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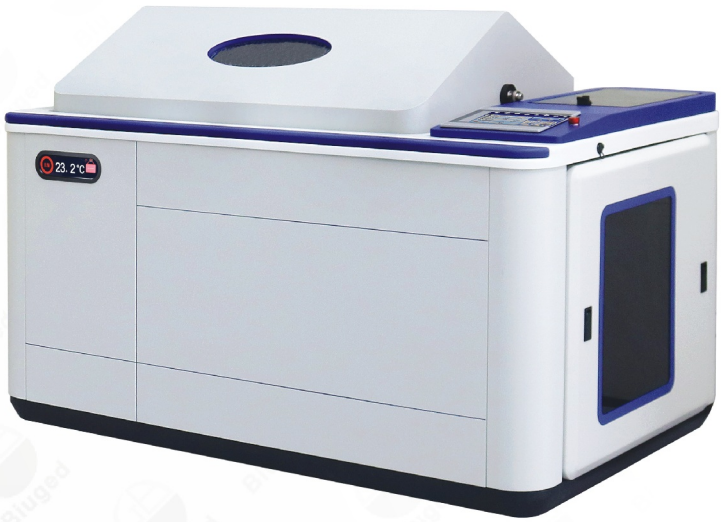
# Multi-functional Cyclic Corrosion Test Cabinets

For most artificial accelerated tests in laboratory, getting a consistent testing result with outdoor is the most important purpose. Prior to cyclic corrosion testing, conventional salt spray（a continuous salt spray at 35℃）, was the most popular way to simulate corrosion in a lab. Because conventional salt spray methods failed to simulate the natural wet/dry cycles of the outdoors, test results frequently provided poor correlation to outdoors. In order to better simulate the complex and changeable external natural environment, cyclic corrosion test has gradually been considered as an important and effective method for the life assessment of industrial products.

The Cyclic Corrosion Test Cabinets is also called CCT&CRH Cabinets. Some industrial products need to be exposed to repeated cyclic salt spray, dry and static environment with high humidity and low humidity. These tests were initially switched between several test chambers manually. The multi-functional Cyclic Corrosion Test Cabinets solves this problem well, and realizes the automatic test of these cycles in a chamber.

In a typical cyclic corrosion cabinet, all specimens are exposed to a series of different environments in a repetitive cycle that simulates the outdoors. Simple cycles, such as Prohesion, may consist of cycling between salt fog and dry conditions. More sophisticated automotive methods may ask for multi-step cycles that incorporate humidity, dry air or condensation, along with salt spray and dry-off.

Within one chamber, users can cycle easily through a series of the most significant corrosion environments. Even extremely complex test cycles can easily be programmed with the controller. Biuged CCT&CRH Cabinets can perform salt spray, Prohesion, and 100% humidity for most cyclic automotive tests.




The Cyclic Corrosion Test Cabinets developed and produced by Biuged sets and controls various parameters through the touch screen, and combines multiple tests such as salt spray corrosion, humidity（high temperature and high humidity, low temperature and low humidity）, air drying（hot drying and air drying）to simulate a variety of cyclic corrosion tests. Of course, special cyclic corrosion test can also be simulated through the combination of other accessories. The instrument can also conduct neutral salt spray test（NSS）, acetic acid salt spray test（AASS）, copper accelerated acetic acid salt spray test（CASS）, water spray test, damp heat test, drying test and standard atmospheric environment test separately.

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## Standards

**ISO 4611**《Plastics-Determination of the effects of exposure to damp heat, water spray and salt mist》

**ISO 7253**《Paints and varnishes -- Determination of resistance to neutral salt spray（fog）》

**ISO 9227**《Corrosion tests in artificial atmospheres -- Salt spray tests》

**ISO 11493**《Corrosion of metals and alloys - Accelerated testing involving cyclic exposure to salt mist, "dry" and "wet" conditions》

**ISO DIN EN 16151**《Corrosion of Metals and Alloys - Accelerated Cyclic Tests With Exposure to Acidified Salt Spray, "dry" and "wet" Conditions》

**ISO 16701**《Corrosion of metals and alloys -- Corrosion in artificial atmosphere -- Accelerated corrosion test involving exposure under controlled conditions of humidity cycling and intermittent spraying of a salt solution》

**ASTM B117**《Standard Practice for Operating Salt Spray（Fog）Apparatus》

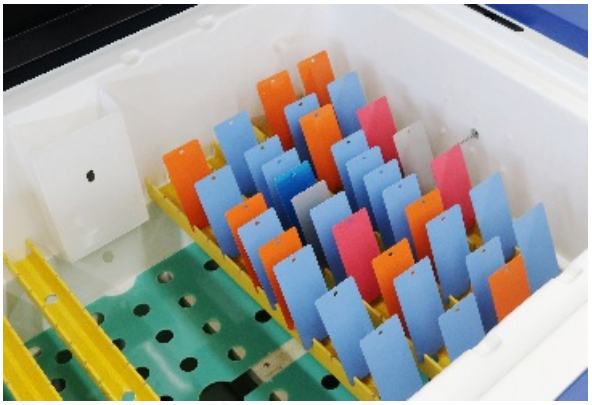
**ASTM B368**《Standard Test Method for Copper-Accelerated Acetic Acid-Salt Spray（Fog）Testing （CASS Test）》

