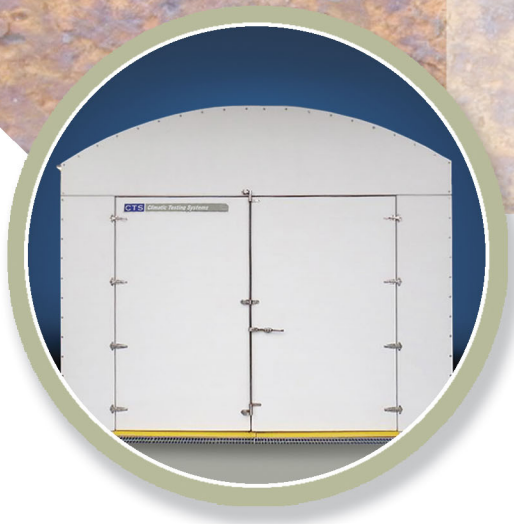
CTS **Climatic Testing Systems**

Bringing the Desired Climate to Your Doorstep

CORROSION CHAMBER SALT SPRAY VEHICLE CHAMBER



The Corrosion Salt Spray Vehicle Chamber 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

Parameter	Specifications
Overall outside Dimensions	40’ (L) x 13.5’ (W) x 16’ (H)
Interior dimensions (Test Chamber)	24’ (L) x 12’ (W) x 9’ (H) Nominal
Walls and ceiling thickness	4-1/2” thick (plus 2-1/2” bolting flange)
Walls and ceiling interior finish	Fiberglass
Walls and ceiling exterior finish	Fiberglass
Floor panel thickness	8”
Floor interior finish	Non-Slip, Fiber Glass, 10,000 lb/ft2
Vehicle Door	9’ (W) x 8’ (H)
Personnel Doors (Qty. 1 in Test Chamber)	3’ (W) x 7’ (H) Single swing door with minimum 12” x 12” window. Vinyl gasket with neoprene rubber wiper gasket at the bottom.
Observation Windows	Optional
Port Holes	Two (2) 4” diameter along long side of chamber (1 each side)
Lighting	Will provide minimum 100 lumens/m2
E-Stop	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.

(Over for more information)

Environmental Test Cell Dry Bulb Temperature

Dry Bulb Temperature range	20°C to 70°C
Temperature Control Stability[1]	±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 Over 20°C to 60°C dew point temperature range. (Minimum dewpoint of 5°C is optional)
Humidity Control Stability[1]	±5%RH at chamber center
Measurement Accuracy	±2%RH
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 weighting 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
Tank Temperatures	Thermostatic control via system PLC

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

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