

LP GAS PRESSURE REGULATOR TESTER



LP Gas Pressure Regulator Tester - ToronFT™ PR-PS

ToronFT™ PR-PS Pressure Regulator Pressure Strength Comprehensive Performance Test Apparatus is a high-capacity pressure testing system engineered for the comprehensive evaluation of the pressure strength and overall mechanical performance of liquefied petroleum gas (LPG) pressure regulators. Pressure regulators used in household and non-household LPG applications must meet rigorous pressure integrity and performance standards to ensure safe gas delivery and long-term reliability.

The ToronFT™ PR-PS uses compressed air as the test medium and is capable of delivering the high output pressures and flow rates required to fully characterize pressure regulator performance across the specified inlet and outlet pressure ranges. The system complies with UL 144 and EN 12864 — the leading international standards governing LPG pressure regulator safety and performance in North American and European markets.

APPLICATIONS

LP Gas Pressure Regulator Tester - ToronFT™ PR-PS Applications

The ToronFT™ PR-PS is designed for pressure strength testing and performance evaluation of the following pressure regulator types:

- Household bottled LPG pressure regulators with inlet pressures from 0.03 MPa to 1.56 MPa and outlet pressures up to 2.80 kPa
- Household voltage regulators with rated flow rates of 33 L/min or less at ambient temperatures from -20°C to +45°C
- Non-household LPG bottles with inlet pressures from 0.03 MPa to 1.56 MPa and outlet pressures of 2.80 kPa $\pm$ 0.50 kPa or 5.00 kPa $\pm$ 0.90 kPa
- Non-household LPG regulators with rated flow rates up to 60 L/min at ambient temperatures from -20°C to +45°C

- Pressure regulator production line quality control and end-of-line pressure testing
- Type testing and certification of new LPG pressure regulator designs



Standards

The ToronFT™ PR-PS is designed in compliance with the following international standards for pressure regulator performance and safety:

- UL 144: Standard for LP-Gas Regulators (Underwriters Laboratories)
- EN 12864: Domestic, non-domestic, and industrial low-pressure regulators and associated pressure control equipment for butane, propane, and their mixtures

FEATURES

LP Gas Pressure Regulator Tester - ToronFT™ PR-PS Key Features

- Uses compressed air as the safe, clean, and readily available test medium — eliminating the hazards associated with using LPG or other flammable gases during laboratory pressure strength testing
- High output pressure of 3 MPa covers the full pressure range required for comprehensive pressure regulator inlet pressure strength testing per UL 144 and EN 12864
- High-volume air output flow of 5.0 M³/h supports both rated flow performance testing and pressure strength evaluation on a single platform
- Powerful 7.5 kW motor drive provides reliable, sustained compressed air supply throughout long test sequences
- Standard test station capacity of 1 with expansion capability — additional stations can be added to increase throughput
- Precision pressure measurement accuracy of $\pm 0.5\%$ F.S. for traceable and repeatable pressure strength test results
- Tight pressure control accuracy of $\pm 1\%$ F.S. ensures test conditions precisely meet specified inlet and outlet pressure requirements
- Programmable timing range of 0-999 hours supports all test durations from short-duration burst tests to extended endurance evaluations

- Normal temperature test medium capability as standard; special (elevated or reduced) temperature testing available as an optional configuration
- Complies with UL 144 and EN 12864, providing test results recognized by certification bodies in North America and Europe

THEORY & METHOD

Theory and Method

The ToronFT™ PR-PS applies controlled compressed air pressure to the inlet of the pressure regulator under test, simulating the full range of LPG supply pressures encountered in service. The system's high-capacity air supply delivers output pressures up to 3 MPa and flow rates up to 5.0 M³/h, enabling both static pressure strength tests and dynamic flow performance tests to be conducted on the same platform.

Pressure measurement at the test station is performed with high accuracy ($\pm 0.5\%$ F.S.), and pressure control accuracy of $\pm 1\%$ F.S. ensures that test conditions precisely replicate the specified pressure regulator test requirements. The timing system (0-999 hours) supports both short-duration burst tests and extended endurance or soak tests. A modular test station design allows for expansion to accommodate multiple concurrent test configurations.

TECHNICAL SPECIFICATIONS

LP Gas Pressure Regulator Tester - ToronFT™ PR-PS Technical Specifications

Parameter	Specification
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Model	ToronFT™ PR-PS
Product Name	Pressure Regulator Pressure Strength Comprehensive Performance Test Apparatus — ToronFT™ PR-PS
Test Medium	Compressed air
Output Pressure	3 MPa
Output Flow	5.0 M³/h (air)
Power	7.5 kW
Medium Temperature	Normal temperature (standard); special temperatures available on request
Test Stations	1 (expandable)
Pressure Measurement Accuracy	±0.5% F.S.
Pressure Control Accuracy	±1% F.S.
Timing Range	0-999 hours
Compliance Standards	UL 144; EN 12864



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