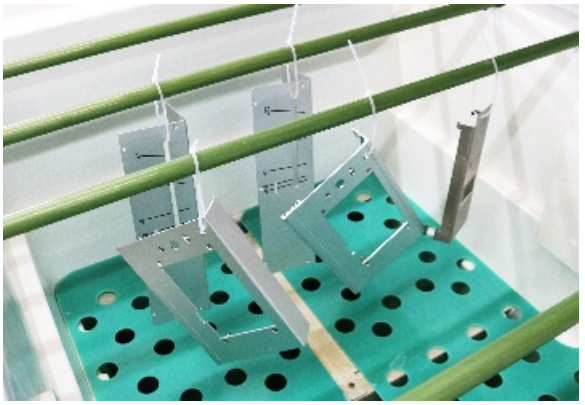
**ASTM B380**《Standard Test Method for Corrosion Testing of Decorative Electrodeposited Coatings by the Corrodkote Procedure》

**ASTM G85 - 11**《Standard Practice for Modified Salt Spray（Fog）Testing》

**ASTM D1735**《Standard Practice for Testing Water Resistance of Coatings Using Water Fog Apparatus》

**DIN 50021**《Salt Spray Testing》





## Features

◆ New structure, the whole body is made of composite plastic steel, super corrosion resistance. Operator can set and control varies testing parameters by 10 inch colorful touch screen.

◆ Can run Neutral Salt Spray Testing (NSS) , Acetic Acid Salt Spray Testing (AASS) Copper-Accelerated Acetic Acid-Salt Spray (Fog) Testing (CASS) Prohesion Testing (Salt Spray + Dry) CCT Testing (Salt Spray + Dry + Humidity).

◆ All testing data can be stored and download by U disc.

◆ The temperature of working room is controlled by air heating. The concentration and PH value of the spray solution will not be affected by any factors.

◆ Equipped with precise metering pump which control accurately and adjust the amount of spraying fog, ensure a stable and same collection amount.

◆ Equipped with precise electric proportion valve, with precise parameter adjustment and easy setting, equipped with pressure monitoring, abnormal situation alarm and automatic shutdown.

◆ With imported atomizing nozzles, it has low water consumption, reducing both the consumption and the number of times test solutions need to be prepared.

◆ Real-time monitor the amount of salt solution and remind or alarm when it's shortage.

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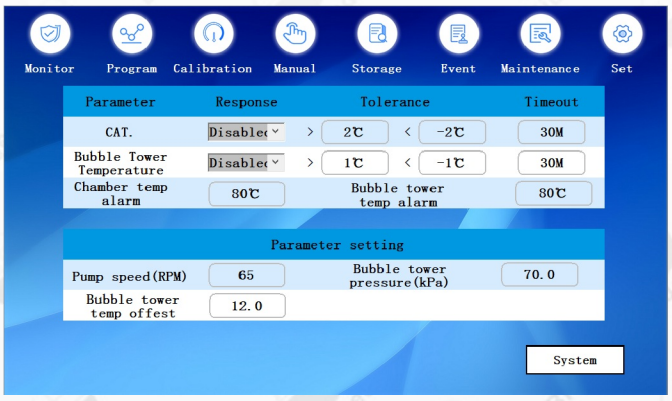
## Main Technical Parameters

| Ordering Information →<br>Technical Parameters ↓ | BGD 885/1<br>（Salt fog spray） | BGD 885/2<br>（CCT/Salt fog spray+dry+100% humi.） | BGD 885/3<br>（CRH/Salt fog spray+dry+settable humi.） |
|---|---|---|---|
| Working Room Size ( W×H×D) | 1140mm×760mm×700mm | | |
| Working Room Capacity<br>（no including V shape cover） | 600L | | |
| Overall Size ( W×H×D), mm | 1780mm×1080mm×1250mm | | |
| Salt Solution Reservoir | 120 L （External） | | |
| Temperature Uniformity | ≤ ±2℃ ( No-load ) | | |
| Temperature Stability | ≤ ±0.5℃ ( No-load ) | | |
| Temperature Deviation of Working Room | ± 1.0℃ | | |
| Temperature Increasing Rate | Rt→50℃ less than 45 minutes ( working room ) ;<br>Rt→63℃ less than 45 minutes ( saturated barrel ) | | |
| Temperature Range（Salt Fog） | Rt ~ 60℃ | | |
| Temperature Range（Humidity） | --- | RT+5℃ ~ 60℃ | RT+5℃ ~ 60℃ |
| Temperature Range<br>（Dwell/without forced air） | Rt ~ 60℃ | | |
| Temperature Range<br>（Dry-off/with forced air） | --- | Rt ~ 70℃ | Rt ~ 70℃ |
| Humidity Range | --- | 95% ~ 100% | 20% ~ 100%<br>( via air pre-conditioner ) |
| Max. Specimen Panel Capacity<br>( 15cm×7cm ) | 160 pcs ( 10 panel racks×16 slots ea ) | | |
| Hanging Rods | 6 pcs ( length 80cm ) | | |
| Collectors | 2 | | |
| Salt Solution Consumption | ( 12 ~ 15 ) L/d | | |
| Compressed Air Requirement | ( 4 ~ 8 ) bar, flow rate≥ 28L/min | | |
| Supply Water Requirement | High Purity Deionized Water, conductivity≤0.1uS/cm | | |
| Power Supply | AC （220±10）V，50/60Hz，Max. current 16A | | |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