



ELECTRIC CONSTANT TEMPERATURE DRYING OVEN

Electric Constant Temperature Drying Oven — ToronFT™ ECT

ToronFT™ ECT Electric Constant Temperature Drying Oven) is a precision thermal testing instrument designed for uniform, stable, and repeatable heat application across a wide range of materials. Built on a robust three-phase electrical system and featuring an intuitive control interface, this oven delivers consistent performance for material characterization and quality control workflows. Its compact footprint and caster-mounted base make it easy to position within any laboratory environment.

The ToronFT™ ECT electric constant temperature drying oven is engineered to observe and measure changes in physical properties — including yellowing resistance, shrinkage, elongation, and residual rate — before and after controlled heat exposure, making it a versatile tool for aging studies and thermal analysis.

APPLICATIONS

Electric Constant Temperature Drying Oven — ToronFT™ ECT Applications

The ToronFT™ ECT constant temperature drying oven is suited for laboratories and quality-assurance environments working with:

- Leather, plastics, and rubber: assessment of thermal aging, deformation, and degradation
- Textile and fabric testing: shrinkage, elongation, and post-heat structural analysis
- Academic and industrial research: material aging characterization across polymers and composites
- Environmental and product compliance testing: pre-shipment and incoming-material verification
- Pharmaceutical and chemical laboratories: drying, conditioning, and stability studies



Standards

The ToronFT™ ECT electric constant temperature drying oven is designed to support compliance with the following international standards:

- ISO 188: Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests
- ISO 176: Plastics — Determination of loss of plasticizers — Activated carbon method
- IEC 61010-1: Safety requirements for electrical equipment for measurement, control, and laboratory use
- ASTM E145: Standard specification for gravity-convection and forced-ventilation ovens

FEATURES

Electric Constant Temperature Drying Oven — ToronFT™ ECT Key Features

- Three-phase five-wire power supply (AC 380V / 50Hz) for stable, high-capacity heating performance
- Total rated power of 6 kW, delivering efficient and rapid ramp-up to target temperatures
- Spacious test chamber: 550 mm (L) × 450 mm (W) × 550 mm (D) — accommodating a variety of specimen sizes
- Compact overall footprint: approximately 950 mm (L) × 810 mm (W) × 1440 mm (H), including caster height
- Caster-mounted base for easy laboratory repositioning
- Uniform temperature distribution prevents localized overheating of specimens
- Intuitive control panel for straightforward temperature and time programming
- Lightweight construction with a clean, professional appearance suitable for shared laboratory spaces

THEORY & METHOD

Theory and Method

The ToronFT™ ECT uses resistance heating elements in combination with a convection airflow system to achieve and maintain a uniform temperature distribution throughout the test chamber. A precision thermostat continuously monitors internal temperature and automatically adjusts power delivery to eliminate hot spots and maintain the set-point within tight tolerances.

After specimens are loaded and the oven is set to the target temperature and hold time, the instrument documents any physical or mechanical changes — such as color change, surface cracking, or dimensional deviation — that develop during exposure. This thermal stress methodology directly simulates accelerated aging conditions, allowing laboratories to forecast long-term material behavior from relatively short test durations.

TECHNICAL SPECIFICATIONS

Electric Constant Temperature Drying Oven — ToronFT™ ECT Technical Specifications

Parameter	Specification
Model	ToronFT™ ECT
Voltage	AC 380V / 50Hz, Three-phase five-wire
Total Power	6 kW
Chamber Dimensions (L×W×D)	550 mm × 450 mm × 550 mm
Overall Dimensions (L×W×H)	~950 mm × 810 mm × 1440 mm (incl. casters)



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