



**BANBROS ENGINEERING PVT. LTD.**

**The Precision Measurement**

# **TOUCH SCREEN SALT SPRAY TEST CHAMBER WITH PLC CONTROLLER**

- *VALUE*
- *VERSATILITY*
- *PERFORMANCE*



**BSC-AT PLC SERIES**

**DESCRIPTION:**

This tester is designed for surface treatment of corrosion-resistant capacity test for various materials, including paint, electroplating, organic and inorganic film, anti-rust oil, chemical treatment, and then achieves a long period of resistance to corrosion products.

**FEATURES:**

- HMI based Touchscreen (DELTA Make).
- Inbuilt temperature settings.
- Temperature device adopts digital display, SSR control, precision is 0.1 centigrade degree.
- Chamber adopts direct steam heating method, fast warming, shortening standby time.
- Salt Spray Test mode enabled to set parameters according to test sample.
- Temperature setting and Preset Timer functions incorporated in HMI for accuracy and repeatability.
- Corrosion Resistant PT-100 sensor.
- Solid state digital Programmable Temperature Controller.
- Program profile for selecting test parameters and performing the test.
- Easy Data Management. User can create PID settings, Air Saturator settings, test temperature, test and air purge time etc.
- With dual over-temperature protection, water shortage warning, ensure safety use.
- Current test running status display.
- Robust Construction with Fiber reinforced body (Double wall).
- Ease of use of sample placements inside the test chamber.
- Air purge after test for fog settlement.
- Microprocessor based inbuilt PID controller.
- Automatic add water when water shortage, with a group of manually water.
- Special glass nozzle, guarantee non-crystalline block for 4000 hours.
- Spray tower attached cone diffuser, with functions of directional mist, adjustable mist, and uniformity fog lamp.
- Reservoir Tank inside sponge filter.
- Auto Tuning feature selection.
- Run time vs temperature graph.
- Data recording with temperature data reading.
- 5 point Auto Tuning feature selection.
- Low compressed air alarm.
- Low NACL solution alarm.
- Maintain fault history (Easy to diagnose the exact issue).

**TECHNICAL SPECIFICATIONS:**

Model No.	BSC-108AT-PLC	BSC-270AT-PLC	BSC-480AT-PLC	BSC-800AT-PLC
Interior Dimensions(Mm)	600X450X400mm	900X600X500mm	1200X850X500mm	1600X1000X550mm
Exterior Dimensions(Mm)	1130X630X1070mm	1460X910X1280mm	2200X1200X1450mm	2600X1450X1550mm
Chamber Volume	108 L	270 L	480 L	800 L
Solution Tank	15L	25 L	40 L	40 L
Power Supply	AC 220V 50HZ			
Ambient Temp. & Humid. Range	+5°C ~ +35°C / <85% RH			
Testing Temperature	NSS ACSS 35°C±1°C / CASS 50°C±1°C			
Air Temperature	NSS ACSS 47°C±1°C /CASS 63°C±1°C			
Solution Consistence	NaCl 5%			
Ph Value	NASS ACSS:6.5~7.2 / CASS:3.0~3.2			
Temperature Fluctuation	≤±0.5°C			
Temperature Uniformity	≤2. 0°C			
Temperature Deviation	≤±2.0°C			
Spray Quantum	1.0~2.0(ml/80cm <sup>2</sup> /h)			
Chamber Material	polyvinyl chloride (PVC)			
Heater	Corrosion-resistant titanium tube			
Temperature Sensor	Platinum Resistance (PT-100)			
Safety Device	Over-temperature protection, leakage protection			

**TESTING MACHINE STRUCTURE: -****MATERIALS USED:**

- Test chamber: use the PVC gray impact resistance plate (from Germany), 5mm in thickness.
- Thermostat water tank: use the gray impact resistance plate of PVC (from Germany), 5mm in thickness and it is equipped with the auto water level controller to avoid the inconvenience to refill the water by manpower.
- The upper cover of the test chamber: use the European transparent acrylic plate, 5mm in thickness.
- The barrel for refilling the reagent: equipped with a built-in water level gauge. Use the gray impact resistance.
- Plate made of PVC 5mm in thickness, which looks as an integral whole with the machine stand.
- The basket supporter inside the test chamber: use the gray PVC impact resistance plate.
- The test angle can be freely adjusted to 15° and 30°
  - 1) 48 test pieces can be placed by the angle of 15 degree
  - 2) 30 test pieces can be placed by the angle of 30 degree
- Note: the size of the test pieces is 150×70mm H×D
- The saturated air tank: made of stainless steel, 2mm in thickness and equipped with the auto water level.
- Controller to avoid the inconvenience to refill the water by manpower.



