

FIRE EXTINGUISHER CYLINDER FLATTENING TESTER



Fire Extinguisher Cylinder Flattening Tester — ToronFT™ FE-FT

ToronFT™ FE-FT Fire Extinguisher Cylinder Flattening Tester is a specialized mechanical testing machine designed to evaluate the structural integrity and deformation characteristics of fire extinguisher cylinders through controlled compressive flattening.

The system accommodates fire extinguishers of various capacities, applying a perpendicular compressive force to the longitudinal axis of the cylinder using precision-dimensioned pressing blocks. With a maximum load capacity of 1,000 kg and programmable test speeds, this apparatus provides accurate, repeatable flattening test data essential for product certification and materials development.

APPLICATIONS

Fire Extinguisher Cylinder Flattening Tester — ToronFT™ FE-FT Applications

The ToronFT™ FE-FT flattening tester is used for:

- Structural deformation and collapse resistance testing of fire extinguisher cylinders
- Material ductility and weld integrity evaluation under compressive loads
- Compliance testing for fire extinguisher cylinder manufacturing standards
- Research and development of new cylinder materials and wall thickness parameters
- Quality control during production of portable fire extinguishers



Standards

The ToronFT™ FE-FT supports compliance with the following international standards:

- ISO 7165: Portable fire extinguishers — Performance and construction
- ISO 11601: Wheeled fire extinguishers — Performance and construction
- EN 3: Portable fire extinguishers
- NFPA 10: Standard for Portable Fire Extinguishers

FEATURES

Fire Extinguisher Cylinder Flattening Tester — ToronFT™ FE-FT Key Features

- Maximum compressive load capacity: 1,000 kg (approximately 9.81 kN)
- Pressing block set of three pieces with standardized geometry: 12.5 mm top radius, 25 mm thickness, 100–500 mm width range
- Continuously variable test speed: 0.5–200 mm/min with infinite speed regulation
- Maximum stroke (excluding clamp): 300 mm, accommodating various cylinder sizes
- Compatible with fire extinguisher cylinders of varying diameters and capacities
- Precision load and displacement measurement with digital data acquisition
- Robust frame construction for consistent, repeatable results

THEORY & METHOD

Theory and Method

The flattening test applies a controlled compressive load perpendicular to the longitudinal axis of the fire extinguisher cylinder. The cylinder's mid-section is placed between two precisely dimensioned pressing blocks, and a hydraulic actuator applies a continuously increasing or programmed compressive force.

The pressing block geometry — 12.5 mm top radius, 25 mm thickness, 100–500 mm adjustable width — ensures standardized contact conditions regardless of cylinder diameter. The system uses an infinite-speed-regulation drive allowing test speeds to be set anywhere in the range of 0.5–200 mm/min, enabling both quasi-static and accelerated test protocols. The maximum stroke of 300 mm (excluding clamp) accommodates extinguisher cylinders of various diameters. Load and displacement data are continuously recorded for analysis and reporting.

TECHNICAL SPECIFICATIONS

Fire Extinguisher Cylinder Flattening Tester — ToronFT™ FE-FT Technical Specifications

Parameter	Specification
Model	ToronFT™ FE-FT
Maximum Pressure (Load)	1,000 kg (~9.81 kN)
Pressing Block Top Radius	12.5 mm
Pressing Block Thickness	25 mm
Pressing Block Width	100–500 mm (3 pieces)
Test Speed Range	0.5–200 mm/min (continuously variable)

Parameter	Specification
Maximum Stroke (excl. clamp)	300 mm
Applicable Standards	ISO 7165, ISO 11601, EN 3, NFPA 10



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