



FIRE SPRINKLER HYDROSTATIC SEAL STRENGTH TESTER

Fire Sprinkler Hydrostatic Seal Strength Tester — ToronFT™ SW-HSS

ToronFT™ SW-HSS Fire Sprinkler Hydrostatic Seal Strength Tester is a high-performance hydraulic testing system designed specifically for water pressure sealing and water pressure strength testing of fire sprinkler assemblies. With a pressure control range of 0–6 MPa and the ability to process up to five sprinkler specimens simultaneously, the ToronFT™ SW-HSS delivers efficient, high-throughput testing for production quality assurance and certification programs.

The sprinkler hydraulic seal and strength tester combine rapid boost capabilities, fine pressure collection resolution, and a high-flow water output system to ensure that every test cycle is conducted with consistent, repeatable hydraulic conditions.

APPLICATIONS

Fire Sprinkler Hydrostatic Seal Strength Tester — ToronFT™ SW-HSS Applications

- Fire sprinkler manufacturers: production-line hydraulic seal and pressure strength testing
- Certification and listing laboratories: qualification testing to international sprinkler standards
- Quality assurance departments: incoming inspection and periodic re-qualification of sprinkler inventory
- Field inspection and maintenance teams: verification of in-service sprinkler hydraulic integrity

FEATURES

Fire Sprinkler Hydrostatic Seal Strength Tester — ToronFT™ SW-HSS Key Features

- Pressure control range: 0–6 MPa: covers the full range of sprinkler hydraulic seal and strength test requirements
- Controlled boost rate: 0.10 ± 0.025 MPa/s: reproducible pressurization for standard-compliant testing
- Five-specimen test capacity per cycle: maximizing throughput for production and certification testing
- High-pressure water output: 20 L/min: enabling rapid fill and pressurization of test fixtures
- Fine pressure collection resolution: 0.005 MPa: precise monitoring of pressure hold and any micro-leakage events
- Automated pressure control system reduces reliance on manual operator adjustment
- Compact cabinet design with intuitive control interface for efficient laboratory integration



THEORY & METHOD

Theory and Method

The ToronFT™ SW-HSS uses a high-capacity hydraulic pump to pressurize each sprinkler specimen to the specified test pressure. For the hydraulic seal test, pressure is applied and held at a defined level while any leakage through seals, joints, or the deflector is monitored and recorded. For the hydraulic strength test, pressure is ramped to the burst-pressure specification, and the sprinkler is evaluated for structural failure or permanent deformation.

The pressure boost rate is precisely controlled at 0.10 ± 0.025 MPa/s to match standard-specified ramp conditions, while the fine pressure collection seat resolution of 0.005 MPa ensures that small pressure deviations are captured and logged. The high-flow output of 20 L/min enables rapid fill and pressurization, reducing cycle time in high-throughput production environments.

TECHNICAL SPECIFICATIONS

Fire Sprinkler Hydrostatic Seal Strength Tester — ToronFT™ SW-HSS

Technical Specifications

Parameter	Specification
Model	ToronFT™ SW-HSS
Pressure Control Range	0 – 6 MPa
Boost Rate	0.10 ± 0.025 MPa/s
Number of Test Specimens (per cycle)	5

Parameter	Specification
High-Pressure Water Output	20 L/min
Pressure Collection Resolution	0.005 MPa



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