



PROGRAMMABLE MOULD INCUBATOR

Programmable Mould Incubator - ToronCubator™ MP

The ToronCubator™ MP is a programmable mould incubator engineered for laboratory environments that require precise, multi-phase temperature control across extended incubation cycles. Available in five chamber volumes from 100 L to 800 L, this laboratory incubator combines a PMMA II operating system, 30-segment/99-cycle programmability, centrifugal fan circulation, and UV lighting — delivering the thermal precision and operational flexibility that research-grade mould incubation demands. For B2B labs seeking a dependable, access-controlled biochemical incubator with full programmable profile capability, the ToronCubator™ MP is a purpose-built solution.

The ToronCubator™ MP is a full-featured programmable laboratory incubator designed for mould cultivation, fungal research, and biochemical incubation workflows that require complex thermal profiles and long unattended run times. The series spans five chamber sizes — 100 L, 150 L, 250 L, 400 L, and 800 L — giving procurement teams a scalable selection that covers benchtop-adjacent research setups through high-capacity institutional laboratory applications.

The outer housing is manufactured from cold-rolled steel with a static spray-plastic surface, and the interior working chamber uses mirror-finished stainless steel for corrosion resistance and ease of cleaning. Shelving positions are optionally adjustable to accommodate different sample heights, with each shelf rated at 15 kg. The inner observation glass door sits behind the main outer door, allowing researchers to inspect samples and read instrument labels without opening the chamber and disrupting the internal environment.

Dual 30 mm test ports — one on each side of the chamber — provide pass-through access for external probes, data cables, or tubing without compromising chamber integrity. An integrated 220V power socket allows peripheral instruments to be powered directly inside the working space. A mechanical door lock secures the chamber between access events, and a screen lock timer combined with a password-protected screen saver prevents unauthorized or accidental parameter changes during active incubation runs — a practical safeguard in shared laboratory incubator environments.

The PMMA II operating system governs all thermal control functions, with an over-temperature alarm and built-in self-diagnosis capability that flag out-of-range conditions before sample integrity is compromised. Power recovery functionality retains all programmed data and active run-state settings following any electrical interruption, protecting long-cycle mould

incubation and biochemical protocols from data loss.

APPLICATIONS

Programmable Mould Incubator – ToronCubator™ MP Applications

The ToronCubator™ MP is suited to a wide range of B2B laboratory and research applications. Its programmable multi-segment design, UV lighting, and 4–70 °C operating range make it adaptable for both mould-specific and general biochemical incubation workflows.

- Mould & Fungal Research: controlled propagation of mould cultures, fungal growth kinetics, and spore viability studies using programmable thermal profiles and integrated UV sterilization.
- Biochemical Research: multi-phase enzyme assays, metabolic studies, and temperature-gradient protocols requiring programmable segment control over extended run times.
- Microbiology: microbial culture incubation under stable, controlled temperatures with unattended operation enabled by reservation and timer scheduling.
- Pharmaceutical QC: stability screening of biological compounds and moisture-sensitive formulations requiring reproducible, precisely timed thermal cycling.
- Food Science & Safety: spoilage microbiology, mould contamination testing, and shelf-life evaluation under programmable incubation conditions that replicate storage environments.
- Agricultural Science: seed germination trials, plant pathogen incubation, and soil microbiology research across extended, unattended incubation periods.



FEATURES

Programmable Mould Incubator - ToronCubator™ MP Key Features

- Cold-rolled steel housing with static spray-plastic finish; mirror stainless steel interior chamber with optionally adjustable shelving
- PMMA II operating system with over-temperature alarm and built-in self-diagnosis function for continuous process monitoring
- Color LCD backlight display for real-time readout of temperature, elapsed time, and active program status
- Screen lock timer and password-protected screen saver to prevent unintended parameter changes in shared laboratory environments
- Programmable multi-segment design supporting up to 30 segments and 99 repeatable cycles for complex thermal profile incubation protocols
- Centrifugal fan with 6-stage speed regulation for uniform, stable air circulation throughout the working chamber
- Inner observation glass door for non-intrusive sample monitoring without opening the main chamber door
- Dual side-mounted test ports, 30 mm internal diameter, for probe, cable, or tubing pass-through access on both sides of the chamber
- Reservation function (0–9999 min) and timer function (0–9999 min/h) for flexible delayed-start and timed-run scheduling
- Mechanical door lock for physical chamber security between access events
- Built-in 220V power socket for convenient in-chamber connectivity to peripheral instruments
- UV lighting in working chamber for sterilization between runs; fluorescent lamp for active sample illumination during incubation
- Imported low-noise compressor unit with consistent, stable thermal performance across the full operating duty cycle
- Power recovery function retains all programmed data and run-state settings after any power interruption or system halt



