

MULTI-FUNCTIONAL CLEANER



MC-4 Multi-functional Cleaner

CORE ADVANTAGES

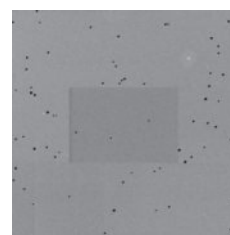
- Integrates downstream plasma cleaning, ultraviolet irradiation, vacuum heating and thermal desorption within a single system, with cleaning modes that can be switched at any time.
- Suitable for cleaning samples and holders used with scanning electron microscopes (SEMs), focused ion beam systems (FIB), and transmission electron microscopes (TEM).
- Features an intuitive, high-resolution touchscreen interface, with support for remote operation via WiFi.
- Can be used as a constant temperature vacuum sample storage cabinet.



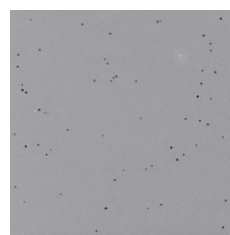
01 CLEANING MODE

PLASMA CLEANING

- Uses inductively coupled plasma (ICP) technology to generate a significantly higher plasma density than traditional capacitively coupled plasma systems.
- Produces a high concentration of reactive oxygen species to efficiently remove hydrocarbon contaminants from sample surfaces.
- The downstream plasma cleaning process minimises direct ion bombardment, protecting delicate samples and preserving their original surface morphology.



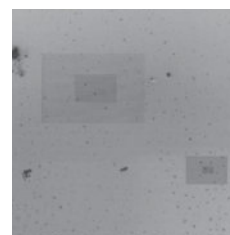
before



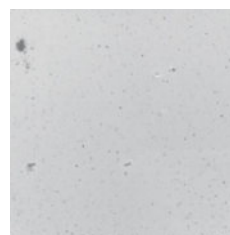
after

UV CLEANING

- Two specialised UV lamps simultaneously irradiate the sample chamber for uniform treatment.
- UV exposure generates a high concentration of highly reactive oxygen species within the sample chamber.
- These reactive species break down and remove organic contaminants from the sample surface.



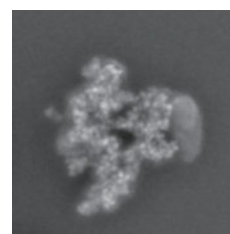
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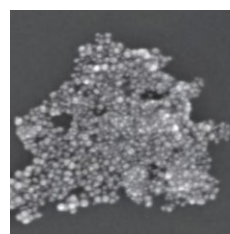
after

HEATING CLEANING

- Rapidly heats the sample chamber to temperatures of up to 150°C.
- High-precision temperature control maintains accuracy within $\pm 0.1^\circ\text{C}$.
- When combined with vacuum pumping, heating accelerates the evaporation and removal of volatile surface contaminants from samples.



before



after

02 SPECIAL DESIGN

TRANSMISSION ELECTRON MICROSCOPE SAMPLE CLEANING

- The sample chamber features a dedicated interface for easy connection of a transmission electron microscope sample holder.
- Provides efficient cleaning of samples and holders for both scanning electron microscopes (SEM) and transmission electron microscopes (TEM).
- Can also be used as a temperature-controlled vacuum storage chamber for samples and holders.
- Features high-resolution touchscreen operation, with support for remote operation via WiFi.
- Can be customised with up to four TEM holder interfaces.

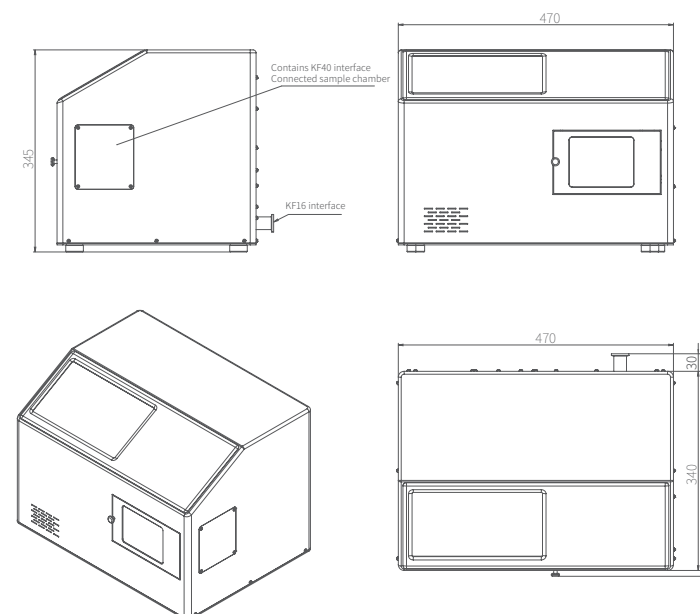


03 USER INTERFACE



- Intuitive user interface for fast, efficient operation.
- Displays key operating parameters in real time, with full control throughout the process.
- Modular design enables quick switching between different operating modes.
- Low maintenance design with no specialised servicing required.

04 PERFORMANCE PARAMETERS



OVERALL PARAMETERS OF THE INSTRUMENT

Size of the equipment (length * width * height)	470*345*340mm
Weight	30kg
Size of the sample chamber size (length * width * height)	120*120*150mm
Size of the touch screen	9inch
Power of the whole machine	Max 500W

WORKING PARAMETERS OF HEATING CLEANING

Maximum heating temperature	150°C
Temperature control accuracy	1°C
Heating power	Max 250W

WORKING PARAMETERS OF UV CLEANING

Radiation power	Max 50W
Operating vacuum	5*10 ⁻⁴ Pa

WORKING PARAMETERS OF PLASMA CLEANING

Cleaning power	100W
Operating vacuum	<80Pa
RF frequency	13.56MHz