

Corona Poling Unit



The Corona Poling Unit provides a platform for sustaining a high voltage corona discharge. The equipment assembly is designed to study potential build up and polarization switching in polymer films. Corona is self-sustaining discharge in air when a high voltage is applied between flat surface and a point electrode. This discharge is utilized to charge the sample surface by spraying ions on to it. The excess charge may reside on the surface or penetrate it. Corona discharge has been used to pole films of ferroelectric materials for applications in NEMs and MEMs, sensors, actuators etc. materials to enhance piezoelectric properties. One of the greatest advantage of corona poling is poling does not require separate metal electrode deposition on surface. The process is clean and offers excellent control.

The unit provides a facility to change the distance between the pin holder assembly, Grid Assembly and the substrate. The substrate holder assembly is provided with a heater assembly to carry out poling at higher temperatures in order to increase the molecular mobility.

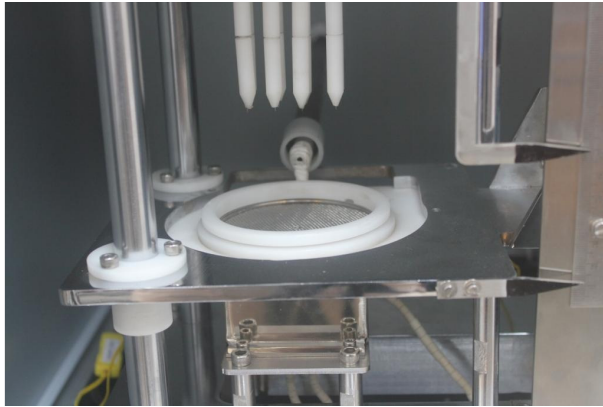
The unit consists of high voltage regulated DC power supply for producing corona discharge. The power supply has closed loop voltage regulation and continuous voltage control by HV SET POT on the front control panel.



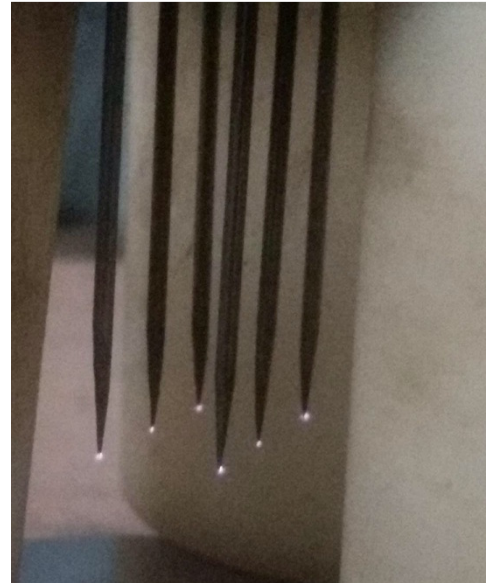
MAIN FEATURES:

- POINT TO PLANE AS WELL AS CORONA TRIODE ASSEMBLY
- FINE SS MESH GRID ASSEMBLY
- ADJUSTABLE POINT-TO-GRID AS WELL AS GRID-TO-SAMPLE DISTANCES
- INDEPENDENT CONTROLS FOR CORONA AND GRID POTENTIALS
- FIXED FORCED AIR-COOLED SAMPLE HEATER PLATE 75 MM X 75 MM
(LINEAR MOTION ON REQUEST)
- SAMPLE HEATING UP TO 250°C
- CONTINUOUS VOLTAGE CONTROL FROM 10 – 100 KV
- ACRYLIC COVER WITH DOOR INTERLOCK [FOR POWER SUPPLY] FOR
OPERATOR SAFETY
- CUSTOMIZED MULTIPLE PIN HOLDER ON REQUEST
- TORQUE CONTROLLED STRETCHING MECHANISM ON REQUEST.

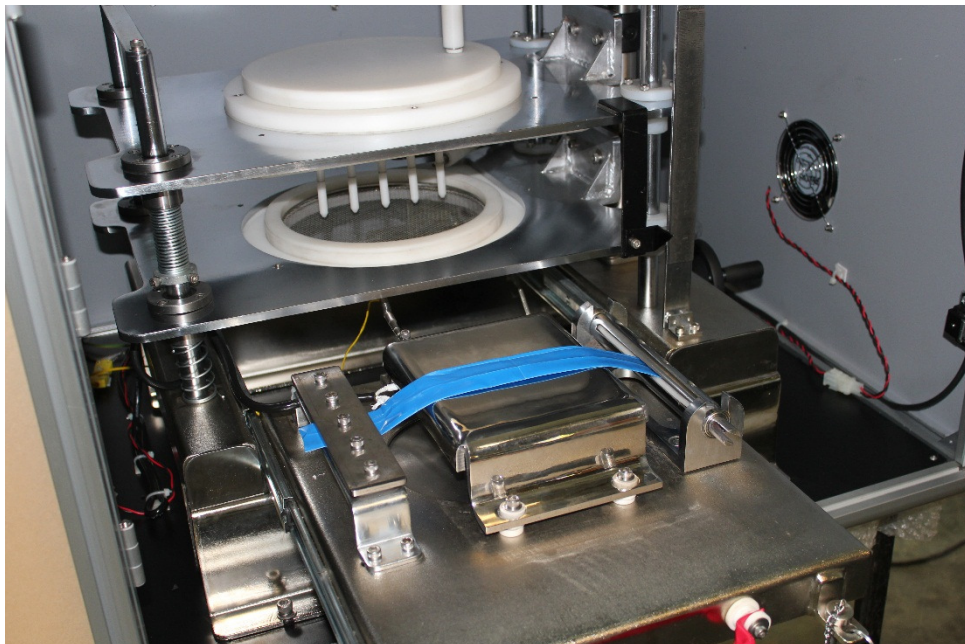




PIN ASSEMBLY AND GRID ASSEMBLY



CORONA POLING



STRETCHING MECHANISM

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