THEORY & METHOD

Theory and Method

PMMA II Microprocessor Control

The ToronCubator™ MP operates on a PMMA II control platform that continuously monitors the internal temperature sensor and adjusts heating and cooling output to maintain the programmed set-point. Temperature resolution is 0.1 °C, with fluctuation held to ± 0.5 °C during heating and ± 0.7 °C during active cooling. An over-temperature alarm activates when the internal temperature exceeds the defined threshold, and a built-in self-diagnosis function identifies system faults before they affect the incubation run. The color LCD backlight display provides a real-time readout of temperature, run time, and program status.

Multi-Segment Programmable Profiles

The ToronCubator™ MP Series supports up to 30 programmable segments arranged across 99 repeatable cycles, enabling researchers to define complex thermal profiles — including ramp-and-soak sequences, step gradients, and multi-phase mould incubation protocols — without operator intervention between steps. A reservation function (0–9999 min) supports

delayed-start scheduling, and a timer function (0–9999 min/h) governs total run duration. This level of programmability is particularly relevant for mould propagation studies and biochemical assays where the temperature history of a sample is as important as the steady-state set-point.

Centrifugal Fan Air Circulation

A centrifugal fan with 6-stage speed regulation distributes conditioned air uniformly throughout the working chamber, achieving temperature uniformity of $\pm 1.0\text{ }^{\circ}\text{C}$ at $37\text{ }^{\circ}\text{C}$ for models up to 400 L, and $\pm 1.5\text{ }^{\circ}\text{C}$ for the 800 L model. Users can select fan speed to match the airflow sensitivity of the sample type — lower speeds for fragile or open-vessel cultures, higher speeds for faster equilibration after door access. The imported low-noise compressor unit provides the refrigeration capacity for temperatures as low as $4\text{ }^{\circ}\text{C}$ with consistent, stable output throughout continuous duty cycles.

UV Sterilization & Access Control

The working chamber is fitted with UV lighting — standard equipment on this mould incubator series — supporting sterile environment preparation between incubation runs. A fluorescent lamp provides illumination for sample observation. Operationally, a screen lock timer and password-protected screen saver prevent unauthorized parameter changes in multi-user laboratory incubator settings. Combined with the mechanical door lock, these access controls help maintain the integrity of long-duration or unattended incubation programs without requiring dedicated supervision.

TECHNICAL SPECIFICATIONS

Programmable Mould Incubator - ToronCubator™ MP Technical Specifications

Parameter	ToronCubator™ MP-100	ToronCubator™ MP-160	ToronCubator™ MP-250	ToronCubator™ MP-400	ToronCubator™ MP-800
Chamber Volume	100 L	150 L	250 L	400 L	800 L

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Type	Biochemical Incubator				
Temperature Range	4-70 °C				
Temperature Resolution	0.1 °C				
Temp. Fluctuation (Heating)	±0.5 °C				
Temp. Fluctuation (Cooling)	±0.7 °C				
Temp. Uniformity at 37 °C	±1.0 °C				±1.5 °C
Rated Power	1000 W	1000 W	1100 W	1350 W	2000 W
Timer Range	0-9999 min/h				
Reservation Range	0-9999 min				
Internal Dimensions W×D×H	490×390×610 mm	510×390×760 mm	510×450×1090 mm	600×640×1050 mm	1220×585×1123 mm
Housing Dimensions W×D×H	630×680×1250 mm	650×680×1400 mm	650×740×1726 mm	745×930×1695 mm	1503×910×1820 mm
Shelves (Standard / Max.)	2 / 4	3 / 5	4 / 7	4 / 7	6 / 12
Load per Shelf	15 kg				
Net Weight / Gross Weight	91 / 109 kg	103 / 119 kg	120 / 150 kg	150 / 182 kg	286 / 342 kg
Package Size W×D×H	730×820×1440 mm	750×820×1590 mm	750×880×1910 mm	890×1120×1880 mm	1640×1090×2040 mm
Chamber Lighting	Fluorescent lamp + UV light				

Parameter	ToronCubator™ MP-100	ToronCubator™ MP-160	ToronCubator™ MP-250	ToronCubator™ MP-400	ToronCubator™ MP-800
Voltage	220V / 50Hz (110V is also available)				



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