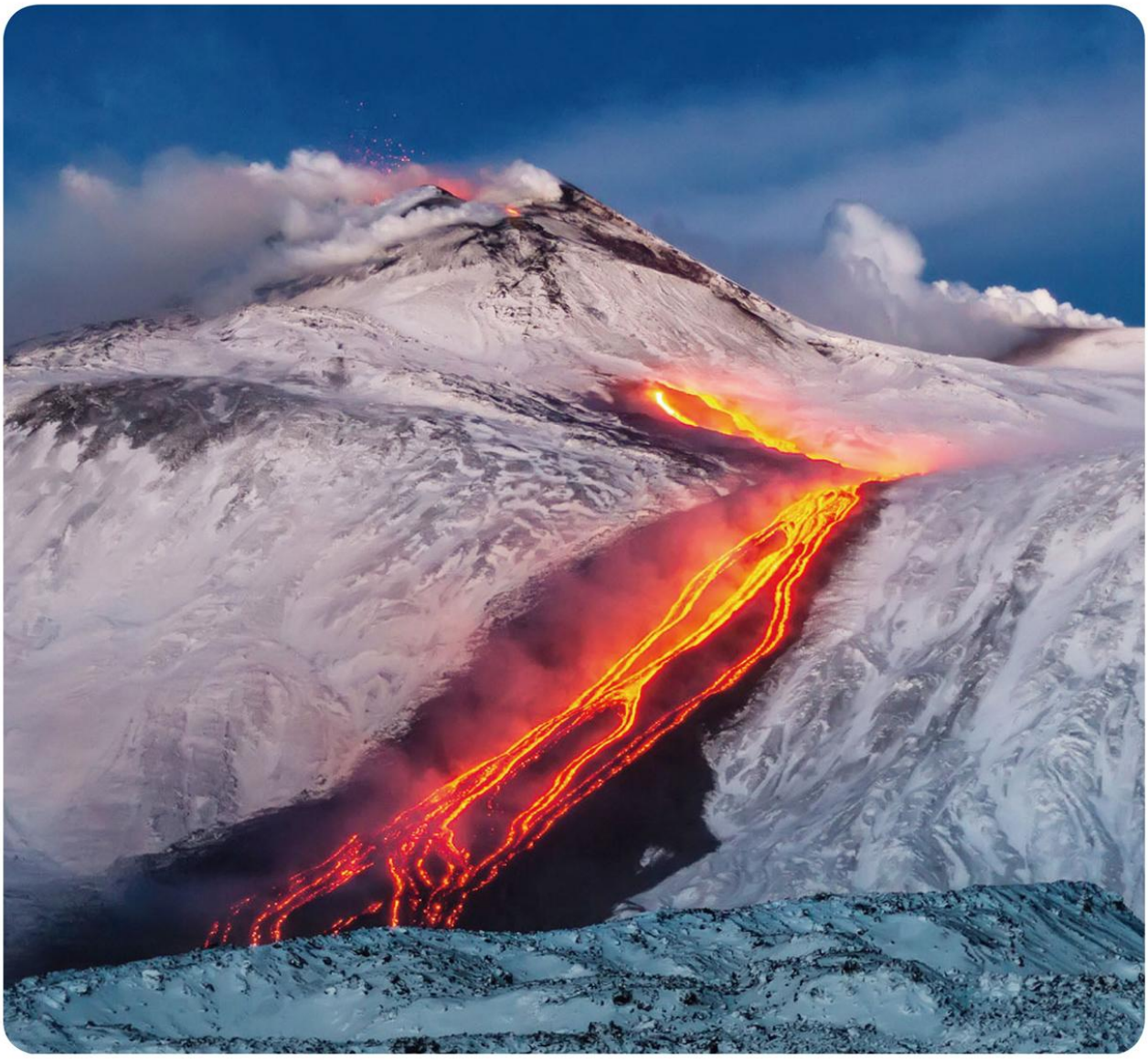
Technical Specification



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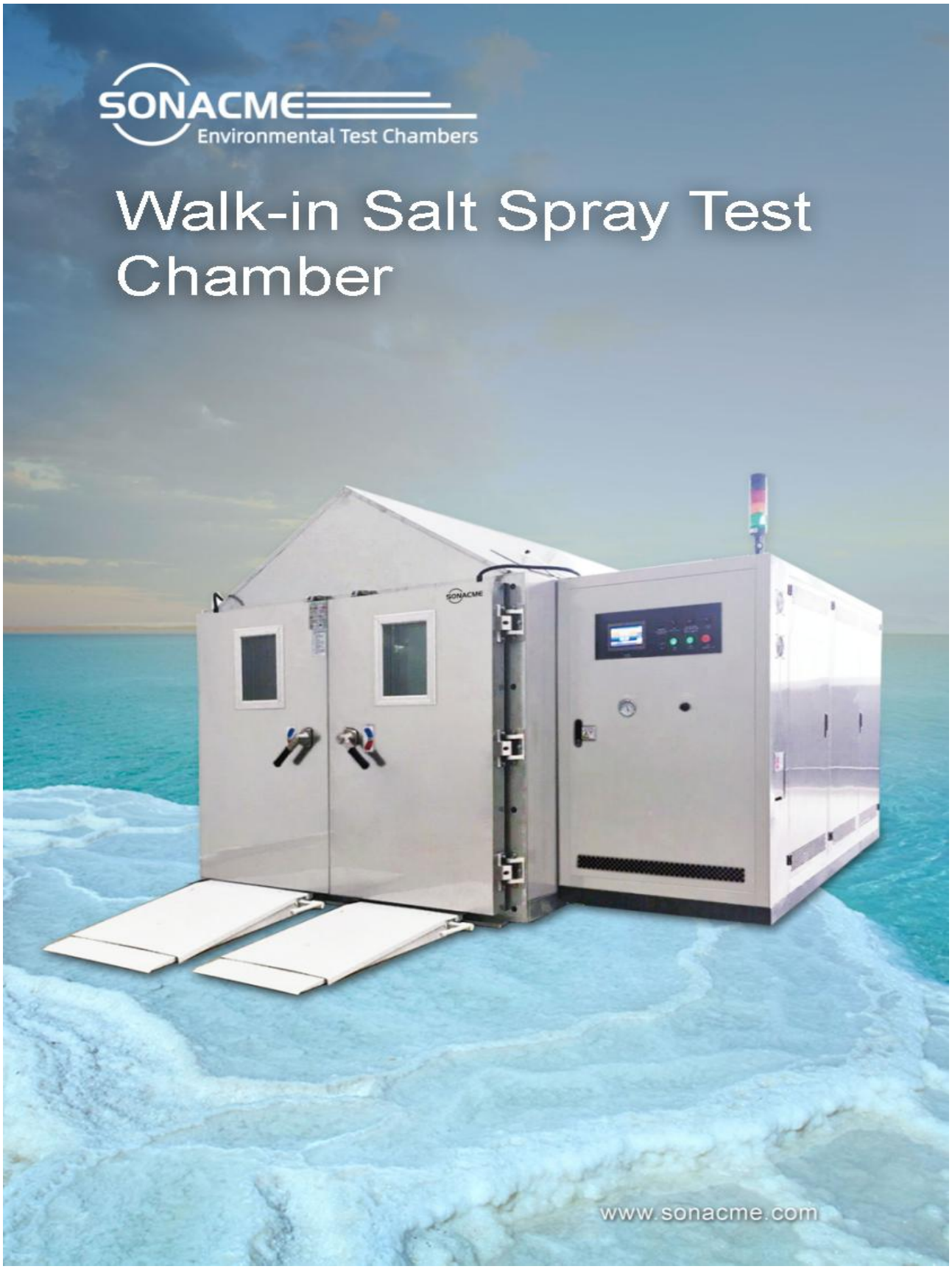


1. Product overview

This series of walk-in salt spray test chambers are mainly used for neutral salt spray tests (NSS) on large-sized and heavy-duty samples, and comply with the requirements of standards such as ISO 9227, GB/T 10125, and ASTM B117. The equipment adopts a walk-in design, facilitating the loading and testing of large workpieces and assembled products. It is widely used in quality inspection and reliability verification in industries such as automotive parts, electronic appliances, metal materials, and military equipment

2. Test Standard

- GB/T2423.17-2008/IEC 60068-2-11-1981 Salt spray test method
- ASTM.B117-19 Salt spray test
- JIS H8502 Salt spray test method
- GB/T10125-2021 Artificial atmosphere corrosion test and salt spray test
- ISO 9227-2017 Artificial atmosphere corrosion test and salt spray test
- GB-T5170.8-2008 Test method for environmental test equipment for electrical and electronic products-Salt spray test equipment
- GB-T5170.11-2008 Test method for corrosive gas test equipment
- GB-T10587-2006 Technical conditions of salt spray test chamber
- GJB 150.11A-2009 Military equipment Laboratory Environmental Test Methods - Part 11: Salt Spray test

