

Plasma cleaners and contamination solutions

Contamination typically comes from several sources: inadvertent touching of specimens or specimen holders, electron microscope column contamination, and adhesives or solvents used in the preparation process. Plasma cleaning samples and sample holders immediately before they are inserted into the electron microscope removes existing carbonaceous debris and prevents contamination from occurring during imaging and analysis.

Plasma cleaners

Fischione Instruments' plasma cleaners are designed with a low-energy, inductively coupled, high frequency, downstream plasma effectively cleans the specimen surface without changing its elemental composition or structural characteristics.

MODEL 1020 Plasma Cleaner

The specimen holder is inserted through a single port into the plasma chamber. The Plasma Cleaner includes the customer's choice of specimen holder port, pumping port assembly, and blank plug assembly.

- Simultaneously cleans sample and sample holder
- Cleans highly contaminated specimens in 2 minutes or less
- Oil-free vacuum system
- Compatible with side-entry holders for all commercial scanning, transmission, and scanning transmission electron microscopes
- Accommodates large objects
- Handy for evacuating vacuum storage containers



MODEL 1070 NanoClean

The NanoClean readily accepts one or two side-entry specimen holders for most commercial TEMs and STEMs, and can accept bulk specimens for cleaning before conducting SEM or surface science analysis. Accepts two electron microscopy specimen holders and has multiple gas inlets with mixing capabilities. The NanoClean includes the customer's choice of specimen holder port, pumping port assembly, and blank plug assembly.

- Multi-functional; simultaneously cleans specimens, specimen holders, and stubs
- Cleans highly contaminated specimens in 2 minutes or less
- Oil-free vacuum system
- Compatible with side-entry holders for all commercial scanning, transmission, and scanning transmission electron microscopes
- Accommodates large objects
- Handy for evacuating vacuum storage containers



Contamination solutions

MODEL 9010 Vacuum Storage Container

The containers are typically evacuated through the use of the Model 1020 Plasma Cleaner or the Model 1070 NanoClean. The specimen portion of the TEM specimen holder can be directly observed through a sight glass. An aluminum outer housing provides a high degree of protection to the specimen holder and enables the safe transportation of specimen holders under clean, vacuum conditions.

All Fischione Instruments TEM tomography holders are shipped in Vacuum Storage Containers.



MODEL 9020 Vacuum Pumping Station

Allows for the simultaneous vacuum storage of up to five plasma-cleaned specimens and TEM specimen holders. It includes a heavy duty metal base, five Model 9010 Vacuum Storage Containers, a vacuum pumping manifold, and all of the necessary components for connection to the Model 1020 Plasma Cleaner and the Model 1070 NanoClean. Precision valves ensure vacuum integrity for prolonged periods. The Vacuum Storage Container is typically evacuated through the use of the Model 1020 Plasma Cleaner or the Model 1070 NanoClean.

Includes the customer's choice of five types of Vacuum Storage Containers. The customer may choose Vacuum Storage Containers from different manufacturers, e.g., three Thermo Fisher Scientific containers and two JEOL containers, or four Hitachi containers and one Zeiss container.



MODEL 9030 Turbo Pumping Station

A versatile, configurable device for evacuating the Fischione Instruments' Model 2550 Cryo Transfer Tomography Holder during zeolite regeneration and for storing transmission electron microscope specimen holders under clean, vacuum conditions. The pumping station allows for vacuum pumping of the specimen holder tip while evacuating the dewar vacuum.

Up to four TEM specimen holders can be pumped down and stored in vacuum conditions. The Turbo Pumping Station can simultaneously accommodate both Thermo Fisher Scientific [TFS] and JEOL, Ltd., [JEOL] specimen holders.

Available in four configurations:

- Basic [TFS]: A single dock with a single TFS port; manual port venting
- Single [TFS]: A single dock with a single TFS port; automatic port venting; display of vacuum level
- Single [JEOL]: A single dock with a single JEOL port; automatic port venting; display of vacuum level
- Quad [TFS and/or JEOL]: A quad holder dock; user specifies TFS and JEOL port mix (four TFS ports, four JEOL ports, or two TFS/ two JEOL ports); automatic port venting; display of vacuum level



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