



HEATING INCUBATOR

Heating Incubator Solutions for the Modern Lab

Precision laboratory incubators engineered for thermal stability, reproducibility, and the demanding requirements of life science, pharmaceutical, and microbiological research.

What Is a Laboratory Incubator?

A laboratory incubator is a controlled-environment instrument that maintains precise temperature and where required, humidity and CO₂ concentration to support biological, chemical, and microbiological processes. Whether culturing mammalian cells at 37 °C, running enzymatic biochemical assays, incubating agar plates as a mould incubator, or conditioning pharmaceutical samples, the right laboratory incubator eliminates environmental variability as a source of experimental error.

ToronCubator™ laboratory incubators span seven distinct series, each optimised for a specific set of thermal and atmospheric requirements. All models are manufactured to ISO 9001:2015 quality standards and carry CE and IEC 61010-1 safety certification providing a consistent quality baseline across the entire range of incubators.

- **Water-Jacket Thermal Stability** The ToronCubator™ WJ-P series surrounds its working chamber with a water-filled thermal buffer on both lateral walls and the base. With a higher thermal mass than air, this jacket absorbs door-opening disturbances and ambient fluctuations achieving a temperature fluctuation of just ± 0.2 °C at 60 °C. It is the preferred laboratory incubator design for long-duration cell culture and biological assays where temperature spikes could affect sample viability.
- **CO₂ Cell Culture Incubators** The ToronCubator™ CC and ToronCubator™ CI series deliver simultaneous precision control of temperature, CO₂ concentration (0-20%, $\pm 0.1\%$), and relative humidity (>90% RH) the three environmental parameters critical for sustained mammalian cell viability. NDIR dual-wavelength CO₂ sensing eliminates sensor drift over a five-year service life, while dry heat or moist heat sterilization cycles maintain a contamination-free internal environment between culture runs.
- **Electric Heating Incubators** The ToronCubator™ EH-E, ToronCubator™ EH-P, ToronCubator™ FC-X, and ToronCubator™ EH-N series cover forced-air and natural convection electric heating across temperature ranges extending from RT+5

°C to 100 °C. As dependable biochemical incubators and general-purpose laboratory incubators, these models serve enzymatic assays, microbiology culture, pharmaceutical QC, and food safety testing with programmable multi-segment profiles and 6-stage fan speed regulation available across the range.

- **Natural Convection Still-Air Incubators** The ToronCubator™ EH-N series removes the fan entirely, operating on gravity-driven convection to maintain a still-air chamber environment. This makes it the technically correct mould incubator and agar plate incubator choice protocols where forced airflow would accelerate surface evaporation, disturb colony development, or introduce edge-drying effects that complicate result interpretation.
- **Precision Microbiological Incubators** The ToronCubator™ MB-S series targets microbiological QC laboratories, pharmaceutical testing environments, and food safety facilities that require the tightest thermal performance in the electric heating lineup (± 0.2 °C at 37 °C), clean laboratory construction with a 5 cm aluminum foil insulation layer, and 10-year internal data storage with multi-level password management supporting 21 CFR Part 11 compliance readiness across regulated environments.

Where ToronCubator™ Incubators Are Used

Every incubator in the ToronCubator™ range is designed with specific laboratory workflows in mind. Whether you need a biochemical incubator for enzyme kinetics or a mould incubator for fungal cultivation, there is a model matched to your protocol.

- **Cell & Tissue Culture:** stable 37 °C incubation for mammalian cell lines, primary cultures, stem cell research, and IVF with CO₂ and humidity control for sustained viability across extended culture periods.
- **Microbiology:** bacterial and yeast culture incubation at physiological or elevated temperatures. These laboratory incubators support reproducible growth kinetics for clinical and research-grade microbiological workflows.
- **Biochemical Assays:** as a precise biochemical incubator, the ToronCubator™ range supports enzymatic reactions, hybridization assays, protein folding studies, and temperature-sensitive protocols requiring sustained, stable heating throughout the incubation period.
- **Mould & Fungal Cultivation:** the still-air ToronCubator™ EH-N and fan-equipped ToronCubator™ MB-S serve as a mould incubator platform for mycology research, antimicrobial testing, and fungal identification programs where controlled thermal incubation and clean construction minimize cross-contamination risk.

- Pharmaceutical Research & QC: dissolution test pre-warming, stability studies, sterility testing, and GMP-adjacent cell-based assay platforms with audit-ready data export and multi-level access control.
- Food Science & Safety: fermentation studies, microbiological shelf-life testing, pathogen detection cultures, and pasteurization simulation at stable, reproducible incubation temperatures.
- Clinical & Diagnostic Labs: specimen warming, reagent pre-conditioning, diagnostic culture plate incubation, and clinical sample preparation at controlled temperatures for diagnostic and point-of-care workflows.
- Academic & Teaching Labs: general-purpose laboratory incubators for undergraduate coursework, multi-user shared facilities, and routine science programs requiring dependable, easy-to-operate heating incubation.

Compare All Heating Incubator Models

All ToronCubator™ laboratory incubators in a single view compare volumes, temperature ranges, heating methods, and key differentiating features to identify the right incubator for your application.

