PRESTO Testing Instruments
Presto Stantest Pvt. Ltd.

PRESTO STANTEST

SALT SPRAY CHAMBER

Accelerated Corrosion Testing for Reliable Product Quality

Evaluate the corrosion resistance of metal components, protective coatings, plated parts, fasteners and finished products in a controlled salt-laden environment.

Test with confidence. Improve corrosion resistance. Support consistent quality.

PRODUCT OVERVIEW

Corrosion can affect a product's appearance, performance, durability and service life. For manufacturers, identifying corrosion-related weaknesses before products reach the market is an important part of quality assurance. A Salt Spray Chamber—also known as a salt fog test chamber—creates a controlled corrosive atmosphere that helps laboratories assess how materials and surface finishes respond to salt exposure.

The Presto Stantest Salt Spray Chamber is positioned as a laboratory testing solution for evaluating the corrosion resistance of samples under defined test conditions. It can support comparative testing, coating development, incoming-material checks and routine quality-control programmes when configured for the relevant test method.

WHY SALT SPRAY TESTING?

Salt spray testing provides a repeatable way to expose test specimens to a salt-containing mist under controlled conditions. The resulting observations—such as visible rust, blistering, coating damage or other specified changes—can help teams compare samples and assess whether a material or finish meets their acceptance criteria.

Typical users include automotive and component manufacturers, metal finishers, paint and coating suppliers, fastener producers, electrical equipment manufacturers, research laboratories and third-party testing facilities.



View product details: www.prestogroup.com/products/salt-spray-chamber/

APPLICATIONS & INDUSTRIES

The Salt Spray Chamber can be used across a wide range of industries where corrosion resistance is an important product-quality characteristic. Test suitability depends on the specimen, coating system, customer specification and selected test method.

Automotive and transportation

Assess corrosion performance of coated panels, brackets, hardware, fasteners, plated parts and other components exposed to challenging service environments. Testing may support supplier qualification, coating comparisons and production quality checks.

Paints, coatings and surface treatment

Compare protective paints, powder coatings, conversion coatings, electroplated finishes and other surface treatments. Salt spray exposure can help identify coating defects or differences in corrosion behaviour when the test is performed and evaluated using the specified procedure.

Metal products and hardware

Test screws, nuts, bolts, hinges, fittings, fabricated metal parts and other components where corrosion can affect appearance, fit or function. Results can be used as one input in product qualification and process improvement.

Electrical, electronics and appliances

Evaluate selected enclosures, connectors, terminals, brackets and coated components for resistance to salt-laden exposure. The test plan should reflect the applicable product specification and intended environment.

Research, development and quality assurance

Use controlled salt spray exposure to compare material formulations, coating thicknesses, pretreatment methods and process settings. Consistent specimen preparation and documentation are essential for meaningful comparisons.

COMMON TEST OBJECTIVES

- Compare corrosion resistance of alternative coatings or materials.
- Check the consistency of a surface-treatment process.
- Identify early signs of corrosion or coating failure.
- Support supplier evaluation and incoming inspection.
- Generate documented evidence for internal quality reviews or customer requirements.

Important: Salt spray results are method-specific and should not be treated as a direct prediction of real-world service life. Use the method and acceptance criteria required by the relevant specification.

HOW THE TEST WORKS

A Salt Spray Chamber produces a controlled salt mist inside an enclosed test space. Specimens are positioned in the chamber according to the applicable test method, and the equipment maintains the required operating conditions for the duration of the test. After exposure, specimens are inspected and evaluated against the agreed criteria.

Typical testing workflow

1. Prepare specimens: Clean, identify and prepare samples according to the selected standard. Avoid handling or preparation practices that could alter the test surface.
2. Prepare the salt solution: Use the solution composition and water quality specified by the test method.
3. Load the chamber: Place specimens at the required angle and spacing so that exposure conditions are appropriate and specimens do not interfere with one another.
4. Set test conditions: Configure temperature, atomisation and other parameters to match the applicable procedure.
5. Run the exposure: Maintain the test for the specified duration, checking operating conditions and recording any interruptions.
6. Inspect and report: Rinse or condition specimens only as directed by the method, then assess corrosion, coating defects or other defined outcomes.

STANDARDS & TEST METHODS

Salt spray tests are commonly associated with methods such as ASTM B117 and ISO 9227. Other product-specific or industry-specific procedures may also apply. These methods can differ in requirements, including solution preparation, chamber conditions, specimen placement, exposure duration and evaluation practices.

Before testing, confirm the exact standard and revision required by the customer, regulator or product specification. Do not assume that one chamber setup or test cycle automatically satisfies every standard. The equipment configuration and operating procedure should be matched to the selected method.

WHAT SHOULD BE RECORDED?

A useful test record can include specimen identification, material and coating details, preparation method, selected standard and revision, solution details, operating conditions, exposure duration, interruptions, inspection method, photographs and final observations. Clear records improve traceability and make comparisons between batches or suppliers more meaningful.

INTERPRETING RESULTS

Evaluation may involve documenting the time to first visible corrosion, the extent or distribution of corrosion, blistering, peeling, creepage from a scribed line or other criteria specified by the test method. Acceptance limits should come from the applicable product standard or customer requirement—not from a universal pass/fail threshold.

KEY BENEFITS & SELECTION GUIDE

A properly specified Salt Spray Chamber helps laboratories perform repeatable corrosion exposure tests and maintain a structured record of material and coating performance.

Benefits for quality teams

• **Controlled exposure:** Supports testing in a defined salt-mist environment when operated to the selected method.
• **Product and coating comparison:** Helps compare samples, surface treatments and process variations.
• **Quality assurance support:** Adds evidence to inspection, supplier qualification and product-development workflows.
• **Documented results:** Encourages consistent recording of test conditions and specimen observations.
• **Process improvement:** Can help identify coating or pretreatment weaknesses for further investigation.

WHAT TO CONFIRM BEFORE ORDERING

To select the right chamber, discuss the following with the Presto Stantest team:
• Required test standard(s) and revision.
• Useful chamber working volume and specimen dimensions.
• Number, size and arrangement of samples per test.
• Required temperature range and control performance.
• Salt solution preparation, atomisation and collection requirements.
• Specimen supports, accessories and any special fixtures.
• Data recording, monitoring and reporting expectations.
• Installation space, utilities, ventilation and maintenance needs.

GOOD TESTING PRACTICES

Follow the relevant standard and the equipment operating manual. Use suitable laboratory safety practices when handling salt solutions and cleaning test specimens. Keep the chamber clean, inspect components regularly, verify operating conditions at planned intervals and document maintenance. Ensure the exhaust and drainage arrangements meet the installation requirements.

PRESTO STANTEST — YOUR CORROSION TESTING PARTNER

Looking to evaluate corrosion resistance or compare protective coatings? Contact Presto Stantest to discuss your application, required standards, specimen sizes and laboratory workflow. The appropriate configuration can be identified after confirming your technical requirements.

Request product details or a quotation
Website: www.prestogroup.com
Email: [Add official sales email]
Phone: [Add official contact number]

Note: Final product specifications, available configurations, dimensions, utilities, accessories and compliance claims should be confirmed with Presto Stantest before publication or purchase. Replace the contact placeholders with verified company details.