SS/SD Series Test Chambers for Solar Panels

Tescor's Damp Heat Test Chamber for Solar Panels assists in developing cost-effective and reliable PV modules and solar panels for the energy industry. The chamber's damp heat test is performed according to IEC 61215 and IEC 61646 standards. With this test, the PV module's ability to withstand the effect of long-term penetration of humidity can be accurately determined. PV modules are subjected to temperatures upwards of 85°C and relative humidity of 85% for 1,000h in the climatic chamber. After the test, the PV modules are analyzed, and those with a damaged PV cell reveal which will experience significantly decreased power in certain environmental conditions. Through the damp heat test, the chamber can prove the reduction of durability resistance of PV modules to the long-term effect of humidity

The Thermal Cycling Test Chamber for Solar Panels performs thermal cycling tests in accordance to IEC 61215, an accelerated test protocol to evaluate module quality and reliability standards. For high power photovoltaic (PV) modules, one of the most critical aspects is the duration for which the module can produce useful power. The purpose of the IEC 61215 test is to determine the ability of the PV module to withstand effects of large temperature variations - analyzing material fatigue and temperature stresses, amongst others. These rapid temperature changes range from 100°C to -40°C, putting a strain on the PV module so that the different coefficients of thermal expansion of parts of the PV module shows defects like poor soldering, cracked cells, delamination, performance reduction and insulation resistance. Reliability and lifespan of PV modules are key factors to system performance and warranty, and the Thermal Cycling Test Chamber for Solar Panels can accurately test PV durability.

7" touch screen, 16M color, Wide Screen, Ethernet Interface	Enhanced with modular controller integrating multi-zone PID Control and Data Acquisition, Web Server, Service Monitor, Trend Graph, Se-curity levels, On Screen Diagnostics, Safety Alarms
Seamless welded test space	Low chamber wall heat load, resulting in fast equal-ization of air temperature to chamber wall during ramp down cycle. Ensures high integrity for extreme conditions like 85°C at 85%RH
Optimum Size	Sizes offered to test standard PV modules. Well utilized test space allows higher quantities of panels to be tested

SS/SD Series Test Chambers for Solar Panels *(continued)*

Specifications:

	Models							
	Damp Heat				Thermal Cycling			
Inner Dimensions	43 x 39 x 55 in 1090 x 990 x 1400mm	48 x 45 x 86 in 1220 x 1220 x 2184 mm	49 x 94 x 59 in 1250 x 2390 x 1500 mm	72 x 72 x 94 in 1830 x 1830 x 2390 mm	43 x 39 x 55 in 1090 x 990 x 1400 mm	48 x 45 x 86 in 1220 x 1220 x 2184 mm	49 x 94 x 59 in 1250 x 2390 x 1500 mm	72 x 72 x 94 in 18230x 1830 x 23890mm
Volume	54 cu.ft 1511 Ltrs.	114 cu.ft. 3274 Ltrs.	155 cu.ft 4500 Ltrs.	282 cu.ft. 7985Ltrs.	54 cu.ft. 1511 Ltrs.	114 cu.ft. 3274 Ltrs.	155 cu.ft 4500 Ltrs.	282 cu.ft. 7985Ltrs.
Temperature Range	185to 122°F 85 to 50°C				212 to -40°F 100 to -40°C			
Humidity Range	20 to 98%RH				Optional			
Average Change Rate As per IEC 60068-3-5	Not Applicable				2°C per min			
Power Supply	460 3ph 60Hz (Other options available upon request)							