ToronCubator™ FC-X Series

Model	Series	Volumes	Temp. Range	Heating Method	Temp. Fluctuation	Key Differentiator	Best For
ToronCubator™ WJ-P Series	Water-Jacket	46 – 247 L	RT+2 to 65 °C	Tri-directional water-jacket (sides + base)	±0.2 °C @ 60 °C	Highest thermal inertia in the range; LCD control; power recovery	Long-duration cell culture, biological assays, specimen hatching
ToronCubator™ CC Series	CO ₂ / Humidity	55 – 260 L	RT+3 to 60 °C	Direct heat air-jacket (6-sided)	≤0.05 °C	7-inch touch screen; 3-level access; 150 °C dry heat sterilization; NDIR CO ₂ sensing	Mammalian cell culture, IVF, biomedical research, pharmaceutical biologics
ToronCubator™ CI Series	CO ₂ / Intelligent	100 – 260 L	RT+5 to 55 °C	Direct hot gas jacket (3-zone, 6 heating units)	±0.3 °C	BRIGHT I system; 500,000-record data log; Boxun IoT; 90 °C moist heat sterilization; USB non-modifiable export	GLP/GMP regulated labs, pharmaceutical biologics, clinical IVF

Model	Series	Volumes	Temp. Range	Heating Method	Temp. Fluctuation	Key Differentiator	Best For
ToronCubator™ EH-E Series	Forced Air	40 – 234 L	RT+5 to 65 °C	Forced-air electric heating	±0.5 °C @ 37 °C	Nano-magnetic door seal; LED display; PMMA I control; observation window; power recovery	Routine microbiology, biochemical assays, clinical sample prep, educational labs
ToronCubator™ EH-P Series	Programmable	40 – 1001 L	RT+5 to 85 °C	Forced-air electric heating	±0.5 °C @ 37 °C	10-segment / 100-cycle profiles; 6-stage fan; LCD; 0-9999 min/h timer; widest volume range	Programmable assays, material testing, pharmaceutical QC, high-volume industrial labs
ToronCubator™ FC-X Series	Performance	64 – 452 L	RT+5 to 100 °C	Forced-air with preheating chamber	±0.3 °C @ 37 °C	BRIGHT I; preheating chamber; dual over-temp alarm; RS-485; countdown reservation	Biochemical incubator workflows, pharmaceutical QC, food science, clinical labs
ToronCubator™ EH-N Series	Natural Conv.	70 – 300 L	RT+5 to 100 °C	Gravity / natural convection (fan-free)	±0.5 °C @ 37 °C	Fan-free still-air chamber; BRIGHT I; preheating design; dual over-temp alarm; RS-485	Agar plates, mould incubator protocols, open culture vessels, histology
ToronCubator™ MB-S Series	Precision Micro	65 – 530 L	RT+5 to 100 °C	Forced-air with preheating + 5 cm Al foil insulation	±0.2 °C @ 37 °C	BRIGHT II; 5-inch touchscreen; >10-year internal data storage; 10 exhaust settings; 21 CFR Part 11 readiness	Microbiological QC, pharmaceutical microbiology, food safety, regulated biochemical incubator use

Why Choose ToronCubator™ for Your Incubator?

From a benchtop mould incubator to a high-capacity intelligent CO₂ laboratory incubator, every instrument in the lineup is built around the same core commitments.

- 1. Thermal Precision Across the Entire Range: whether the application demands the ±0.2 °C fluctuation of the WJ-P water-jacket incubator and the ToronCubator™ MB-S microbiological incubator, or the ±0.05 °C performance of the CC CO₂ laboratory incubator, every ToronCubator™ model is engineered with thermal stability as its primary design objective not an afterthought.

- Purpose-Built for Every Protocol Type: general-purpose electric heating incubators, dedicated biochemical incubator models, still-air mould incubator configurations, and full CO₂ cell culture laboratory incubators each reflect distinct engineering choices not rebadged variants of the same platform. The result is a laboratory incubator that fits the protocol rather than asking the protocol to accommodate the equipment.
- Intelligent Control Systems: BRIGHT I and BRIGHT II intelligent controllers automatically compensate operating parameters in response to real-time ambient conditions maintaining set-point accuracy across seasonal temperature shifts and HVAC cycling without manual recalibration. This adaptive capability is particularly valuable in laboratory incubators running long-duration, unattended protocols.
- Audit-Ready Data Management: from the basic power recovery of the EH-E series to the 500,000-record non-modifiable USB export of the CI intelligent CO₂ incubator and the 10-year internal storage of the MB-S microbiological laboratory incubator, data integrity is built into every tier of the lineup supporting GLP, GMP, and 21 CFR Part 11 compliance readiness.
- Contamination-Conscious Construction: mirror-finished stainless steel interiors, dead-angle-free molded chambers with no exposed fasteners, HEPA filtration, dry heat and moist heat sterilization cycles, and antibacterial exterior coatings are found across the laboratory incubator range reducing contamination risk as a structural feature of the incubators rather than an optional accessory.
- International Safety & Quality Standards: every ToronCubator™ laboratory incubator is manufactured under ISO 9001:2015 quality management and carries IEC 61010-1 electrical safety certification, CE marking, RoHS compliance, and reference compliance with UL 61010-1 providing a certified quality baseline that supports procurement in regulated laboratory and clinical environments globally.
- Scalable Volume Range: with chamber volumes spanning from 40 L compact benchtop incubators to 1001 L industrial-scale floor-standing units, ToronCubator™ laboratory incubators scale with laboratory throughput without requiring a change of platform. A single product family covers research, QC, and high-volume production workflows across all incubator categories.
- Power Recovery & Long-Duration Run Protection: all ToronCubator™ incubators include power recovery functionality that retains programmed set-points, segment profiles, and run-state data following any power interruption. For long-duration cell culture, microbiological incubation, and multi-phase biochemical incubator protocols, this safeguard eliminates the need to restart cycles after power events.

Contact our team to discuss your incubation requirements application, volume, temperature range, and regulatory context and we will recommend the ToronCubator™ model matched to your workflow.



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