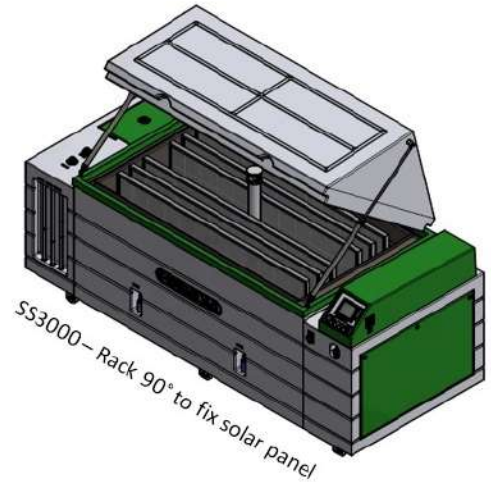


## Salt Spray Cyclic Test Chamber – CASS/AASS (Salt + Acids) /Humidity/Dry



Illustrative Photo SS1300



SS3000 – Rack 90° to fix solar panel



Touch Screen- SD Data Logger



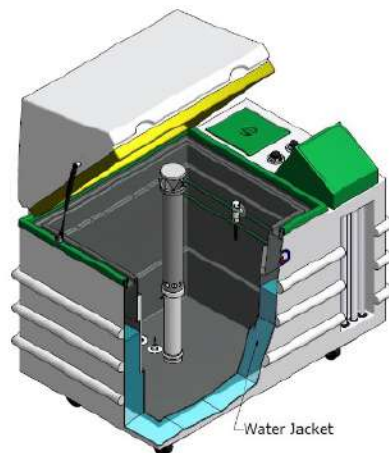
Specimen inside the chamber



Inclined Rack for Coupons

**Indirect heating of the internal cabinet through the water jacket (ASTM B368/ASTM G85 A1, A3, A4), ensuring great homogeneity of the internal temperature of the test cabinet.**

**US PATENT # 10371623**



Water Jacket

**Copper-Accelerated Acetic Acid-Salt Spray (Fog) Testing (CASS Test).  
Acetic Acid Salt Spray (FOG) Testing (AASS Test).**

CASS / AASS especially useful for testing decorative coatings of copper +nickel + chromium, or nickel + chromium. It has also been found suitable for testing anodic and organic coatings on aluminum.

Allows you to program multiple fully automatic cycles with 4 different modes:

- Salt Spray Mode (ASTM B368/ ASTM G85 A1 / ISO 9227 / JIS Z2371 / DIN 50021)
  - Humidity Mode (ASTM D2247 / ASTM D1735 /ISO 6270-2)
    - Natural Dry Mode
    - Soak Mode

The SS series meets:

ASTM G 85 A1, A2 (Consult us – C.C.T) , A3 (SWAAT TEST – Optional Mode), A4 (SO<sub>2</sub> - Optional Mode), A5 Prohesion (consult us – C.C.T)

**Models**

	SS 600 CASS/AASS	SS 1300 CASS/AASS	SS 3000 CASS/AASS	SS 5000 CASS/AASS
<b>Internal Dimension W x D x H (mm)</b>	32.3"x 25.6"x 30.7" (820 x 650 x 780)	51.2"x 30.7"x 35.4" (1,400 x 850 x 850)	81.9"x 42.5"x 39.4" (2,050 x 1,080 x 1,000)	78.8"x 59.1" x 39.4" (2,000 x 1,500 x 1,000)
<b>External Dimension Lid open W x D x H (mm)</b>	74.5"x 43.3"x 30.7" (1,890 x 1,100 x 1,440)	97.7" x 45.3"x 66.9" (2,480 x 1,150 x 1,700)	133.9"x 63.0"x 70.9" (3,400 x 1,600 x 1,800)	150.0"x 70.9" x 82.7" (3,800 x 1,800 x 2,100)
<b>Approx. Crated Dimensions W x D x H (mm)</b>	63"x 45.3"x 67" (1,600 x 1,150 x 1,700)	102.4"x 51.2"x 72.9" (2,600 x 1,300 x 1,850)	140"x 70"x 83" (3,550 x 1,700 x 2,110)	Pallets / Container
<b>Approximate net weight.</b>	452 lbs (205 kg)	802 lbs (364 kg)	1,212 lbs (550 kg)	1,962 lbs (890 kg)
<b>Approximate Shipping Weight.</b>	551 lbs (250 kg)	919 lbs (417 kg)	1,874 lbs (850 kg)	2,204 lbs (1,000 Kg)
<b>Approximate test – Lid Included Approx.</b>	21.2 cu.ft 600 (L)	45.9 cu.ft (1,300 L)	106.0 cu.ft (3,000 L)	176.6 cu.ft (5,000 L)
<b>FLA (208 ~ 230 V 50/60 Hz– 1 φ)</b>	25 Amp.	35 Amp.	35 Amp	45 Amp.
<b>Chamber exhaust pipe without siphon PVC.</b>	2"	2"	4"	4"

