

ROBUST · AUTOMATIC · COMPLIANT

ASTM D3212 Leaktightness Tester

Reliable joint-integrity testing for buried plastic pipe systems. The LTT verifies that elastomeric-sealed pipe joints stay watertight under combined vacuum, hydrostatic pressure and mechanical deflection, and complies with ASTM D3212.

Built for pipe manufacturers, test institutes and certification bodies, the LTT reproduces real installation stresses, angular deflection, and internal pressure, so joints can be qualified with confidence before they ever go into the ground.

The LTT is controlled via SIGMA automatic, recipe-based test sequences that handle filling, deflection, pressurization and leak monitoring with minimal operator input.

This ensures a consistent, standard-compliant procedure every time, on PVC, PE and PP gravity sewer, drainage and underground pipe systems.



SCITEQ ASTM D3212 LTT

- For combined vacuum, hydrostatic pressure and deflection testing of gasketed joints
- Fully automatic angular deflection.
- Standard test frame for Ø100–1200 mm pipe.
- Robust, industrial-grade main frame built for continuous lab use.

PROVEN TECHNOLOGY

Specialists in plastic pipe quality testing since 1966.

AUTOMATED & OPTIMIZED TEST

AUTOMATIC JOINT INTEGRITY TESTING

Automated test systems offer clear advantages over manual testing. They improve repeatability across multiple test cycles, while delivering higher accuracy in both pressure control and deflection positioning.

Setup is faster across different pipe dimensions, and continuous data logging ensures reliable documentation and traceability throughout. Together, these features also reduce dependency on the operator during critical test stages.

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more info and
articles.



ADVANTAGES OF AUTOMATED TESTING EASY, EFFICIENT & OPTIMIZED

- Automated filling and pressure regulation
- Real-time monitoring of leakage
- High-precision regulation
- Automatic angular deflection
- Repeatable test documentation
- Auto-generated test reports and full data logging for traceability.
- Faster setup across different pipe dimensions, with reduced operator dependency.



MARKET LEADING SOFTWARE

INTUITIVE SOFTWARE

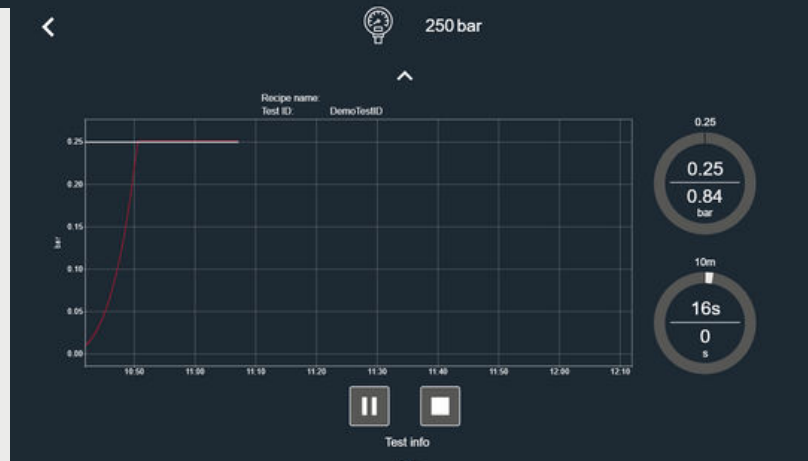
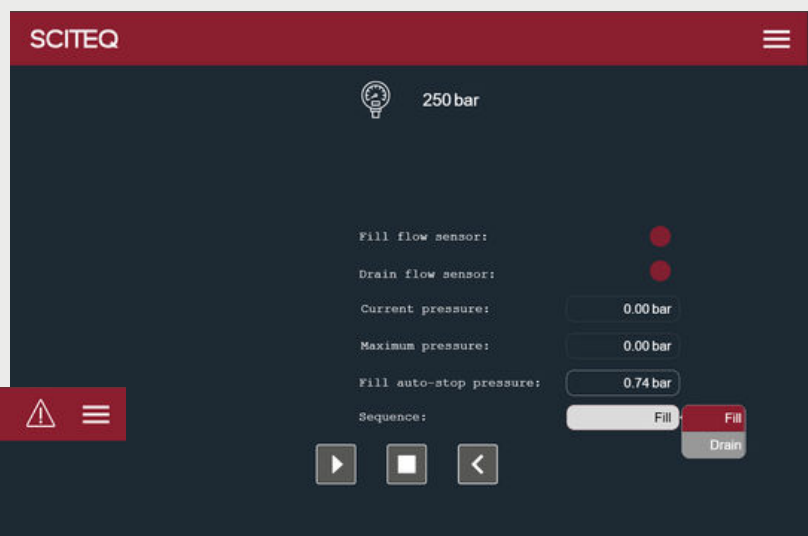
SIGMA is our browser-based test automation software for accurate, efficient control of pipe and material testing. It gives operators a simple way to set up recipes, start tests in just three clicks, monitor progress in real time, and generate reports instantly.

Reports are generated automatically and test data is easily exported to CSV with live exchange enabled via OPC UA – or to external data management softwares.

The platform integrates with corporate IT systems and supports industrial communication standards and Industry 4.0 workflows, enabling connected testing.

ADVANCED TESTING - EASY OPERATION

- Easy-to-use browser-based interface
- Start tests with a few clicks
- Fast and simple recipe setup
- Instant report generation
- Easy data export to CSV
- Back-up to local server via influx database
- Real-time overview of test and system status
- OPC UA integration for industrial connectivity
- Designed to support Cyber Resilience Act (CRA) compliance and NIS2.



Examples of the SIGMA user-interface for LTT ASTM D3212.

SPECIFICATIONS & PROCEDURE

The Typical ASTM D3212 test procedure

A standard leak test sequence typically includes the following steps:

1. Prepare and seal the test specimen
2. Mount the joined pipe sections in the testing frame
3. Apply the specified angular deflection
4. Fill the specimen with water and remove trapped air
5. Raise the internal hydrostatic pressure to the required level
6. Maintain the pressure for the specified duration
7. Inspect the joint for visible leakage

If no leakage is observed during the test period, the joint passes the test.

The specification of the SCITEQ LTT System is shown in the table below. If you need further information, please reach out to us at sales@sciteq.com

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SCITEQ Leak Tightness Tester ASTM D3212		
Standard pipe dimension range		DN100 – DN1200
Sample length [mm]		Min. 1400mm – Max. 4400mm
Automatic test sequence		√
Horizontal hydraulic assemble press		√
Automatic water filling function		√
Automatic water drainage function		√
Maximum vacuum pressure		-0,9 bar
Maximum positive pressure		1 bar
Display accuracy		+/- 0,001 bar
Angular Deflection		0-140mm
Main frame dimensions (L x W x H)		L5400 x B1700 x H2770mm Weight app. 2700 kg
Pressure control cabinet dimensions (L x W x H)		L1500 x B1200 x H1900. Weight app. 450 kg
Complied standards		ASTM D3212 and equivalent
Utilities	Water supply	1-6 bar
	Power supply	3 x 400V, 50Hz
	Compressed air	2-8 bar