

FIRE EXTINGUISHER CYLINDER HYDROSTATIC CYCLING TESTER



Fire Extinguisher Cylinder Hydrostatic Cycling Tester — ToronFT™ FE-CHS

ToronFT™ FE-CHS CFire Extinguisher Cylinder Hydrostatic Cycling Tester is a comprehensive multi-function testing system engineered for the complete mechanical evaluation of portable fire extinguisher cylinders.

The system performs hydraulic pressure testing, expansion rate measurement, burst testing, and pressure alternating (fatigue) testing in a single integrated platform. Designed for fire extinguishers with capacities from 1-12 kg and 2-9 L, this apparatus is an indispensable quality control and compliance verification tool for manufacturers and independent testing laboratories.

APPLICATIONS

Fire Extinguisher Cylinder Hydrostatic Cycling Tester — ToronFT™ FE-CHS Applications

The ToronFT™ FE-CHS is used for:

- Hydraulic pressure testing of portable water-based, dry powder, and clean agent fire extinguisher cylinders
- Cylinder expansion rate measurement and volumetric analysis
- Burst pressure testing to evaluate maximum failure threshold
- Pressure alternating (cyclic fatigue) testing for long-term durability evaluation
- Quality assurance testing in fire extinguisher manufacturing facilities
- Type approval and third-party certification testing



FEATURES

Key Features of Fire Extinguisher Cylinder Hydrostatic Cycling Tester

- Comprehensive multi-function capability: hydraulic pressure, expansion rate, burst, and pressure alternating tests in one system
- Compatible with portable fire extinguishers: 1-12 kg and 2-9 L capacity ranges
- Pressure control range: 0-25 MPa with high accuracy
- High-pressure pump capacity: 0-28 MPa maximum
- High-pressure water output: 16 L/min for efficient pressurization cycles
- Precision pressure sensing via current transmitter method: $\pm 0.25\%$ F.S. accuracy, 0.1 MPa resolution
- Integrated digital control and data acquisition system
- Suitable for water-based, dry powder, and clean agent fire extinguisher types

THEORY & METHOD

Theory and Method

The apparatus employs a high-pressure hydraulic system to pressurize fire extinguisher cylinders to specified test pressures. A precision pressure transducer using the current transmitter method monitors and records pressure throughout the test cycle. For hydraulic strength testing, cylinders are filled with water and pressurized to proof pressure while leakage and deformation are monitored. For pressure alternating tests, the system cycles pressure between a lower and upper limit at a controlled rate to simulate service fatigue loading. The high-pressure pump provides up to 28 MPa, and the system delivers 16 L/min of high-pressure water output for rapid pressurization. A digital display and control interface enables programmable test sequences, automated data logging, and real-time pressure monitoring.

TECHNICAL SPECIFICATIONS

Technical Specifications of Fire Extinguisher Cylinder Hydrostatic Cycling Tester

Parameter	Specification
Pressure Control Range	0-25 MPa
High-Pressure Pump Pressure	0-28 MPa
High-Pressure Water Output	16 L/min
Pressure Sensing Method	Current transmitter method
Pressure Sensing Accuracy	±0.25% F.S.
Pressure Resolution	0.1 MPa
Applicable Extinguisher Sizes	1-12 kg; 2-9 L
Test Functions	Hydraulic pressure, expansion rate, burst, pressure alternating
Applicable Extinguisher Types	Water-based, dry powder, clean agent



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

