

AIR PRESSURE SEAL TESTER



Air Pressure Seal Tester — ToronFT™ APS

ToronFT™ APS Air Pressure Seal Tester is a versatile pneumatic testing instrument designed for the performance testing of pressure-bearing products across a wide range of industrial and fire protection applications. Capable of evaluating air sealing performance, gas pressure resistance, gas leakage detection, and gas pressure resistance bursting tests, the ToronFT™ APS serves as a comprehensive air pressure qualification platform for valves, pipe fittings, pressure vessels, gas cylinders, and related pressure-containing components.

With a pressure range of 0–20 MPa (expandable to higher pressures upon request), compatibility with air, nitrogen, helium, and other gas media, a pressure measurement accuracy of $\pm 0.5\%$ F.S., and a pressure control accuracy of $\pm 1\%$ F.S., the ToronFT™ APS air pressure seal tester provides the measurement precision and operational flexibility demanded by both production quality assurance and certification testing programs.

APPLICATIONS

Air Pressure Seal Tester — ToronFT™ APS Applications

- Gas fire extinguishing system manufacturers: air sealing performance and gas pressure resistance testing of cylinders, valves, and fittings
- Valve and pipe fitting manufacturers: gas pressure resistance, gas leakage detection, and sealing performance qualification
- Pressure vessel and gas cylinder manufacturers: pressure resistance and burst testing qualification
- Third-party certification and testing laboratories: pneumatic performance testing per international pressure equipment and fire protection standards
- Quality assurance departments: production-line and incoming inspection air pressure sealing verification for pressure-bearing components



FEATURES

Air Pressure Seal Tester — ToronFT™ APS Key Features

- Versatile test capability: air sealing performance test, gas pressure resistance test, gas leakage detection, and gas pressure resistance bursting test — all on one platform
- Suitable for valves, pipe fittings, pressure vessels, gas cylinders, and other pressure-bearing products
- Pressure range: 0–20 MPa (expandable to higher pressures on request) — covering standard and elevated test pressure requirements
- Compatible test media: air, nitrogen, helium, and other gas media — flexibility for leak detection and inert gas applications
- Test temperature: normal ambient (special temperature capabilities available upon consultation)
- Expandable test stations: starts at 1 station, expandable — scalable to meet growing production throughput needs
- Pressure measurement accuracy: $\pm 0.5\%$ F.S. (expandable to higher accuracy) — precise, traceable pressure data
- Pressure control accuracy: $\pm 1\%$ F.S. — stable, repeatable test pressure delivery
- Timing range: 0–999 hours — accommodating any standard-specified pressure hold duration

THEORY & METHOD

Theory and Method

Air pressure seal testing pressurizes the test specimen to the specified test pressure using a gaseous medium (air, nitrogen, helium, or other specified gas) and evaluates whether the specimen maintains pressure integrity — showing no measurable leakage — over the required hold duration. The ToronFT™ APS applies the test pressure through the specimen connection interface and monitors pressure using precision transducers with $\pm 0.5\%$ F.S. accuracy throughout the test hold period. Gas

pressure resistance testing applies pressure incrementally to the burst or proof pressure level, verifying structural integrity under over-pressure conditions.

Gas leakage detection uses sensitive pressure decay measurement — any drop in the monitored pressure during the hold period indicates leakage from the specimen. The precision timing system (0–999 h range) ensures that any standard-specified hold duration can be accurately executed, and the expandable test station design allows the instrument to grow from one station to multiple stations as throughput requirements increase.

TECHNICAL SPECIFICATIONS

Air Pressure Seal Tester — ToronFT™ APS Technical Specifications

Parameter	Specification
Model	ToronFT™ APS
Pressure Range	0 – 20 MPa (expandable to higher)
Test Media	Air, nitrogen, helium, and other gas media
Test Temperature	Normal ambient (special temperature available on request)
Test Stations	1 (expandable)
Pressure Measurement Accuracy	±0.5% F.S. (expandable to higher)
Pressure Control Accuracy	±1% F.S.
Timing Range	0 – 999 h



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