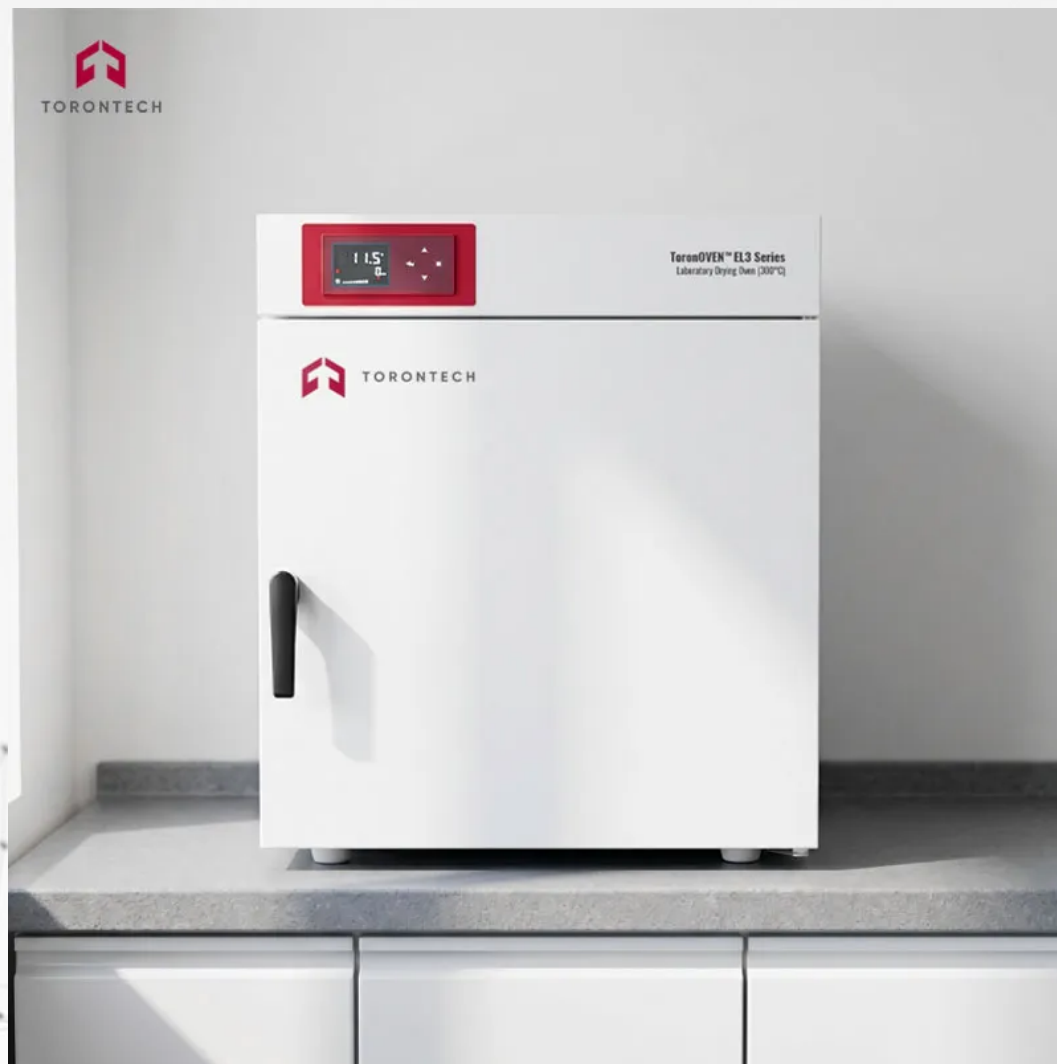




ECONOMICAL LABORATORY DRYING OVEN (300°C)

Economical Laboratory Drying Oven (300°C) - ToronOVEN™ EL3

ToronOVEN™ EL3 (300°C) is a high-temperature forced-air blast drying oven built for laboratory and light industrial applications that demand reliable performance at elevated temperatures. With a maximum operating temperature of 300°C and five capacity options spanning 64 L to 452 L, the ToronOVEN™ EL3 delivers consistent, uniform heating for a broad range of demanding drying, heat-treatment, and sterilization tasks.

The ToronOVEN™ EL3 (300°C) drying oven is engineered to deliver dependable, high-temperature thermal processing for laboratories, research institutions, and light production facilities where standard 200°C ovens are insufficient. Powered by the PMMA I control system with an LCD readout, it provides straightforward temperature regulation, countdown timing, and over-temperature alarm protection — all the essential controls for routine high-temperature workflows without unnecessary complexity.

The mirror-finish stainless steel inner chamber with freely adjustable shelving handles a wide variety of sample sizes and load arrangements, while the cold-rolled steel exterior features an electrostatic powder-coat finish for long-term durability. A high-integrity door seal with a rotating two-stage locking structure minimizes heat loss and maintains chamber stability throughout each cycle. Preheating chamber design conditions incoming air before it enters the workspace, and the power-supply recovery function automatically reinstates the last active setpoint after any unexpected power interruption. Whether used as a bench-top blast drying oven or a large-capacity floor unit, the ToronOVEN™ EL3 (300°C) is the reliable foundation for any high-temperature drying or heat-treatment operation.

