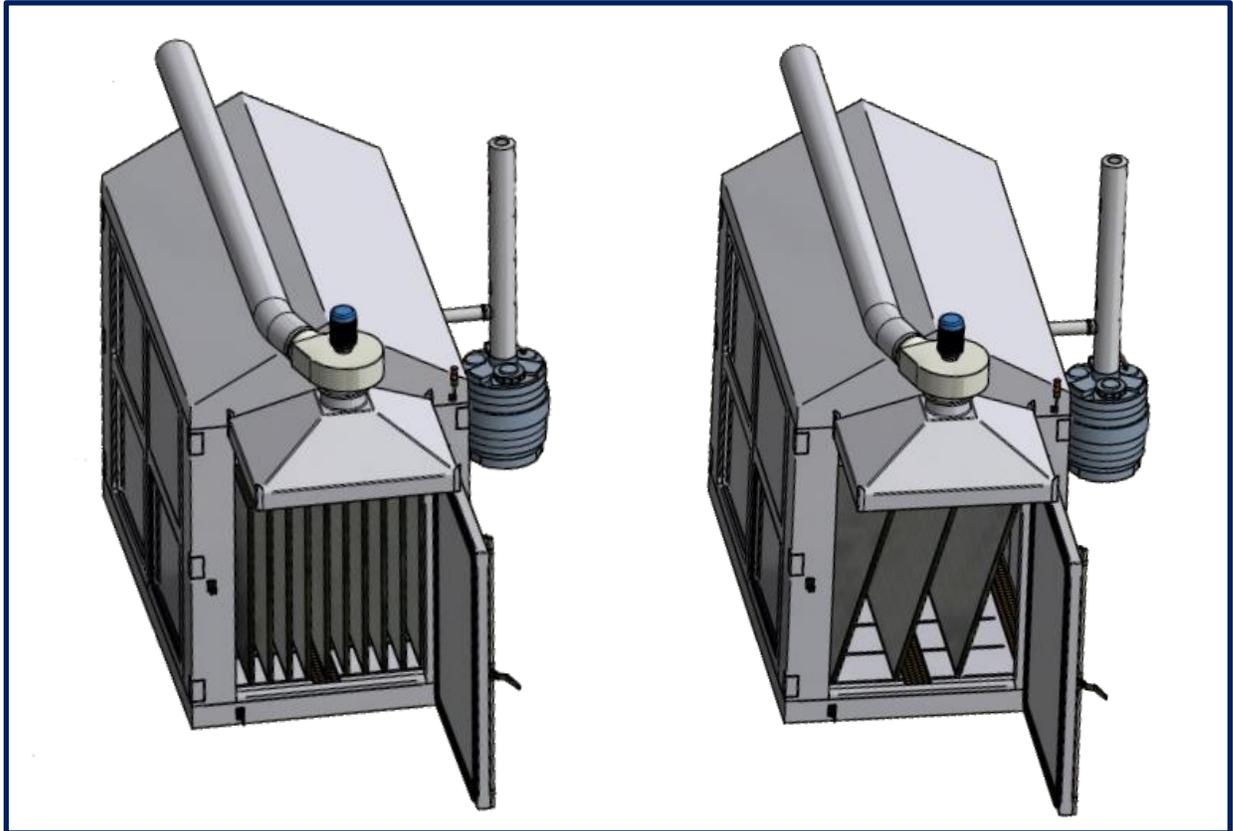


## Ammonia Corrosion Test Chamber for Testing IEC 62716:2013

To simulate Agricultural Environments testing Photovoltaic (PV) modules against corrosion



Photovoltaic (PV) modules are electrical devices intended for continuous outdoor exposure during their lifetime. Highly corrosive wet atmospheres, such as in the environment of stables of agricultural companies, could eventually degrade some of the PV module components (corrosion of metallic parts, deterioration of the properties of some non-metallic materials – such as protective coatings and plastics – by assimilation of ammonia) causing permanent damages that could impair their functioning and safe operation.

This standard describes test sequences useful to determine the resistance of PV modules to ammonia (NH<sub>3</sub>). All tests included in the sequences, except the bypass diode functionality test, are fully described in IEC 61215, IEC 61646 and IEC 61730-2. They are combined in this standard to provide means to evaluate possible faults caused in PV modules when operating under wet atmospheres having high concentration of dissolved ammonia (NH<sub>3</sub>).

**Cabinet internal temperature Range:** Amb. + 9°F(+5°C) - +140°F(+60°C)



**Ambient temperature for chamber's installation:** +62°F(+17°C) - +82°F (+28°C) - Max. 85% R.H (without condensation)

**Homogeneity of the internal cabinet temperature:** ±1.8°F (±1°C)

**Relative humidity of the internal cabinet:** 97% - 100%

**NH3 dosing:** 0 up to 34.9 gal (132 L) – 6667 ppm.

**DI water tray volume:** 34.9 gal (132 L)

**Electrical Supply:** 208 to 220 Vac Ø1 60 Hz – 35 FLA (other consult factory)

**Volume of internal test cabinet:** 5283 gal (20000 L)

**Approx. net weight:** 1763.7 lbs. (800 kg)

**Approximate Shipping Weight (Crated):** 2204.62 lbs. (1000 kg)

**Internal dimensions L x W x H:** 137.8" x 78.8" x 122" (3500 mm x 2000 mm x 3100mm) - (other consult factory)

**External dimensions L x W x H:** 145.7" x 86.6" x 139.2" (3700 mm x 2200mm x 3535mm)

**Approx. Crated Dimensions L x W x H:** 145.7" x 94.5" x 98.4" (3700 x 2400mm x 2500mm)

**Custom dimensions available upon consult.**

### **RECOMMENDATED LABORATORY FACILITIES**

**DI water:** 34.9 gal (132 L) per 24 hours cycle

**Water Supply:** Chamber cleaning

Water to be per ASTM D 1193 Type IV standards

**Exhaust:** Air room from where equipment will be installed

**Drain:** 4" tubing (must be drained to sewage treatment)