

Ptfe Acid Steam Cleaning System Hf Resistant Trace Analysis Beaker Digestion Tank Customizable

Item Number: PL-CP325



Introduction

Precision-engineered PTFE acid steam cleaning systems provide contaminant-free trace analysis environments. These high-purity PFA systems resist hydrofluoric acid, ensuring non-polluting results for digestion tanks and laboratory beakers through automated, customizable vapor cleaning protocols for demanding scientific laboratory research.

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Application	Description	Key Benefit
Geochemical Trace Analysis	Cleaning of PFA digestion vessels and beakers used for isotope and rare-earth element determination.	Achieves ultra-low background blanks for ppt-level detection.
Semiconductor Wafer Prep	Decontaminating PTFE holders, tanks, and fluid handling components used in cleanroom processes.	Ensures zero metallic ion interference in sensitive electronic materials.
Environmental Monitoring	Maintenance of sample bottles and digestion tubes for heavy metal analysis in soil and water.	Prevents cross-contamination between high-concentration samples.
Nuclear Research	Decontamination of labware used in radioactive isotope handling and fuel cycle analysis.	Superior chemical resistance and ease of surface decontamination.
Pharmaceutical Quality Control	Cleaning of reaction vessels and storage containers used in drug synthesis and purity testing.	Eliminates residual trace impurities that could affect batch stability.
Microwave Digestion Prep	Intensive cleaning of inner liners and caps for microwave digestion systems used in various industries.	Extends the life of liners by deeply leaching embedded contaminants.
Forensic Science	Preparation of specialized containers for sensitive biological and chemical residue analysis.	Guarantees the integrity of evidence by removing all previous residues.
Battery Research	Cleaning of electrochemical cells and battery testing fixtures used in lithium-ion development.	Protects sensitive electrolyte chemistries from moisture and metallic ions.

Feature	Specification Details (Model PL-CP325)
Model Identifier	PL-CP325 (Customizable Series)
Primary Construction Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Vessel Liner Material	PFA (Perfluoroalkoxy) - High Transparency Option
Chemical Compatibility	HF, HNO3, HCl, H2SO4, Aqua Regia, Organic Solvents
Operating Temperature	Fully Adjustable to suit specific acid boiling points
Chamber Configuration	Customizable Dimensions based on laboratory throughput
Rack System	Custom CNC-machined racks for beakers, tanks, and tubes
Sealing Mechanism	Integrated PTFE Seal Gaskets with zero-metal exposure
Heating Method	External or Encapsulated Heating Elements (Customizable)

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Drainage System	Integrated PFA Valves and Sloped Floor Design	
Sample Capacity	Scalable from 10 to 100+ items per cycle	
Safety Features	Pressure Relief Ports and Fume Containment Seals	
Manufacturing Process	Precision CNC Machined and Welded Fabrication	