

FIRE EXTINGUISHER AIR TIGHTNESS TEST CHAMBER



Fire Extinguisher Air Tightness Test Chamber — ToronFT™ FE-AT

ToronFT™ FE-AT Fire Extinguisher Air Tightness Test Chamber is a water immersion-based enclosure system designed for leakage and sealing integrity testing of cart-type fire extinguishers and portable fire extinguisher cylinders weighing up to 70 kg.

The chamber accommodates varying water temperature requirements through a precise temperature control system, enabling tests to be conducted at temperatures from ambient to 55°C. This apparatus provides a controlled, reliable environment for verifying that fire extinguisher assemblies are leak-free under pressurized conditions, essential for product quality assurance and certification.

APPLICATIONS

Fire Extinguisher Air Tightness Test Chamber — ToronFT™ FE-AT

Applications

The ToronFT™ FE-AT is used for:

- Air tightness and sealing integrity testing of cart-type (wheeled) fire extinguishers
- Leakage detection of portable fire extinguisher cylinders by water immersion method
- Testing cylinders and assemblies at controlled water temperatures
- Quality control inspection in fire extinguisher manufacturing
- Certification testing for compliance with international fire safety standards



FEATURES

Fire Extinguisher Air Tightness Test Chamber — ToronFT™ FE-AT Key Features

- Suitable for large-format fire extinguishers: accepts cart-type extinguishers and portable cylinders up to 70 kg
- Water immersion leak detection method for precise identification of sealing defects
- Test medium: tap water for practical and cost-effective operation
- Water temperature control range: ambient to 55°C
- Temperature control accuracy: $\pm(50-55)^{\circ}\text{C}$ (within the controlled range)
- Heating power: 9 kW electric element for rapid heat-up
- Voltage: AC 380V
- Compatible with diverse fire extinguisher types and cylinder configurations

THEORY & METHOD

Theory and Method

The water immersion method is used to detect leakage from pressurized fire extinguisher assemblies. The fire extinguisher is pressurized to the specified test pressure, then fully submerged in the temperature-controlled water bath of the test chamber. Any leakage manifests as a stream of bubbles from the defective area, allowing precise location identification.

The chamber's temperature control system maintains the water bath at selectable temperatures from ambient up to 55°C, with control accuracy of $\pm(50-55)^{\circ}\text{C}$, enabling both ambient and elevated-temperature sealing tests. The 9 kW electric heating element and AC380V power supply ensure rapid temperature ramp-up and stable maintenance throughout the test.

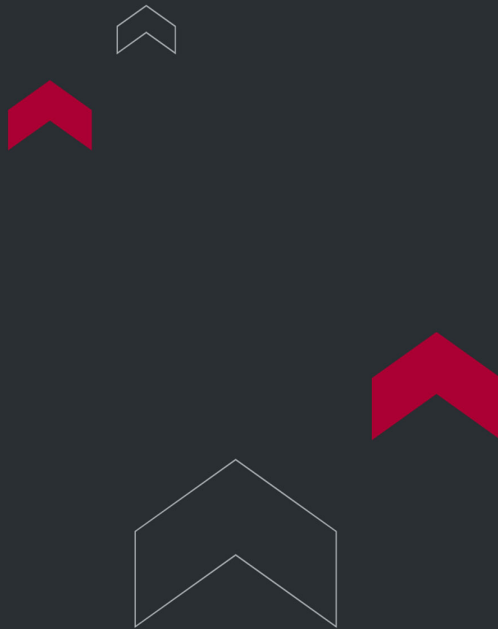
The test medium is tap water.

TECHNICAL SPECIFICATIONS

Fire Extinguisher Air Tightness Test Chamber — ToronFT™ FE-AT

Technical Specifications

Parameter	Specification
Test Medium	Tap water
Maximum Specimen Weight	70 kg
Temperature Control Range	Ambient – 55°C
Temperature Control Accuracy	±2°C within 50–55°C range
Heating Power	9 kW
Voltage	AC 380V
Test Method	Water immersion
Applicable Fire Extinguisher Types	Cart-type (wheeled) and portable



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