Multiplelabs
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

# SSTC - 3000Series

## Salt Spray Test Chamber


EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

**www.analyticalgroup.net**

## Test Standards

- **ASTM B117.**

### Apparatus

4.1 The apparatus required for salt spray (fog) exposure consists of a fog chatiiher. a salt solution reser oir, a supply of suitably conditioned coiiipressed air. one or more atomi/ing nottles, specimen supports. pros ision for heating the chamber. and necessary means of control. The size and detailed Construction of the apparatus are optional, provided the conditions obtained meet the requirements of this practice.

4.2 Drops of solution which accumulate on the ceiling or coser of the chamber shall not be permitted to fall on the specimens being esposed.

4.3 Drops ol solution which tall íroiii the specililens shall not be returned to the solution reseroir for respra ing.

4.4 1aterial of construction shall be such thai ii will not aĺtet the conmieness ol the fog.

4.5 All water used br this practice shall con form to Type IV water in Specitication L) 1193 (except that for this practice limits for chlorides and sodium may be ignored). This does not apply to running tap water. All other water will be referred to as reagent grade.

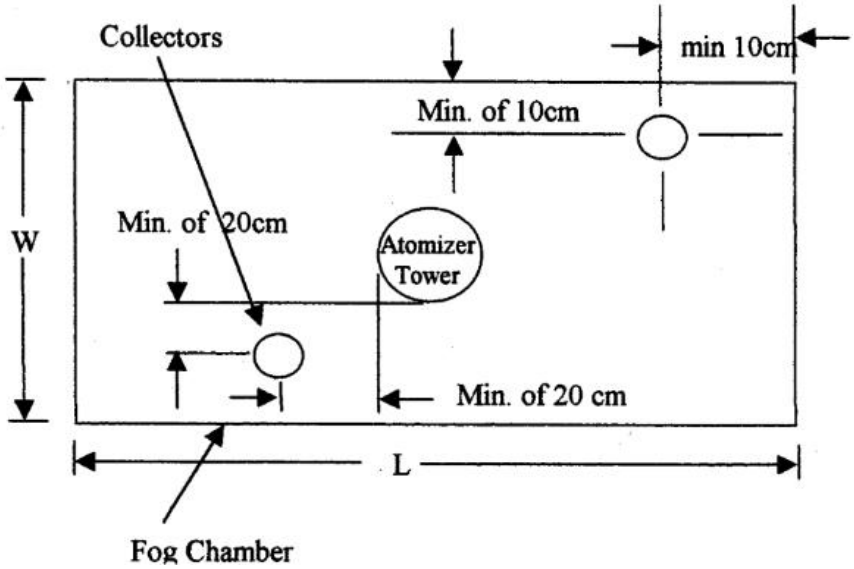



**Fig. 1 Arrangement of Fog Collectors**

### Conditions In the Salt Spray Chamber

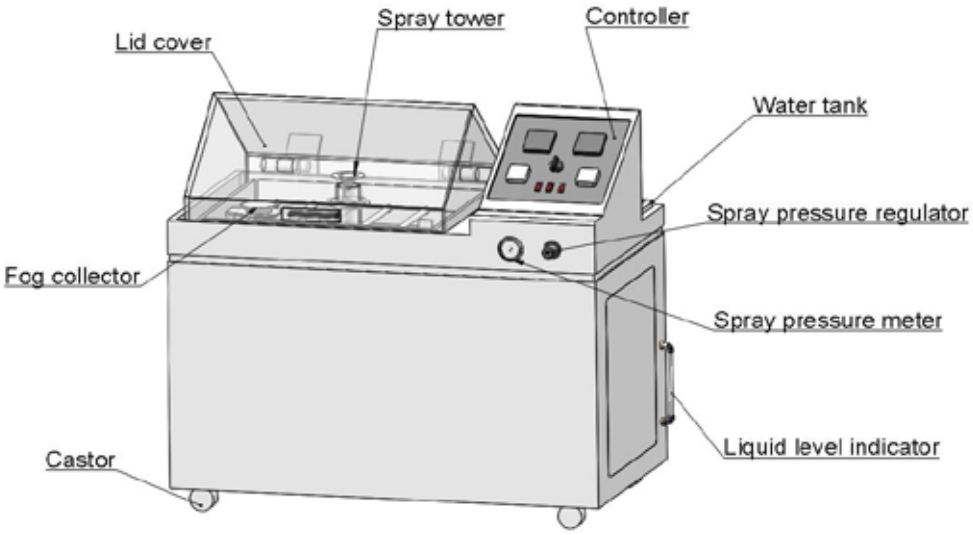
10.0 Temperature - The exposure tone of the sali spray chamber shall he maintained at 35 + 1.1 - 1.7°C (95 + 2 - 3°F). Each set point and its tolerance represents an operational control point for equilibrium conditions ai a single location in the cabinet which may not necessarily represent the uniformity of conditions throughout the cabinet. The temperature within the exposure tone of the closed cabinet shall be recorded (Note 8) at least twice a day at least 7 h apart (except on Saturdays. Sundays. and holidays when the salt spray test is not interrupted for exposing. rearranging. or femo ins test specimens or to check and replenish the solution in the reservoir)

