



TORONTECH

SIGNAL FEEDBACK DEVICE ACTION TESTER



Signal Feedback Device Action Tester — ToronFT™ SFD

ToronFT™ SFD Signal Feedback Device Action Tester is a precision pneumatic testing instrument designed for the action pressure and working reliability evaluation of signal feedback devices used in gas fire extinguishing systems. By applying controlled air pressure to the signal feedback device under test and verifying correct actuation behavior across the full required pressure range, the ToronFT™ SFD enables manufacturers and testing laboratories to qualify signal feedback devices for reliable, standard-compliant performance in gas fire suppression system installations.

The signal feedback device action performance tester consists of two integrated sub-systems — an air source part and a test part — providing a complete, self-contained testing platform with a pressure range of 0–10 MPa and expandable test station capability for high-throughput production and certification testing environments.

APPLICATIONS

Signal Feedback Device Action Tester — ToronFT™ SFD Applications

- Gas fire extinguishing system manufacturers: signal feedback device action pressure and reliability qualification
- Third-party certification and listing laboratories: signal feedback device performance testing per ISO 14520 and related international standards
- Quality assurance departments: production-line and incoming inspection action pressure verification for signal feedback devices
- System integrators and commissioning engineers: pre-installation verification of signal feedback device actuation performance
- R&D departments: evaluation of new signal feedback device designs and pressure setpoints



FEATURES

Signal Feedback Device Action Tester — ToronFT™ SFD Key Features

- Dual sub-system architecture: integrated air source part and test part — complete, self-contained signal feedback device test platform
- Pressure range: 0–10 MPa — covering the full action pressure range of gas fire extinguishing system signal feedback devices
- Test medium: air at normal ambient temperature — clean, safe, and directly replicating in-service pneumatic conditions
- Expandable test station design: starts at 1 station, expandable — scalable for growing production throughput requirements
- Pressure measurement accuracy: $\pm 0.5\%$ F.S. (expandable to higher accuracy) — precise, traceable action pressure recording
- Pressure control accuracy: $\pm 1\%$ F.S. — stable, repeatable pressure delivery across all test cycles
- Timing range: 0–999 hours — accommodating any standard-specified hold duration for working reliability tests
- Suitable for both action pressure testing and working reliability (cyclic) testing in a single instrument platform

THEORY & METHOD

Theory and Method

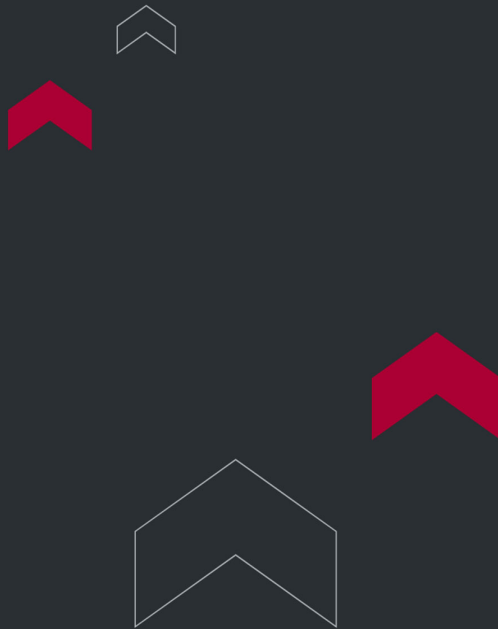
Signal feedback device action performance testing evaluates two key parameters: the action pressure at which the device generates its output signal (indicating system activation), and the working reliability of the device across repeated pressure cycles. The ToronFT™ SFD applies controlled air pressure from the integrated air source sub-system through the test part to the signal feedback device under test, increasing pressure at a controlled rate while monitoring for device actuation.

When the signal feedback device actuates at the specified action pressure, the device generates its output signal. The ToronFT™ SFD records the exact actuation pressure using the precision measurement system ($\pm 0.5\%$ F.S. accuracy, expandable to higher accuracy) and compares it against the standard-specified acceptance range. Working reliability testing applies multiple pressure cycles to verify consistent actuation performance across the full test sequence. The $\pm 1\%$ F.S. Pressure control accuracy ensures that the pressure conditions during each cycle are precisely reproduced for accurate, traceable results.

TECHNICAL SPECIFICATIONS

Signal Feedback Device Action Tester — ToronFT™ SFD Technical Specifications

Parameter	Specification
Model	ToronFT™ SFD
Test Sub-Systems	Air source part + test part
Pressure Range	0 - 10 MPa
Test Medium	Air
Medium Temperature	Normal ambient temperature
Test Stations	1 (expandable)
Pressure Measurement Accuracy	$\pm 0.5\%$ F.S. (expandable to higher)
Pressure Control Accuracy	$\pm 1\%$ F.S.
Timing Range	0 - 999 h



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