APPLICATIONS

Economical Laboratory Drying Oven (300°C) - ToronOVEN™ EL3 Applications

The ToronOVEN™ EL3 (300°C) blast drying oven is suited to a wide range of elevated-temperature thermal processing needs, including:

- High-temperature sample drying
- Dry heat sterilization of glassware & lab ware
- Annealing & stress relief of metals
- Curing of high-temp coatings & resins
- Ashing & loss-on-ignition preparation
- Ceramic & composite pre-sintering
- Accelerated aging & stability testing
- Electronics component baking & outgassing
- Pharmaceutical & medical device processing
- Quality control & incoming material inspection

ToronOVEN™ EL3 Series
Laboratory Drying Oven (300°C)



TORONTECH

FEATURES

Economical Laboratory Drying Oven (300°C) - ToronOVEN™ EL3 Key Features



- Cold-rolled steel exterior with electrostatic powder-coat finish for long-term corrosion resistance; mirror-finish stainless steel inner chamber with freely adjustable shelving to accommodate diverse sample sizes and load configurations up to 300°C

- PMMA I control system with LCD readout provides clear, at-a-glance visibility of operating parameters, paired with intuitive controls for temperature setpoint, countdown timer, and over-temperature alarm threshold
- Preheating chamber design conditions incoming air before it enters the main workspace, improving temperature uniformity across the chamber and reducing thermal recovery time after door openings or sample loading
- Power-supply recovery function automatically reinstates the last active temperature setpoint after an unexpected power interruption, protecting long-duration unattended drying and heat-treatment processes from disruption
- Heavy-duty door with rotating two-stage locking structure, reinforced seal strip, and ergonomic handle maintains a consistent, high-integrity seal throughout each cycle — essential for stable temperature performance at 300°C

THEORY & METHOD

Theory and Method

The ToronOVEN™ EL3 (300°C) operates on the principle of forced-air convection. An electrically powered heating element raises the internal chamber temperature, while a continuously running fan circulates heated air throughout the working space. This blast drying approach eliminates thermal stratification, delivering far more uniform and faster heat transfer than passive gravity-convection drying ovens — a critical advantage when processing heat-sensitive samples or materials that require tight temperature control at elevated setpoints.

A precision resistance temperature detector (RTD) sensor continuously monitors the chamber temperature and feeds live data to the PMMA I microprocessor controller. The controller modulates heater output to maintain the user-defined setpoint within a fluctuation of $\pm 1^{\circ}\text{C}$ at 150°C. An independent over-temperature alarm circuit provides a hardware-level safety layer: should the chamber temperature exceed the configured safety limit, the system triggers an alert to protect both samples and equipment from thermal damage.

The preheating chamber design conditions incoming air before it reaches the main workspace, improving temperature uniformity across the chamber cross-section and shortening thermal stabilization time after loading. The power-supply recovery function automatically restores the last active setpoint after an unexpected power outage, making the

ToronOVEN™ EL3 (300°C) well suited to unattended, long-duration processes where interruptions cannot be tolerated.

TECHNICAL SPECIFICATIONS

Economical Laboratory Drying Oven (300°C) - ToronOVEN™ EL3 Technical Specifications

Parameter	ToronOVEN™ EL364	ToronOVEN™ EL3129	ToronOVEN™ EL3210	ToronOVEN™ EL3280	ToronOVEN™ EL3452
Volume (L)	64	129	210	280	452
Temperature Range (°C)	RT+5 ~ 300	RT+5 ~ 300	RT+5 ~ 300	RT+5 ~ 300	RT+5 ~ 300
Temp. Resolution (°C)	0.1				
Temp. Fluctuation at 150°C (°C)	±1				
Temp. Uniformity at 150°C (%)	±2.5				
Heating Rate to 150°C (°C/min)	>5				
Rated Power (W)	1,550	2,150	2,750	2,750	3,500
Voltage (V, Hz)	220 ±10%, 50 ±2% (110V is also available)				
Timer Range (min or h)	0 - 9,999				
Interior Dimensions W×D×H (mm)	410×350×450	570×400×570	630×530×630	720×530×745	600×580×1,300
Exterior Dimensions W×D×H (mm)	555×566×722	715×616×842	775×746×902	865×746×1,017	774×845×1,704
Shelves — Standard / Max (pcs)	2 / 5	2 / 7	3 / 8	3 / 10	4 / 18

Parameter	ToronOVEN™ EL364	ToronOVEN™ EL3129	ToronOVEN™ EL3210	ToronOVEN™ EL3280	ToronOVEN™ EL3452
Max Load per Shelf (kg)	15				
Net Weight (kg)	42	57	77	97	145
Gross Weight (kg)	60	75	96	118	174
Package Size (mm)	675×726×872	835×776×992	895×906×1,052	985×906×1,167	894×1,005×1,854

RT = ambient room temperature. Temperature fluctuation and uniformity measured at 150°C. All dimensions in millimeters (mm). Specifications subject to change without notice.



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