



TORONTECH

GAS FIRE EXTINGUISHING SYSTEM START-UP TESTER



Gas Fire Extinguishing System Start-Up Tester — ToronFT™ GFE-SU

ToronFT™ GFE-SU Gas Fire Extinguishing System Start-Up Tester is a comprehensive system-level testing platform designed for startup and operational performance qualification of gas fire extinguishing systems. Using compressed air as the test medium in place of actual fire extinguishing agent, the ToronFT™ GFE-SU enables safe, complete system-level testing of all startup and operational functions including automatic start, manual start, and mechanical emergency start, without expending costly fire suppression agent or creating the hazards associated with live agent discharge.

The gas fire extinguishing system start-up operation tester replicates the full operational architecture of a deployed gas fire extinguishing system, incorporating fire extinguishing agent bottle groups, drive gas bottle groups, one-way valves, selector valves, driving devices, manifolds, connecting pipes, nozzles, signal feedback devices, safety relief devices, control panels, leak detection devices, write high-sealing valves, pipeline fittings, and all ancillary components.

APPLICATIONS

Gas Fire Extinguishing System Start-Up Tester — ToronFT™ GFE-SU

Applications

- Gas fire extinguishing system manufacturers: complete system-level startup and operational qualification testing prior to shipment
- Third-party certification and listing laboratories: system startup and operational performance testing per ISO 14520 and related international standards
- System integrators: pre-installation commissioning and verification of fully assembled gas fire suppression systems
- Fire protection contractors: system acceptance testing and commissioning verification using safe compressed air in place of live agent

- Training and demonstration: safe demonstration of system startup sequences and operational behavior for technical training programs



FEATURES

Gas Fire Extinguishing System Start-Up Tester — ToronFT™ GFE-SU Key Features

- Safe system-level testing using compressed air as the test medium — eliminating agent consumption and live discharge hazards during qualification testing
- Complete system composition replicated: fire extinguishing agent bottle groups, drive gas bottle groups, one-way valves, selector valves, driving devices, manifold, connecting pipes, nozzles, signal feedback devices, safety relief devices, control panel, leak detection devices, write high-sealing valves, pipeline fittings, and all ancillary components
- Three start modes tested: automatic start, manual start, and mechanical emergency start — full operational coverage
- Manual start and mechanical emergency start incorporate dedicated anti-malfunction measures — preventing inadvertent system activation
- Continuously adjustable delay start function: 0-30 seconds — covering the full range of standard delay time requirements
- Combined distribution system action program: verifies container valve opens before or simultaneously with zone selector valve — per standard sequencing requirements
- Comprehensive, end-to-end system validation in a single test session — reducing commissioning time and improving documentation completeness

THEORY & METHOD

Theory and Method

System startup and operation testing validates the complete operational sequence of the gas fire extinguishing system from detection and alarm initiation through agent discharge. By substituting compressed air for the actual fire suppression agent, the ToronFT™ GFE-SU allows all mechanical, pneumatic, and electrical functions to be exercised through their full operational sequence without agent consumption or discharge hazard.

Automatic start testing verifies that the control panel correctly processes detector inputs and initiates the system discharge sequence without operator intervention. Manual start testing verifies that manual call points and manual override controls correctly initiate the sequence. Mechanical emergency start testing verifies that the direct mechanical actuation path — bypassing electronic controls — correctly opens the container valve. Both manual start and mechanical emergency start incorporate dedicated anti-malfunction measures to prevent inadvertent activation. The delay start function is continuously adjustable within 0–30 seconds. For combined distribution systems, the action program verifies that the container valve opens the selected protection zone valve either before or simultaneously with agent release.

TECHNICAL SPECIFICATIONS

Gas Fire Extinguishing System Start-Up Tester — ToronFT™ GFE-SU

Technical Specifications

Parameter	Specification
Model	ToronFT™ GFE-SU
Test Medium	Compressed air (substituted for fire extinguishing agent)
Start Modes Tested	Automatic start, manual start, mechanical emergency start
Anti-Malfunction Measures	Incorporated in manual start and mechanical emergency start
Delay Start Range	0 – 30 seconds (continuously adjustable)

Parameter	Specification
System Components Included	Extinguishing agent bottles, drive gas bottles, one-way valves, selector valves, driving devices, manifold, pipes, nozzles, signal feedback devices, safety relief devices, control panel, leak detection devices, high-sealing valves, pipeline fittings
Combined Distribution Action	Container valve opens before or simultaneously with zone selector valve



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