TORONTECH

SLOW FREEZE-THAW TEST CHAMBER FOR CONCRETE DURABILITY TESTING

ToronSFTC™ Slow Freeze-Thaw Test Chamber is a high-performance solution designed to evaluate the long-term durability and freeze-thaw resistance of concrete and masonry materials. Ideal for research institutions, quality control laboratories, and construction material testing centers, the ToronSFTC™ allows for slow-cycle freeze-thaw testing under controlled environmental conditions.

This next-generation system combines robust stainless steel construction with precise temperature control and an intuitive PLC-based interface, providing a reliable and user-friendly experience for extended cyclic testing applications.

APPLICATIONS

Designed for Durability and Ease of Use

The ToronSFTC™ Slow Freeze-Thaw Test Chamber is equipped with a stainless steel inner tank and a movable external water reservoir for drying and freeze-thaw testing. Its advanced filtration system ensures clean operation, while the large touchscreen interface offers one-touch control for commonly used test protocols, including freeze-thaw cycles for concrete, red bricks, and ceramics.

The system comes pre-loaded with multiple standard temperature curves and allows for custom test programming, giving you full flexibility for long-term material performance evaluation.

Applications

1. Long-term freeze-thaw durability testing of concrete
2. Performance evaluation of red bricks and ceramics

3. Quality assurance for building and masonry materials
4. Research and development in construction material resilience
5. Laboratory testing for infrastructure subjected to cold climate conditions

ToronSFTC™ Slow Freeze-Thaw Test Chamber delivers precision, durability, and ease of use for laboratories performing slow freeze-thaw testing. With its large capacity, user-friendly controls, and intelligent temperature management, it’s the ideal tool for studying material behavior under prolonged freeze-thaw exposure.

FEATURES

Key Features

1. Optimized for slow-cycle freeze-thaw testing of concrete, bricks, and building materials
2. Large-capacity stainless steel chamber with excellent corrosion resistance
3. High-efficiency polyurethane insulation for superior thermal retention
4. Microprocessor-controlled PLC system with large color touchscreen
5. Quiet, imported low-temperature compressor for stable and efficient operation
6. Built-in memory for automatic data recording and temperature curve tracking
7. Free PC software for remote monitoring, custom curve creation, and data management
8. Environmentally friendly water filtration and storage system with easy maintenance

TECHNICAL SPECIFICATIONS

Specification	Details

Internal Chamber Dimensions	1100 × 500 × 500 mm
Overall Equipment Dimensions	1800 × 850 × 1300 mm
Temperature Range	-35°C to +50°C
Temperature Uniformity	≤ ±1°C within the chamber
Cooling Rate	≤ 20°C per hour
Specimen Capacity	Up to 5 wall bricks (190 × 190 × 390 mm)
	Up to 54 concrete test cubes (100 × 100 × 100 mm)
	Up to 60 red bricks
Freezing Time Range	0–9999 hours (adjustable)
Thawing Time Range	0–9999 hours (adjustable)
Cycle Count Range	0–9999 cycles (adjustable)
Temperature Measurement Accuracy	±1°C
Control System	PLC + Touchscreen interface
Compressor	Low-temperature compressor with low noise
Voltage	220V (110V available upon request)
Weight	200 kg

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