**Technical Specifications:**

<b>Chamber Temperature Salt Spray Range:</b>	Ambient + 9°F (5°C) - +131°F (55°C)
<b>Bubble Tower Temperature Salt Spray Range:</b>	Ambient + 9°F (5°C) - +165°F (74°C)
<b>Collect fog per ASTM B 117</b>	Fog collection Range: 1.0 - 2.0 ml/hour, continuous 16 hours of test. (others consult us)
<b>Condensation Humidity Temperature Range:</b>	Ambient + 9°F (5°C) - +140°F (60°C)

	97% +/- 3% * Others consult us.
Natural Dry Temperature and Relative Humidity Range:	Ambient (labs) Temperature x Relative Humidity
Soak Temperature Range:	Ambient + 9°F (5°C) - +140°F (60°C)
Bubble Tower with constant level, no auxiliary tank necessary for long duration test	
Centralized Atomization Nozzle with distribution tower and cone in accordance with: ASTM B117, pg. 4, Annex A ISO 9227, JIS Z 2371	
<ul style="list-style-type: none"> <li>- Designed entirely in fiberglass (US patent 10371623) Indirect Heating through water jacket according to ASTM B117 to ensure that no metallic heating will affect corrosivity of testing results.</li> <li>- Lid engineered with smooth surface, without seams, per ASTM B117, drops of solution which accumulate on the ceiling of the chamber shall not be permitted to fall on the specimens being exposed.</li> <li>- Unibody construction incorporating solution tank, bubble tower in one cabinet.</li> <li>- Central Atomization Tower engineered to ASTM B117 standards ensuring collect fog uniformity and homogenous results.</li> </ul>	
Data Acquisition Software - option: <ul style="list-style-type: none"> <li>- By PC (RS 232, USB or RS 485)</li> <li>- 2 types: PC or SD Card.</li> </ul>	
Lid safety system	Included
Visual and audible security system	Included
Alarm message on touch screen	Included
Critical test parameters displayed on one screen	Included



20 programmed test	included
Preventive maintenance messages are automatically shown on the touch screen	Included
Error messages displayed	included
Pneumatic lid with safety systems	Included
External collect Fog	Included
- Mult-day, continuous test tank. - Maximum and minimum level indication. - Automatic mixing solution during the test – settable in panel touch screen.	included
Recommended Lab conditions	Temperature: 63 °F (17°C) - 82°F (28°C), Relative humidity: Maximum 85% (without condensation)
Test water requirement	ASTM D 1193 Type IV
DEI water pressure	7 to 14 psi (0.5 to 1.0 kgf/cm <sup>2</sup> )
DEI water input Ø	1/2"
Constant Pressure	56 psi +/- 0.7 psi (4 kgf/cm <sup>2</sup> )
Drink Water Supply	Chamber cleaning
Corrosive Agent	Per Standard
Lab exhaust	Fume Hood and motor – if necessary
Drain	½" PVC tubing or PVC drain 4" at least
Measurement items: pH, Conductivity NaCl concentration	In accordance with ASTM B 117, JIS Z 2374, ISO 9227, ASTM G85 A3, ASTM D2247, ASTM D1735
Service Area	minimum of 19.6" (50 cm) for an easier cleaning, assembling and maintenance
1 (One) Year Parts Warranty against manufacturing defects from date of delivery at customer's site. This assumes equipment is used under normal operating conditions in accordance to the instruction manual. This warranty does not apply to glassware (lamps). In case of non-warranty issues during warranty period, actual expenses shall apply.	
<p><b>Note 1:</b> All our equipment is delivered with Installation, Maintenance and User Manual. We believe this material is enough for the correct use of the equipment. We are available for further questions and clarifications. Additionally, if desired, we can provide the technicians to assemble the equipment and conduct staff training at the client's site. (Cost available upon request).</p>	
<p><b>Note 2:</b> Appearance and specifications of equipment are subject to change without prior notice.</p>	
<p><b>Note 3:</b> We highly recommend that you don't use the same chamber for different solutions, e.g. don't use a Salt Spray chamber for CASS; Kesternich (SO<sub>2</sub>) test or CASS chamber for humidity test due the chemical contamination that may distort the results. See item 4.6 of Standard ISO 9227.</p>	

## Optional Accessories

CODE:

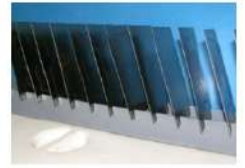
EQOP. 0001 – SS 600e

EQOP. 0002 – SS 1000e

EQOP. 0003 – SS 13000e

EQOP. 0004 – SS 3000e / SS 5000e

- (1) rack - 15° or 20° inclination in accordance with ASTM B117 and ISO 9227.



