TORONTECH

WHEELED FIRE EXTINGUISHER STABILITY TESTER

Wheeled Fire Extinguisher Stability Tester — ToronFT™ FE-W

ToronFT™ FE-W is a purpose-built fire extinguisher driving performance tester designed to evaluate the self-reset stability of trolley-mounted fire extinguishers. Engineered to simulate real-world tipping and recovery scenarios, this system determines whether a trolley-type fire extinguisher reliably returns to its upright operational position after being deflected — a critical safety characteristic demanded by regulatory authorities internationally.

Compact yet versatile, the ToronFT™ FE-W integrates an angular measurement ruler, a precision push-pull force gauge, and height-measurement instrumentation into a single cohesive test platform. It is ideally suited for manufacturers, third-party testing laboratories, and compliance inspection bodies that routinely test portable and trolley-type fire extinguisher assemblies.

APPLICATIONS

Wheeled Fire Extinguisher Stability Tester — ToronFT™ FE-T Applications

- Driving and reset performance testing of trolley-type fire extinguishers in manufacturing quality-control environments
- Regulatory compliance testing for wheeled fire extinguisher assemblies at certified third-party laboratories
- Research and development validation of new trolley fire extinguisher designs
- Periodic performance audits of trolley-mounted fire extinguishers during product lifecycle verification
- Combined multi-function testing when integrated with the Fire Extinguisher Spray Laboratory system

FEATURES

Wheeled Fire Extinguisher Stability Tester — ToronFT™ FE-W Key Features

- 1× universal angle ruler with indication error not exceeding ±5°, enabling precise tilt measurement throughout the test
- Integrated push-pull force gauge with a measurement range ≥ 500 N and accuracy class 0.5 or better
- Height measurement capability spanning 0–1,000 mm with 1 mm graduation, accuracy class II or above
- Flat cement platform surface for consistent, repeatable test conditions matching real deployment scenarios
- 10° deflection protocol: extinguisher is tilted to precisely 10° off-vertical, then released to observe self-righting behavior
- Partial integration with spray laboratory for comprehensive trolley extinguisher performance evaluation
- Suitable for testing trolley-type fire extinguishers in their normal use position on a level surface
- Robust, industrial-grade construction designed for high-throughput testing laboratory environments

THEORY & METHOD

Theory and Method

The driving performance test for trolley fire extinguishers assesses whether the unit's center of gravity and wheel-axle geometry allow it to self-right after being tilted from vertical. During the test, the trolley-type fire extinguisher is placed on a flat cement surface in its normal operating orientation. A universal angle ruler precisely measures the tilt angle as the unit is manually deflected 10° from vertical using a calibrated push-pull force gauge. Upon release, the instrument automatically records whether the extinguisher resets to its upright position without external assistance.

Height measurements are recorded at multiple configurations to verify that the trolley assembly conforms to dimensional requirements. All force inputs and angular positions are logged against acceptance criteria, providing a clear pass/fail determination in accordance with the applicable standard. Part of the test scope — specifically sub-section e) of clause 7.5.4 — is performed in coordination with the Fire Extinguisher Spray Laboratory for integrated function testing.

TECHNICAL SPECIFICATIONS

Wheeled Fire Extinguisher Stability Tester — ToronFT™ FE-W Technical Specifications

Parameter	Specification
Angle Measurement Tool	1× Universal angle ruler
Angle Indication Error	Not exceeding ±5°
Force Gauge Measurement Range	Not less than 500 N
Force Gauge Accuracy Class	Class 0.5 or better
Height Measurement Range	0 – 1,000 mm
Height Graduation	1 mm
Height Accuracy Class	Class II or above
Test Platform Surface	Flat cement floor
Deflection Angle for Test	10° from vertical
Applicable Extinguisher Type	Trolley-type fire extinguisher
Integration Capability	Compatible with Fire Extinguisher Spray Laboratory (for section 7.5.4 e)

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