3. Chamber material

1: External chamber: Corrosion-resistant PPR or PVC board, with a thickness of ≥10mm and reinforcing ribs
2: 8mm imported gray-white impact-resistant P.V.C board, high temperature resistance up to 85 ℃, corrosion resistance.
3: Chamber frame: 304 stainless steel square steel/Angle steel
4: Support frame: 10MM glass fiber rod, corrosion-resistant. The plastic steel V-shaped frame and the fiber rod are placed at an angle to ensure that the test object is at an oblique angle of 15-30 degrees.
5: The pressure barrel is seamlessly welded with 2.0MMSUS304 stainless steel plate.
6: Titanium alloy electric heating tube is used for heating, with high corrosion resistance and long service life, which is 3-5 years longer than ordinary stainless steel heating tubes.
7: Saturated air tank: SUS304 stainless steel, with insulation layer, automatic water level control
8: The unique design structure of water and gas separation to guarantee the experimental temperature . Which is more effective to avoid the frequently adding water to the pressure tank caused brine concentration reduction, and the leakage of the pressure tank.
9: Spray tower/nozzle: Quartz glass or polytetrafluoroethylene material, non-crystalline design

4. Technical Parameter:

Model	SWT-18000-SS
Testing room (m^3)	18m^3 Note: Top oblique volume is not included
Internal dimension	2000×3000×3000mm（W x D x H）
External dimension	3200×3300×3500mm（W x D x H）(Approx.)
Weight	2000kg (Approx.)
Maximum power	40KW (Approx.)
Power supply condition and power supply	AC 380V single-phase two-wire + protection grounding; Allowable voltage fluctuation range ±10%V; The frequency fluctuation range is 50±0.5HZ; Power supply in TN-S mode or TT mode The grounding resistance of the PGND cable is less than 4 ohms The user is required to configure the air or power switch of the corresponding capacity for the device at the installation site, and the switch must independently control the use of the device
load-bearing capacity	500kg
Temperature range	RT+5℃ to 60℃
Temperature fluctuation	≤±0.5℃ (without load)
Temperature uniformity	≤±2℃ (without load)
Temperature deviation	≤±2℃ (without load)
Salt spray deposition	1.0-2.0 ml/80cm^2·h (adjustable) Collect the average value for 16 consecutive hours
Spray pressure	0.5-1.5 kgf/cm^2 (adjustable)
Brine concentration	5% NaCl (NSS test)
PH value	6.5-7.2 (NSS test)
Humidity	≥95% RH Continuous spray state
Spraying method	Continuous spray / Intermittent spray (programmable)

5. Control system(Standard configuration)

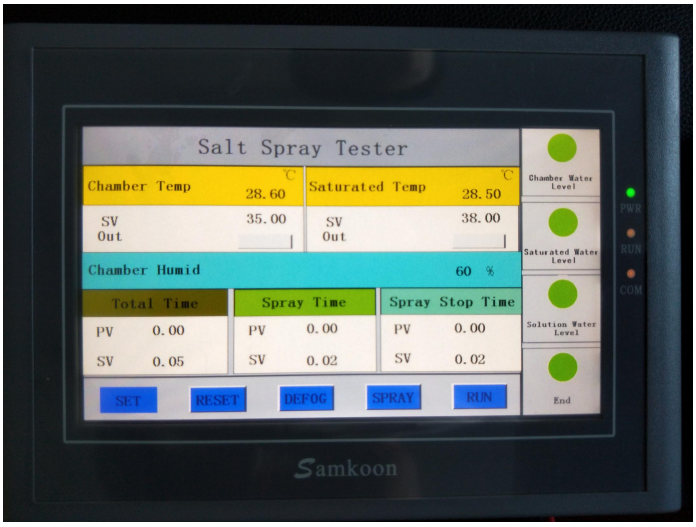
1. The temperature controller in the laboratory is 0-99 ℃, the liquid crystal double digital display has p.i.d automatic calculation, and the control error is ± 1 ℃
2. Pressure air barrel temperature control 0-99 ℃, LCD double digital display with p.i.d automatic calculation, control error ± 1 ℃
3. High precision multi-function digital display timing controller 0.1s-9990hr (Zhejiang Julong)
4. Time integrator 0-99999 HR (camscohm-1, Taiwan)
5. Relay (Omron, Japan)

6. Spray solenoid valve (Japan KSD)
7. Air filter (AIRTAC, Taiwan)
8. Pressure regulating valve (AIRTAC, Taiwan)
9. Water filling system: automatic and manual water filling system is adopted, and it is automatically supplemented when the water level is too low
10. Timing system: high precision timer with power failure memory function is adopted, and the test time setting is multifunctional 0.001s-9999.9h can be set Until the required time for product completion.