CODE: EQOP.0005

- Special rack for customer supplied test sample.

CODE: EQOP.0008

- (2) Fog collectors.



CODE: EQOP.0009

- Pressure regulator with water, oil filter and pressure gauge.



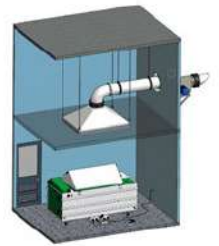
CODE:

EQOP.0011 - SS 600e / SS 1000e

EQOP. 0144 - SS 1300e / SS 3000e /

SS 5000e

- Fiberglass Fume Hood (hood only).



CODE: EQOP.0012

- Fiberglass axial fan assembly capacity: 1940 cfm. 220 ~ 208 V. Net weight: 88 lbs. (40 kg).



CODE: EQOP.0013

- DI Water assembly includes: activated carbon water filter, DI column, LED water quality indicator.



CODE: EQOP.0014

- Spare DI water column.



CODE: EQOP.0015

- Spare activated carbon water filter.



CODE: EQOP.0016

- pH meter – Digital with standard solution.



CODE: EQOP.0017

- Conductivity meter – Digital with standard solution.



CODE: EQOP.0018

- Densitymeter to measure concentration of saline solution in accordance to ASTM B117.



CODE: EQOP.0019

- Plastic bucket with 50lb Salt EQCORR with chemical analysis Certificate in accordance with ASTM B117, ISO 9227, JIS Z2371, MILS STD810G.



CODE: EQOP.0038

Test Panels – 2.9" x 5" (76mm x 127mm). In accordance with ASTM B117 (100 Pieces).



CODE: EQOP.0075

- Test Panels – 2.7" x 5.9" (70mm x 150mm). In accordance with ISO 9227 (100 pieces).



CODE: EQOP.0044

- Supervisory Software: Data Acquisition: By PC (RS 232/ 485 - USB)



CODE: EQOP.0047

- Digital relative humidity indication, software, wet bulb.



CODE:

EQOP.0118 – SS 600e

EQOP.0119 – SS 1000e

EQOP.0120 – SS 3000e / SS 5000e

- Grid type test brackets supports 265 lbs (120 kg) with distributed load.



CODE: EQOP.0035

- Cable port  $\varnothing = 2"$  (Other diameter, consult us)



CODE: EQOP.0169

- Inclined specimen holder for 36 screws with Nylon threaded bushings to be defined by the customer (maximum  $\varnothing 22\text{mm}$ )



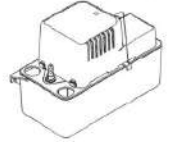
CODE: EQOP.0111

- Gas Scrubber – Exhaust system.



CODE: EQOP.0068

- Pump to drain precipitated solution - Salt Spray Chamber



CODE: EQOP.0034

- Solution tank for long term testing capacity 71.3 gal (270 Liters), with automatic solution mix and feed.



CODE: EQOP.0161

- Manual mix solution

CODE: EQOP.0162

- D.I water entrance to solution tank

CODE: EQOP.0056

- CSA Certificate (Canada)

Consult us

CODE: EQOP.0007

- Side window in lid to prevent dripping on samples -  
ASTM B117 - ISO 9227 –  
JIS Z2371 - MILS



CODE: EQOP.0169

- Plug SWAAT TEST (ASTM G 85 ap. 3)



