

# K1050X



SERVING THE SCIENCE OF ELECTRON MICROSCOPY



The K1050X with Rack Out draw system and sample holder tray. This tray system can be readily removed to accommodate large samples or alternative custom designed sample holders.

### OPERATION

- Ease of sample access with Rack Out Drawer system
- Micro-controller with default settings programmable by the operator
- Indication of settings of LCD display of Status/Entry
- Indication of conditions during the cycle for Vacuum, RF Power and Elapsed Time
- Selection of two gases with flowmeter monitoring
- Pump down to predetermined vacuum before admitting gases
- Pump shuts off before venting to minimise sample disturbance
- Selection of venting to full Vent or Restricted Vent

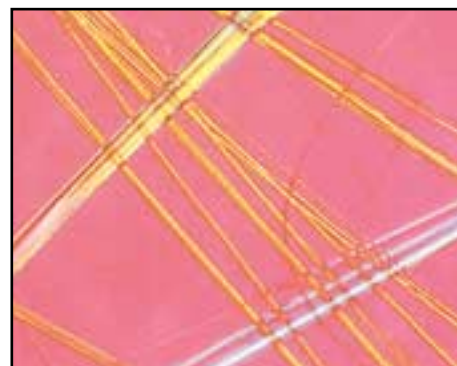
### FEATURES

- Rack Out Drawer
- Solid State RF Power Supply
- Fully Automatic
- Barrel Chamber with Isotropic Plasma
- Automatic Tuning
- Automatic Power Control Feedback
- Dual Flow Gauge selectable gas mixing control
- Dual Vent Control System
- Bench Top System
- Location bay in rear for Backing Pump (can also be mounted externally with all connections available)
- Optional Pumping System



No. 3 Fomblin Pump

The K1050X is often used in Asbestos Specimen Preparations as a Low Temperature Ashing Technique



Sample of 'Amosite' used in Boiler Insulation

The Plasma process is accomplished through the use of a low pressure, RF induced gaseous discharge, this glow discharge having a characteristic colour depending on the gas being used.

With Oxygen as the process gas the molecules disassociate into chemically active atoms and molecules, the 'combustion' products are carried away in the gas stream by the Vacuum System.

The unique property of the process is the relatively low temperature at which it occurs when ashing typically organic material and avoiding the use of chemicals for etching processes.

The K1050X consists of a Solid State RF Generator and associated tuning circuits, Dual Process gas with flow monitoring needle valve control and Full or Restricted vent control. It has a Cylindrical Chamber with a Rack Out Draw system for ease of sample loading.

The Vacuum System is external with Standard Rotary Pump or Optional Turbo Pump backed by a Diaphragm Pump. The Rack Out Drawer System can be exchanged for a Vacuum Loading Port, for special cleaning applications in TEM. This usually employs an Oxygen/Argon mix of gases, the Oxygen removing Organic material (hydrocarbons) and the Argon giving surface etching of the sample.

## APPLICATIONS

- Asbestos Sample Preparation
- Microincineration of Organic Material
- Removal of Photoresist and electronic component encapsulations for examination
- Surface treatment of plastics
- Cleaning of TEM samples and holders



**Option - Turbo Pump, 60 Litres per second backed by a Diaphragm Pump (Oil Free)**



**Option - Diaphragm Pump for K1050T**

## SPECIFICATIONS

Instrument Case	450mm W x 350mm D x 300mm H
Barrel Work Chamber	'Pyrex' 110mm L x 160mm Dia (Borosilicate Glass as standard)
Rack Out Drawer	Sliding Drawer Assembly with sample holder tray
Plasma Output	RF Power Supply – Solid State 150watts RF Peak, normal operation range 25 to 75 watts @ 13.56MHz (Note. The frequency used is that allocated by the International Standards CISPR as an allowed 'Industrial' frequency)
Vacuum Gauge	Active Gauge Head with fully operating vacuum range display (ATM to $1 \times 10^{-5}$ mbar) Full Scale – Normal operating vacuum 0.5 mbar to 1.0 mbar)
Digital Timer Unit	Displays elapsed time with range select: 99.9 hours Automatic termination of Ashing Process
Dual Gas Flow Gauge	Dual Gas Needle Valve Flow Control, selectable for 1 or 2 or both gases (calibrated 5 to 100cm <sup>3</sup> /minute Air @ A.T.P.)
Weight	25Kg
Supply	220/240 volts 50Hz (5 amp Max incl pump) 110/120 volts 60Hz (10 amp Max incl pump)
Services	Process Gas at nominal 5psi (0.33 bar)
Vacuum Pump	Pump – No 3 Pump (with a synthetic oil 'Fomblin' for Oxygen or corrosive process gases)

## Ordering Information

K1050X RF Plasma Asher Unit	Cat No EK 3158
Standard – No 3 Pump with 'Fomblin' oil	Cat No EK 3176
K1050T RF Plasma Cleaning Unit	Cat No EK 3161
Optional – Turbo Pump with Diaphragm Backing Pump	Cat No EK 3170