

LPG REGULATOR LEAK TESTER



LPG Regulator Leak Tester - ToronFT™ LT

ToronFT™ LT LPG Regulator Leak Tester is a purpose-built testing system for conducting air tightness evaluation of bottled liquefied petroleum gas (LPG) pressure regulators using the water immersion method. Air tightness is a fundamental safety requirement for all LPG pressure regulators — any leak represents both a safety hazard and a failure of regulatory compliance.

The immersion method, in which pressurized regulators are submerged in a controlled-temperature water bath and visually inspected for air bubbles, is a highly sensitive and internationally recognized leak detection technique. The ToronFT™ LT provides a precise temperature-controlled immersion tank with stainless steel construction, enabling standardized and repeatable air tightness testing of LPG pressure regulators in compliance with applicable international standards.

APPLICATIONS

LPG Regulator Leak Tester - ToronFT™ LT Applications

The ToronFT™ LT is designed for air tightness testing of LPG pressure regulators and associated components in the following contexts:

- End-of-line 100% air tightness testing of LPG pressure regulators in manufacturing facilities
- Incoming inspection and receiving quality assurance for LPG pressure regulator components
- Type testing and design validation of new LPG pressure regulator models
- Laboratory compliance testing for LPG pressure regulator certification
- Investigation and root cause analysis of field-returned regulators suspected of pressure leakage
- Air tightness testing of different regulator types requiring varied water bath temperatures per test protocol



FEATURES

LPG Regulator Leak Tester - ToronFT™ LT Key Features

- Water immersion detection method provides a highly sensitive, visual, and direct indication of air leakage from pressure regulators — capable of detecting very small leaks that may not be apparent through electronic or pressure-decay methods
- Precise temperature control range from normal ambient to 55°C, enabling immersion air tightness testing at the exact water temperatures specified for different types of LPG pressure regulators
- Temperature control accuracy of (50-55)°C ensures test conditions are maintained within tight tolerances for consistent, repeatable air tightness results
- 3 kW heating power for efficient and responsive water bath temperature control, minimizing warm-up time between tests
- Generous test space of approximately 800 mm x 350 mm x 500 mm (L x W x H) allows multiple pressure regulators or large-body regulators to be tested simultaneously
- Premium 1.2 mm thick stainless steel tank construction ensures long-term durability, corrosion resistance, and suitability for continuous water immersion service
- Test medium is tap water — no specialist chemicals or consumables required, keeping operating costs low and logistics simple

THEORY & METHOD

Theory and Method

The immersion method for air tightness testing involves pressurizing the LPG pressure regulator under test with a specified gas pressure and then submerging it in a controlled-temperature water bath. Any air leakage from the regulator body, diaphragm, seat, or fittings will produce a stream of visible bubbles in the water — providing a highly sensitive and direct indication of leak location and severity.

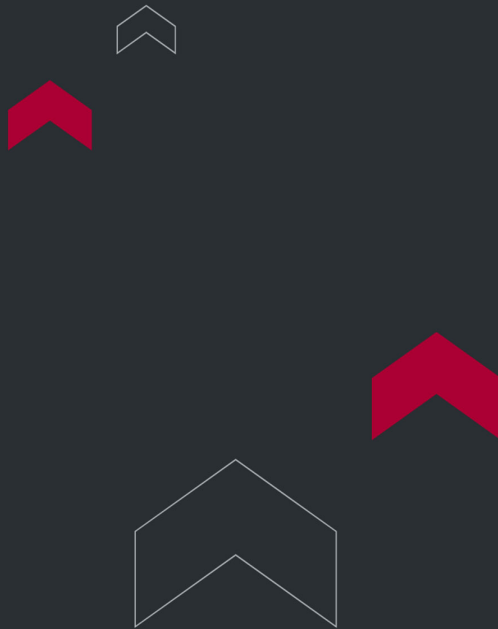
The ToronFT™ LT's temperature-controlled water bath allows the test to be conducted at the specific water temperature required by the applicable standard or regulator type. Different regulator designs may require testing at different immersion temperatures to replicate worst-case service conditions. The 1.2 mm thick stainless steel tank construction ensures long-term durability and corrosion resistance when used with water immersion test media, and the generous test space accommodates a range of pressure regulator sizes.

TECHNICAL SPECIFICATIONS

LPG Regulator Leak Tester - ToronFT™ LT Technical Specifications

Parameter	Specification
Model	ToronFT™ LT
Product Name	Pressure Regulator Air Tightness (Immersion Method) Test Apparatus — ToronFT™ LT
Test Method	Water immersion
Test Medium	Tap water
Temperature Control Range	Normal ambient temperature to 55°C
Temperature Control Accuracy	(50-55)°C
Heating Power	3 kW
Test Space (L x W x H)	Approx. 800 mm x 350 mm x 500 mm

Parameter	Specification
Tank Construction	Stainless steel, 1.2 mm wall thickness



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