

FIRE EXTINGUISHER PRESSURE ALTERNATING TESTER



Fire Extinguisher Pressure Alternating Tester — ToronFT™ FE-PA

ToronFT™ FE-PA Pressure Alternating tester is a multi-function hydraulic testing system engineered for fatigue and burst performance evaluation of portable fire extinguisher cylinders. Combining hydraulic pressure testing, expansion rate measurement, simplified burst testing, and pressure alternating (cyclic fatigue) testing, this system provides fire extinguisher manufacturers and test laboratories with a versatile and space-efficient solution for product compliance verification. Compatible with fire extinguisher sizes from 1-12 kg and 2-9 L, the ToronFT™ FE-PA delivers high accuracy and reliable performance.

APPLICATIONS

Fire Extinguisher Pressure Alternating Tester — ToronFT™ FE-PA Applications

The ToronFT™ FE-PA is applied in:

- Pressure alternating (cyclic fatigue) testing of portable water-based, dry powder, and clean agent fire extinguisher cylinders
- Hydraulic pressure and expansion rate measurement
- Simplified burst pressure evaluation
- Routine production quality control testing
- Type approval and certification testing in accordance with international standards



FEATURES

Fire Extinguisher Pressure Alternating Tester — ToronFT™ FE-PA Key Features

- Multi-function platform: hydraulic pressure, expansion rate, simplified burst, and pressure alternating tests
- Broader pressure control range: 0–26 MPa
- High-pressure pump capacity: 0–28 MPa
- High-pressure water output: 16 L/min
- Pressure sensing via current transmitter method: $\pm 0.25\%$ F.S. accuracy, 0.1 MPa resolution
- Compatible with portable fire extinguishers: 1–12 kg and 2–9 L
- Suitable for water-based, dry powder, and clean agent extinguisher types
- Automated control interface with digital data display and reporting

THEORY & METHOD

Theory and Method

The ToronFT™ FE-PA employs a high-capacity hydraulic pump to pressurize fire extinguisher cylinders to specified test pressures. A precision current transmitter-based pressure transducer continuously monitors and records system pressure throughout each test cycle. For pressure alternating tests, the control system automates cyclic pressurization between defined lower and upper pressure limits at a programmed rate and count, simulating the fatigue loading experienced during a product's service life.

For hydraulic pressure and expansion tests, cylinders are hydrostatically loaded to proof pressure. The simplified burst test sequence elevates pressure in a controlled ramp until the cylinder's failure point, capturing burst pressure data. The 0.1 MPa pressure resolution and $\pm 0.25\%$ F.S. accuracy ensure precise and repeatable test results throughout all test modes.

TECHNICAL SPECIFICATIONS

Fire Extinguisher Pressure Alternating Tester — ToronFT™ FE-PA
Technical Specifications

Parameter	Specification
Pressure Control Range	0-26 MPa
High-Pressure Pump Pressure	0-28 MPa
High-Pressure Water Output	16 L/min
Pressure Sensing Method	Current transmitter method
Pressure Sensing Accuracy	$\pm 0.25\%$ F.S.
Pressure Resolution	0.1 MPa
Applicable Extinguisher Sizes	1-12 kg; 2-9 L
Test Functions	Hydraulic pressure, expansion rate, simplified burst, pressure alternating



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

