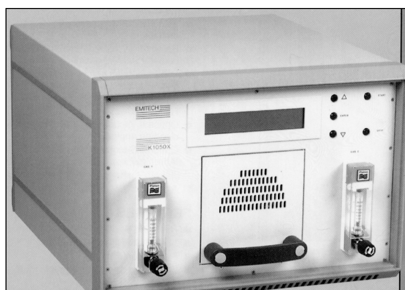
Plasma Ashing/Etching/Cleaning

The Plasma process is accomplished using 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 dissociate 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.

Applications

- Asbestos sample preparation
- Microincineration of organic material
- Etching of organic samples for SEM & TEM work
- Removal of photoresist and electronic component encapsulations for examination
- Surface treatment of plastics
- Cleaning of TEM samples and holders

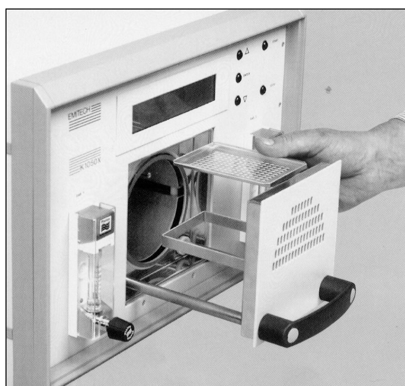


K1050X Plasma Unit

K1050X RF Plasma System

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 drawer system for ease of sample loading.

The vacuum system is integral with the 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.



K1050X Drawer

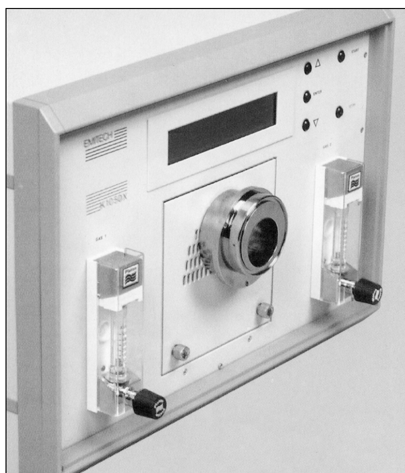
Features:

Rack-out drawer
Solid state RF power supply
Fully automatic
Barrel chamber with isotropic plasma
Automatic tuning
Dual flow gauge selectable gas mixing control
Dual vent control system
Bench top siting
Automatic power control feedback
Rotary pump housed in rear panel
Optional pumping system

Specifications:

K1050X

Instrument case; 450 W x 350 D x 300mm H *Barrel work chamber;* 'Pyrex' 110mm l x 160mm Ø *Rack-out drawer;* Sliding drawer assembly with sample holder tray *Plasma output;* RF power supply - solid state 150 watts RF peak, 25-75 watts @ 13.56Hz *Timer;* Digital 99.9 hrs *Dual gas flow gauges;* Dual gas needle valve flow control selectable for 1 or 2 or both gases *Weight;* 25Kg *Services;* Process gas at nominal 5 psi (0.33 bar) *Vacuum pump;* Integral no 2 with synthetic 'Fomblin' for oxygen or corrosive gases.



K1050C TEM Port

K1050C

As K1050X with following changes:
Vacuum access port; Drawer replaced with fitted vacuum access port to facilitate insertion of TEM holders (can be retro-fitted) *Vacuum pump;* Turbo pump with diaphragm backing pump.

K1050G

As K1050X with following changes:
Afterglow chamber; Additional chamber fitted with access port and heated sample stage.

P500 K1050X Plasma asher 220/240V 50Hz
P500C K1050C Plasma asher 220/240V 50Hz
P500G K1050G Plasma asher 220/240V 50Hz
P500/1 K1050X 110/120V 60Hz
P500C/1 K1050C 110/120V 50Hz
P500G/1 K1050G 110/120V 60Hz

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