

## **DC-PECVD (SI-PE80)**

Plasma Enhanced Chemical Vapor Deposition unit is a highly specialized piece of equipment for the realization of carbon nanostructures, carbon nanotubes and nano-structure fabrication.

### **SI-PE803**

It is a recently developed collection of three reactors, which enables the user to program the growth process by means of computerized control over the growth parameters such as temperature, pressure, plasma power (if needed) and the sequence of the gas inclusion into the system. The evolution of various features in the growing layer depends on the status of the system, which can be quickly switched to a different state. The operating temperature of each reactor can be set between 500 and 850 °C for different applications. Apart from standard growth, which is expected from a CVD reactor, this piece of equipment can be used as a reactive ion etching unit for hard-to-etch substrates such as SiC.

The standard unit comes with two lines of hydrogen and acetylene, although it can be upgraded by adding one or two more MFCs to include other gases, such as oxygen,  $\text{NH}_3$  or Ar as a carrier gas.

To add to the safety of the equipment, an isolated transformer is exploited to reduce the electric shock to the user. In addition, door-locks are used to further reduce hazards. In addition, we provide commodious space for two or three gas cylinders just on the back of the unit to increase it's operation safety.



### **Technical specifications**

- Main body: metallic suitable for three tubes
- Dimensions: 70X120X170 (width, depth, height)
- Quartz reactor(3 pcs), 80cm in length
- Main valve: Vacuum gage
- Two mass flow controllers (MFC),
- Temperature control unit,
- Control Unit: computer,
- Necessary connections