CODE: EQOP. 0046

- ASTM G 85 A4 – SO2 Injections

Consult us

CODE: 0131

- ASTM G 85 A5 – PROHESION

Consult us

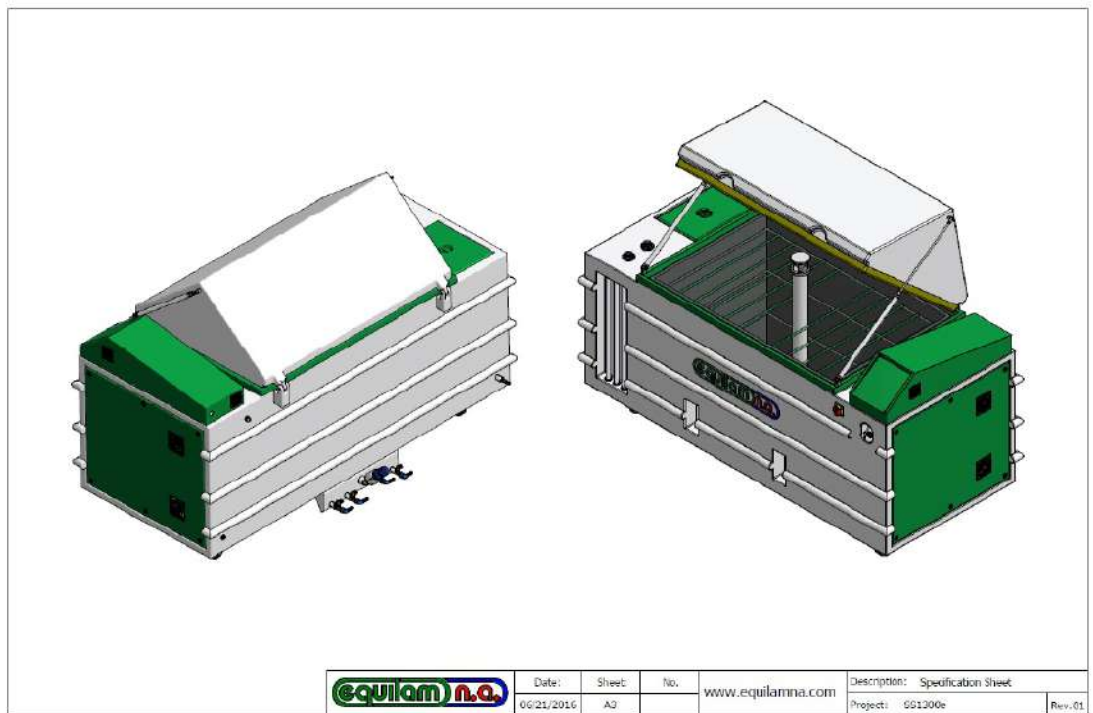


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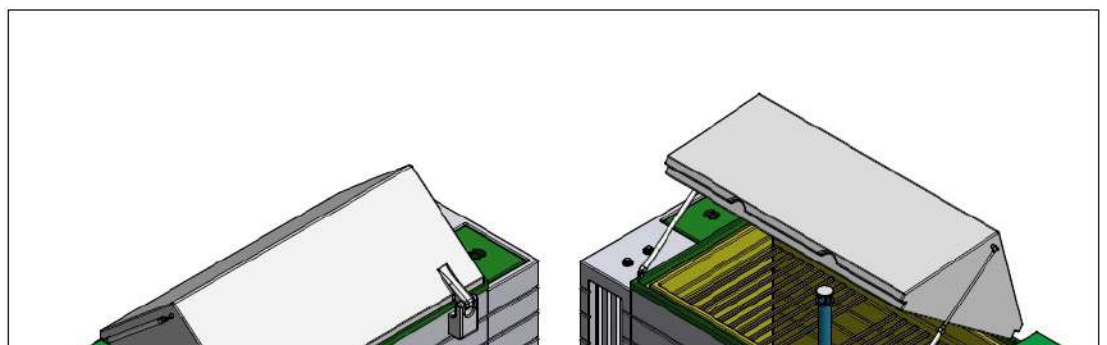
- DRY Mode in accordance MIL STD 810 G

Consult us

- Further optional requests shall be considered upon request.
- Chambers with other internal volumes consult us.