10.2 Atomization and Quantity of fog - Place at least Iwo clean fog collectors per atomizer tower within the exposure zone so thai no drops of solution will he collected from the test specimens or any other source. Position the collectors in the proximity of the test specimens. one nearest to any nottle and the other farthesL from all nozzles. A typical arrangement is shown in Fig.1 The 11g shall be such that for each () cm2 (12.4 in.2) of horizontal collecting area, there will be collected from 1.0 to 2.0 mL of sollution per hour based on an average run of at least 16 h Note 9). The sxiium chloride concentration of the collected solution shall be 5 I mass % (Notes 9-li). The p1-I of the collected solution shall be 6.5 to 7.2. The pH measure-ment shall he made as described in 8.2 (Note 3).

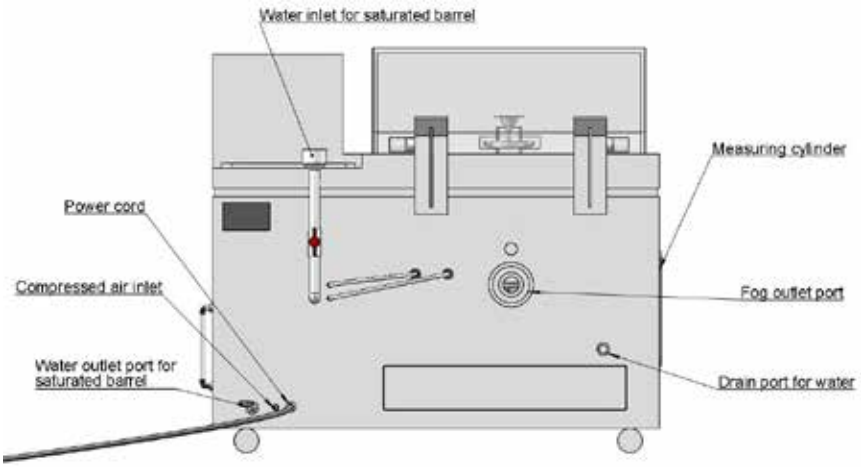
10.3 The nozzle or nozzles shall be so directed or baffled that none of the spray can impinge directly on the test specimens.

## Diagram

### • Front Side




### • Back Side



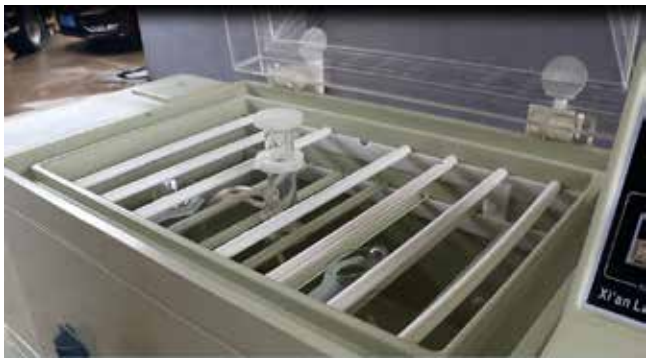
## Technical Parameter

| Model | | S-3150 | S-3250 | | S-3750 |
|---|---|---|---|---|---|
| Internal dimensions (mm) | | 460*600*400 | 640*1000*510 | | 750*1100*500 |
| Overall dimensions (mm) | | 700*1100*1000 | 910*1580*1200 | | 920*1900*1200 |
| Interior Volume (L) | | 110 | 326 | | 410 |
| Parameter | Temperature range | Ambient ～ +60 ℃ | | | |
| | Saturated barrel temp range | Ambient ～ +60 ℃ | | | |
| | Temperature Fluctuation | ± 0.5 ℃ | | | |
| | Temperature Deviation | ± 2.0 ℃ | | | |
| | Salt Fog Deposition | 1～2ml / 80cm2 · h | | | |
| | Spray Type | Continuous / Periodic | | | |
| Structure | Heating Element | Nichrome heater | | | |
| | Salt Fog Collected | Fog collector and fog measure cylinder | | | |
| | Air Preheating | Saturated air barrel (31Liter) | | | |
| | Spraying System | Atomizer tower and Spray nozzles | | | |
| | Sealing | Hydrostatic hood seal | | | |
| | Controller | PID controller | | | |
| | | | | | |
| | Temperature Sensor | PT100Ω / MV A-class | | | |
| | Water Solution Tank(mm) | 350*180*320 | | | |
| | Safety Device | Humidifier Dry-combustion Protection;<br>Over-temperature Protection;<br>Over-current Protection;<br>Water Shortage Protection;<br>Earth leakage Protection | | | |
| Material | | Glass fiber reinforced plastics | | | |
| Lid Material | | Transparent resin | | | |
| Standard Configuration | | 6 round bars and 5 V-shaped grooves | | | |
| Power Supply | | 220V 50Hz 1P | | | |
| Maximum Noise | | 65 dBA | | | |
| Standard | | ASTMB117, ISO9227 | | | |
| Environmental Conditional | | 5℃～+35 ℃ ≤85% RH | | | |

