The Corrosion Salt Spray Vehicle Chamber is designed to provide accelerated corrosion life testing of body, frame, undercarriage components of passenger cars and trucks. The facility is capable of quickly cycling from hot, humid to hot, dry conditions to cooler dry conditions and back again. Salt solutions are injected in front, above and under the vehicle to simulate on-road salt conditions.

**System Design & Features**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall outside Dimensions</td>
<td>40' (L) x 13.5' (W) x 16' (H)</td>
</tr>
<tr>
<td>Interior dimensions (Test Chamber)</td>
<td>24' (L) x 12' (W) x 9' (H) Nominal</td>
</tr>
<tr>
<td>Walls and ceiling thickness</td>
<td>4-1/2&quot; thick (plus 2-1/2&quot; bolting flange)</td>
</tr>
<tr>
<td>Walls and ceiling interior finish</td>
<td>Fiberglass</td>
</tr>
<tr>
<td>Walls and ceiling exterior finish</td>
<td>Fiberglass</td>
</tr>
<tr>
<td>Floor panel thickness</td>
<td>8&quot;</td>
</tr>
<tr>
<td>Floor interior finish</td>
<td>Non-Slip, Fiber Glass, 10,000 lb/ft²</td>
</tr>
<tr>
<td>Vehicle Door</td>
<td>9' (W) x 8' (H)</td>
</tr>
<tr>
<td>Personnel Doors (Qty. 1 in Test Chamber)</td>
<td>3' (W) x 7' (H) Single swing door with minimum 12&quot; x 12&quot; window. Vinyl gasket with neoprene rubber wiper gasket at the bottom.</td>
</tr>
<tr>
<td>Observation Windows</td>
<td>Optional</td>
</tr>
<tr>
<td>Port Holes</td>
<td>Two (2) 4&quot; diameter along long side of chamber (1 each side)</td>
</tr>
<tr>
<td>Lighting</td>
<td>Will provide minimum 100 lumens/m²</td>
</tr>
<tr>
<td>E-Stop</td>
<td>An E-stop cable will run along the left side on the chamber interior at a height of 1 meter off the floor. An E-stop button will also be located within 1 foot of the operation/control panel.</td>
</tr>
</tbody>
</table>

(Over for more information)
### Environmental Test Cell Dry Bulb Temperature

- **Dry Bulb Temperature range**: 20°C to 70°C
- **Temperature Control Stability**: ±1.5°C at chamber center
- **Temperature Uniformity**: ±2°C after stabilization, measure at a minimum of 12” from walls, floors, ceiling
- **Heat Up Time**: 20°C to 60°C in less than 30 minutes.
- **Temperature Condition**: Temperature performance will be guaranteed while chamber is occupied with a test vehicle weighing up to 2700 kg
- **Temperature Calibration**: Sealed external junction box for measuring control thermocouple.
- **Measurement Accuracy**: ±0.2°C
- **Sensor Location**: Air Discharge

### Environmental Test Cell Humidity

- **Relative Humidity Range**: 15% to 98%RH
- **Humidity Control Stability**: ±5%RH at chamber center
- **Humidity Uniformity**: ±5%RH
- **Dehumidification Rate**: 95%, 50°C to 20%, 60°C in less than 30 minutes
- **Humidification Rate**: 20%RH (60°C) to 95%RH (50°C) < 30 minutes
- **Humidity Condition**: Humidity performance will be guaranteed while chamber is occupied with a test vehicle weighing up to 2700 kg.
- **Sensor Location**: Center of Chamber
- **Humidity Calibration**: Sealed external junction box for measuring control humidity sensor

### Air Flow Specification - Optional

- **Air Flow Low Speed**: 10 km/hr
- **Air Flow High Speed**: 100 km/hr,
  - Two System blower(s) will be provided, rated for a minimum of 13,000 cfm at 3.5”WC each.
- **Nozzle**
  - Nozzle will have adjustable damper to modify flow area from low velocity to high velocity.

### Salt Spray System

- **Floor Nozzles Salt Spray**: Twelve (12) nozzles, 90° full cone
- **Front Nozzles Splash Salt Spray**: Four (4) nozzles, 60° full cone spray
- **Flow Control**: Flow to spray nozzles to be adjustable by fluid pressure

### Brine System

- **Brine Supply Tank**: One (1) 500 gallon holding tank with 12 kW heaters for chamber salt spray
- **Brine Mixing Tank**: One (1) 300 gallon tank for mixing salt solution.
  - Automated to maintain proper concentration ranging from 0 to 5% salt concentration
  - Thermostatic control via system PLC

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1Control Stability is during steady state operation. This control stability may be exceeded during operation of salt spray system.