SS600 – SS1300

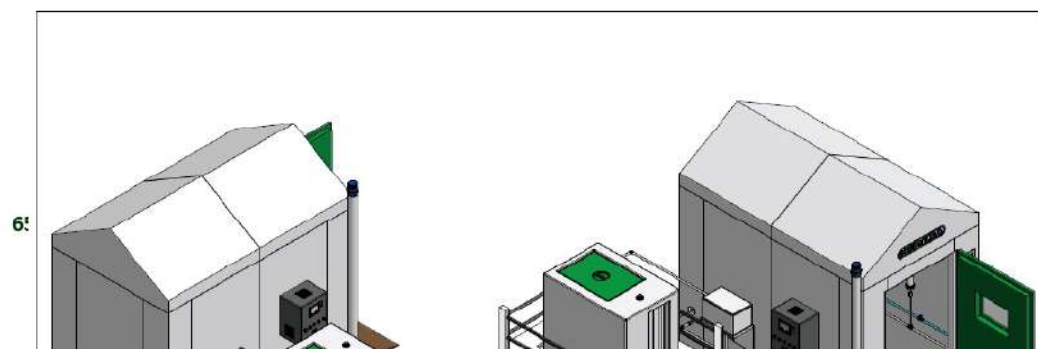




SS 3000

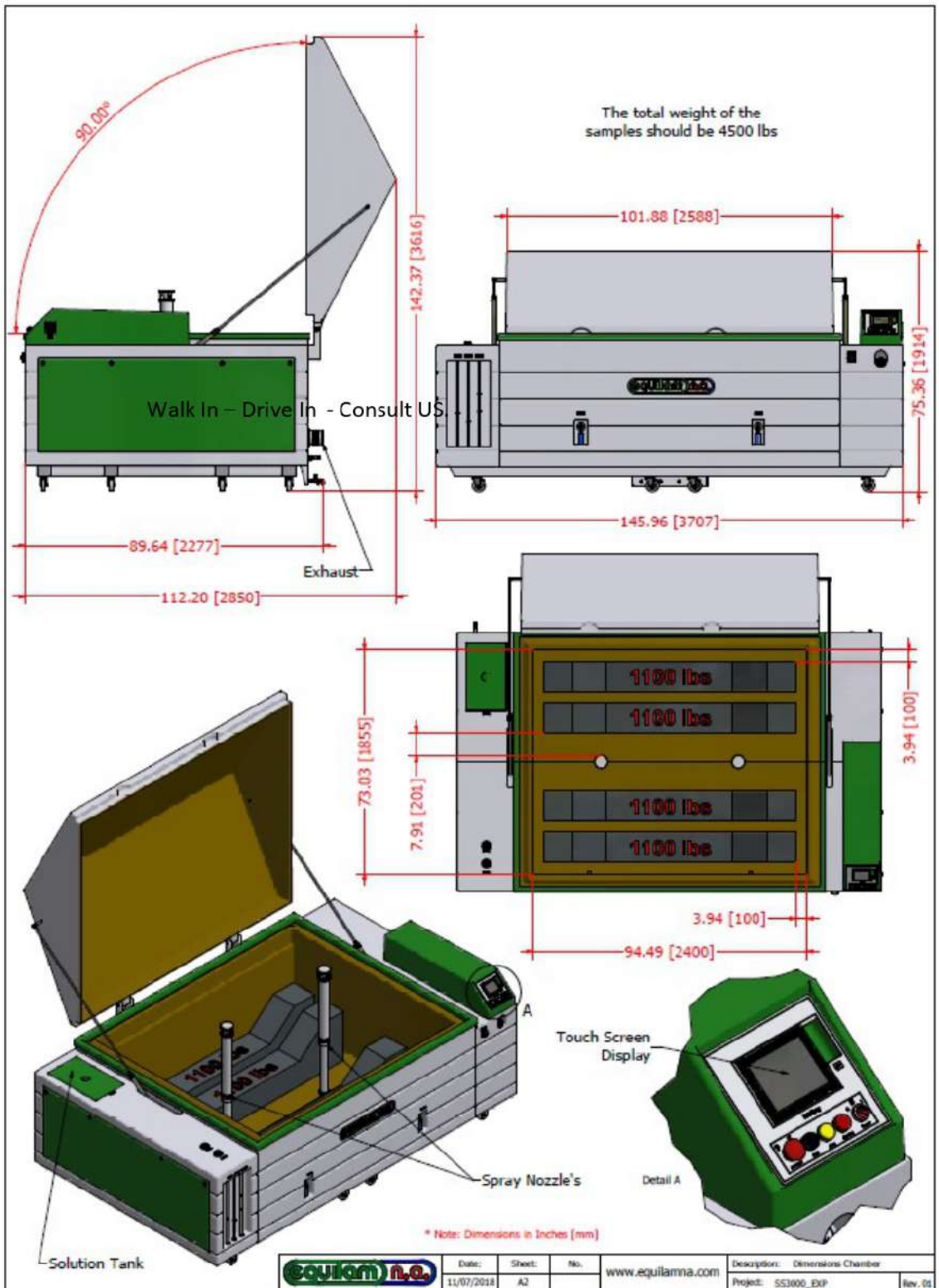


SS5000



6:

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Special design SALT SPRAY TEST CHAMBER ASTM B117 - Floor to withstand high loads –  
Lid opening 90 degrees - Contact us.