5.1 Touch screen control system

Using a 7-inch /10-inch touch controller, it can conduct constant value (i.e. continuous, or constant temperature) experiments or programmable (intermittent, cyclic) salt spray experiments. One of them can realize multiple functions and meet the different salt spray experiment requirements of customers High precision temperature control module, PID automatic calculation control temperature, high stability platinum temperature probe, error ± 0.3 ℃.

Timing mode; Hour mode,
The controllers are all on the same panel, which is easy to operate and clear at a glance. The temperature data in the experimental process is stored accurately and intuitively, and the accuracy of analysis is high.



6. Water filling system

Automatic / manual water filling system is adopted, with automatic / manual water filling function when the water level is insufficient. The experiment is uninterrupted and meets the diversified environmental requirements of guests. (automatic water replenishment only needs to be connected to the tap water pipe)

7. Heating Method

In the salt spray experiment, the method of direct steam heating is adopted, which has the advantages of fast heating speed, uniform temperature distribution and short standby time.

8. Control method

Rocker type standard operation. With full detection fault early warning system. When the fault occurs, it can be alerted.
Built in manual demist function The product can be placed or viewed during the experiment to remove the salt mist accumulated in the experiment.

9. Protection devices

With double over-temperature protection (Italy EGO), the heating power can be automatically cut off when the temperature control meter fails or the heating system fails. Avoid high temperature damage to the instrument.
Double low water level protection to prevent dry burning and damage to the heating pipes of the laboratory and pressure barrels.
With overload short circuit protection. To prevent damage to the instrument and the electronic control accessories inside the instrument in the event of an abnormality. (A reminder of the low salt level of the real brine bucket in the experiment is attached to avoid abnormality in the experiment after the brine is completed)

10. Measuring cylinder

A built-in fog collection tube is used. Compared with the traditional external type, it is less likely to be damaged.

11. Spay nozzle

Precision quartz glass nozzle Ensure no crystallization after 4000 hours of use The spray tower is

equipped with a conical disperser, which has the function of guiding fog

Adjust the fog saving amount, and evenly drop fog and other functions.

12. Sealing method

The inner and outer chamber are connected with sealing grooves and sealed with water Prevent salt mist from leaking out.

13. Control panel main parts

Name	Qty
Temperature controller (Huibang)	2pcs
Timing controller (Zhejiang Julong)	1pc
Timer	1pc
Platinum resistance (Baoguang, Hong Kong)	2pc
Spray solenoid valve (Japan KSD)	1pc
Solid state relay (Schneider, Germany)	2pc
Intermediate relay (Japan ormon)	3 sets
Heating tube (customized titanium tube)	1pc
Pressure regulating valve (AIRTAC, Taiwan)	1pc
Air filter (AIRTAC, Taiwan)	1pc

14. Appendix:

Prats name	Qty	Parts name	Qty
V-shape sample hol der	1 group	O shape sample holder	1 group
Sodium chloride	2 bottles	5000measuring bucket	1pc
Hydrometer	1pc	Operation manual	1pc

15. Temperature range

1: Laboratory temperature: 35℃--50℃ (can be set arbitrarily)

2: Pressure barrel temperature: 47℃--63℃ (can be set arbitrarily)

16. Heating rate

1: Laboratory, normal temperature -- → 35 ℃, about 35 minutes

2: Pressure barrel, normal temperature -- → 47 ℃, about 15 minutes

17. Brine concentration 5% PH value requirements:

Neutral test 6.0～7.0 Acid test 3.0～3.1

PH value of spray solution: neutral 6.5～7.2 acid 3.1～3.3

Note: The loss of carbon dioxide in the solution during spraying may cause a change in pH value. The content of carbon dioxide in the solution can be reduced by the following methods, such as heating the solution to above 35°C before placing it in the test equipment, or using fresh boiling water to prepare the solution. , can avoid the change of pH value, acid test or copper accelerated salt spray test to ensure the pH value of spray solution, can adjust the pH value of the prepared liquid medicine to 2.8 ~ 3.0 and check whether the solution and/or solute meet the requirements

18. Power supply requirements

AC220V single-phase two-wire + protective grounding or AC380V three-phase five wire system; Allowable voltage fluctuation range ± 10% v;

The allowable frequency fluctuation range is 50 ± 0.5Hz;

The user is required to configure the air or power switch with corresponding capacity for the equipment at the installation site, and this switch must independently control the use of the equipment.

19. Air source requirements

Air compressor: Power 2.5P (or above) Air storage tank capacity 60L (or above)