.)	1,380 mm (54.3 in.)	1,380 mm (54.3 in.)	1,380 mm (54.3 in.)
Weight (without crate)	1,000 kg (2,205 lbs)	1,200 kg (2,646 lbs)	1,400 kg (3,086 lbs)	1,800 kg (3,968 lbs)	2,500 kg (5,512 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	32 kW	38 kW	44 kW	56 kW	74 kW
Exhaust requirements <sup>(3)</sup>	700 m <sup>3</sup> /hr (412 CFM)	750 m <sup>3</sup> /hr (441 CFM)	800 m <sup>3</sup> /hr (442 CFM)	1000 m <sup>3</sup> /hr (589 CFM)	1200 m <sup>3</sup> /hr (706 CFM)

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

(2) Contact factory for speeds of 80-400 mm/min. (3.2-15.7 in./min.), or 300-1500 mm/min. (11.8-59.1 in./min.)

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

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

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