#### APPLICATION TEMPERATURE: -

- Set the type according to the standards of CNS, JIS and ASTM:
- The test method of salt water:  
The test chamber:  $35\text{C} \pm 1\text{ C}$  / The saturated air barrel:  $47\text{C} \pm 1\text{ C}$
- The test method of corrosive resistant:  
The test chamber:  $50\text{C} \pm 1\text{ C}$  / The saturated air barrel:  $63\text{C} \pm 1\text{ C}$

#### SPRAYING MODES: -

- Conical disperser: It can adjust the spraying and make the reek and falling reek even.
- Glass nozzles. The accurate glass nozzles (self-made)
- Note: volume of spraying:  $1\sim 2\text{ ml} / 80\text{CM}^2 / 1\text{h}$  (self-made)

#### CONTROL SYSTEM: -

- Temperature control of test chamber  $0\sim 99.9$  with accuracy in  $0.1$  (LED with 2 figures) PID automatic calculator: 1 No.
- Safe temperature controller for liquid expansion in heating channel  $0\sim 110$ : 2 Nos.
- The temperature controller of saturated air tank:  $0\sim 99.9$  with accuracy in  $0.1$  . (LED with 2 figures), able, PID automatic calculator: 1 No.
- Time controller: ANLY AH5R-2: 1 No.
- Total timer  $0\sim 9999.9\text{ hr}$ : 1 No.
- The first stage pressure adjusting structure:
  - 1) First pressure regulating valve with a set of pressure gauge (pre-adjust To  $2\sim 2.5\text{kg}/\text{CM}^2$ )
  - 2) Second pressure regulating valve: pressure regulating valve  $1/4''\text{ PT}$ , pressure  $0\sim 4.0\text{kg}/\text{CM}^2$ , adjustable (adjust the spraying pressure to  $1.0\text{kg}/\text{CM}^2$ ).
  - 3) Pressure gauge  $2\text{kg}/\text{CM}^2$  ( $0.1\text{kg}/\text{CM}^2$ ): 1 No.

#### SAFETY DEVICES: -

- Water level controller: 1 Set
- State warning lamp: 3 Nos.
- Protection switch for over temperature: 2 Sets

#### STANDARD ACCESSORIES: -

- Bracket for 1 set (can carry the weight of test samples under 2kgs).
- 500g NaCl reagent contained in 2 bottles (contained in 4 bottles for standard type)
- 10kg barrel for salt water making: 1 No.
- 80cm<sup>2</sup> standard collecting cup: 1 No. (2pcs. for standard type)
- 50ML graduated cylinder: 1 No. (2pcs. for standard type)
- The detailed operational manual: 1 No.

**FOR TOUCH SCREEN CONTROLLER FEATURES: -**

- AEE type 6.5-inch LCD touch screen control.
- Digital circuit design, PID automatic calculation for temperature control.
- Temp. resolution 0.1
- Touch modules can continuously use more than 200,000times.
- Complete test function.
- Dynamic display working interface, man-machine dialogue interface.
- A buzzer alarm to signal the working condition of the machine.
- Adopt ergonomic design, beautiful shape, easy operation.
- Power outage time memory function. Once the machine suddenly loses power or shut down, the test data and set data will be kept to the reboot.
- All function keys are integrated on the touch screen, all circuit adopts integrated circuit and modular structure greatly reduce the incidence of failure.
- Lock screen function, operator can lock the screen when he need leave, it can prevent other persons to wrong operate the machine.



**\* Due to continuous product development, Image & specification can be upgrade.**