## Construction

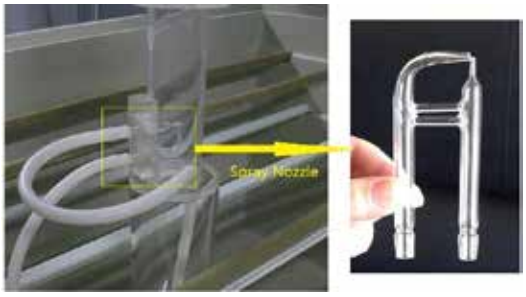
### 1). Workroom

- The material is glass fiber reinforced plastics which has strong corrosion resistance,one-time forming,
- Reinforced design, long service life and high temperature resistance.
- The transparent lid of salt spray chamber is made of resin, manually opened and closed
- The sample holder contains 8 round bars and 7 V-shaped grooves for different tests.



### 2). Salt Spray nozzle

- The spray tower is adjustable in height and spray volume to meet different test standards.
- Quartz nozzles are easy to clean and resistant to high temperatures, corrosion, and clogging.
- Spray pressure is 83KPA according to the standard.
- Spray deposition: 1~2ml / 80cm2 • h
- Spray type: Continuous / Periodic

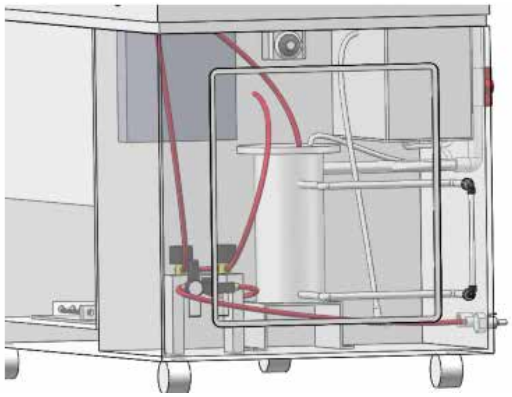



### 3). Salt Water Tank

- Built-in 20 liter salt solution tank with a brine mixing system to keep the brine even.

**4). Saturated Barrel**

- The air is preheated in the saturated barrel, and the heating tube is perpendicular to the saturated barrel.
- The saturated barrel has protection against dry burning. If the water level is low, the spray will stop, and the air source will not be supplied to avoid damage to the equipment.



**5). Controller**

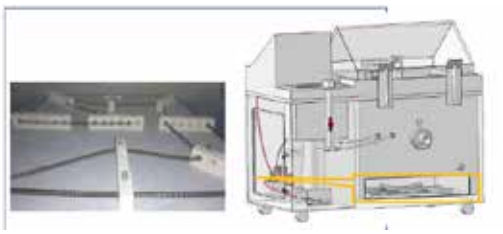
- Temperature control and display unit
- PID control system, set the test parameters by button type.
- Continuous /periodic spray type can be operated according to test conditions.
- Equipped with a timer for complete recording of spray time
- Option: programmable color touch screen controller.


## 【Core Function】

- It is tower salt spray system. The air generated by the air compressor is purified, preheated, and depressurized, and then enters the nozzle. The solution replenishment system supplies the solution to the nozzle suction pipe.
- When spraying, the compressed air rushes out of the nozzle, creating a negative pressure above the suction pipe.
- Under the action of negative pressure, the salt water flows toward the glass nozzle to the tip cone and spreads to the entire working space to form a diffuse state, simulating the salt spray environment.

**Spraying System**

• The bottom of the chamber is equipped with heating wire. When the resistance wire is heated, the air temperature of the chamber rises.



Heating System

• PT-100 Class A sensor, real-time accurate detection and display of temperature changes at 0.001 degrees.

Temperature Sensor

• After the test, the fog of the studio can be quickly removed, and the observation window can be quickly moved to view the change of the measuring pieces.

Exhaust System

## Accessory

**The customer need to prepare the parts as follows,**

| No | Name | Photo |
|---|---|---|
| 1 | Salt |  |
| 2 | Air compressor |  |

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DSC/TGA

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PCR/Gradient PCR/ RTPCR

TOC Analyzer

Laser Particle Size Analyzer

Ion Chromatograph

Water purification system

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2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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