



KINTEK

Pfa Trace Analysis Labware Catalog

Contact us for more catalogs of PTFE(Teflon) Products, Sample Preparation & Filtration, Reaction & Synthesis Equipment, High-Purity & Trace Analysis, Custom Machining Services, General Consumables & Seals, Electrochemistry & New Energy Testing, Basic Labware & Containers, Fluid Transfer, Tubing & Valves, etc.

KINTEK

COMPANY PROFILE

>>> About Us

From everyday basic labware (beakers, measuring cylinders, crucibles, dishes, reagent/wash bottles, centrifuge and digestion tubes), high-purity trace analysis instruments, and cleaning/storage tanks, to comprehensive fluid transfer components (tubing, fittings, valves), sample prep and filtration tools (separatory funnels, burettes, filters, pipettes, tweezers, spatulas), and general consumables (stirring bars, O-rings, gaskets, seal tapes, caps, septa), extending all the way to advanced derivative and reaction apparatus like standard or custom electrochemical cells, battery testing fixtures, electrode accessories, hydrothermal synthesis liners, microwave digestion vessels, microchannel reactors, and condensation/reflux devices, KINTEK manufactures virtually all imaginable laboratory supplies crafted from PTFE and PFA. Backed by end-to-end custom CNC fabrication, we are equipped to deliver absolutely everything from complex non-standard machined parts and bespoke laboratory setups to high-volume orders, maintaining an exclusive and absolute focus on high-performance fluoropolymer materials.



High Purity Pfa Filtration Bottle With Integrated Sieve Plate And Squeezable Body For Trace Analysis

Item Number: PL-CP181



Introduction

Premium PFA filtration bottles feature integrated sieve plates and squeeze-action dispensing for high-purity trace analysis. These customizable units ensure zero contamination and extreme chemical resistance in semiconductor and environmental laboratory workflows.

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Application	Description	Key Benefit
Trace Element Analysis	Storage and filtration of samples for ICP-OES and ICP-MS detection in environmental labs.	Eliminates background noise and secondary contamination from container walls.
Semiconductor Processing	Handling and dispensing of ultra-high purity acids and photoresists in cleanroom environments.	Maintains the extreme purity levels required for wafer fabrication and chemical delivery.
LC-MS/MS Sample Prep	Preparation and storage of mobile phases like acetonitrile and ammonium acetate for mass spectrometry.	Ensures baseline stability and prevents organic solvent penetration and leaching.
Heavy Metal Detection	Storing 2% nitric acid diluents and rinsing solutions used in analytical chemistry.	Minimizes ion adsorption, ensuring the accuracy of heavy metal quantification.
Pharmaceutical R&D	Processing of high-value active pharmaceutical ingredients (APIs) in aggressive solvent systems.	Provides a non-reactive environment that preserves the integrity of sensitive compounds.
Environmental Monitoring	Collection and filtration of seawater or groundwater samples for sub-ppb level analysis.	Prevents loss of trace analytes to the container surface through hydrophobic properties.
Battery Research	Handling of corrosive electrolytes and chemical components in lithium-ion battery testing.	Resists degradation from harsh electrochemical reagents while maintaining sample purity.
Volatile Chemical Storage	Secure containment of high-purity organic solvents and volatile organic compounds (VOCs).	Superior sealing and low permeability prevent sample loss and atmospheric contamination.

Feature	Specification Details for PL-CP181
Model Number	PL-CP181
Primary Material	High-Purity Perfluoroalkoxy (PFA)
Fabrication Method	Precision Blow Molding and CNC Machining
Bottle Capacity	Fully Customizable to Client Specifications
Sieve Plate Configuration	Customizable Pore Size and Hole Pattern (Custom CNC)
Wall Construction	Flexible/Squeezable Design with Reinforced Base
Temperature Resistance	Customizable based on Application Range
Chemical Compatibility	Universal (Except molten alkali metals and fluorine gas)
Closure Type	Threaded PFA Cap with Precision Seal

Application	Description	Key Benefit
Feature	Specification Details for PL-CP181	
Surface Finish	Ultra-Smooth, Hydrophobic, Non-Stick	
Trace Metal Background	Low-ppb to ppt levels (Material Grade Specific)	
Sieve Plate Diameter	Tailored to Bottle Internal Diameter	

High Purity Pfa Gas Washing Bottle Corrosion Resistant Tail Gas Absorption And Buffer Vessel

Item Number: PL-CP425



Introduction

Premium PFA gas washing bottles and tail gas absorption vessels offer ultimate chemical resistance and ultra-trace purity. These customizable buffer bottles ensure zero contamination for demanding laboratory applications, semiconductor processing, and high-precision chemical analysis and research.

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Application	Description	Key Benefit
Semiconductor Etching	Used for scrubbing corrosive gases and managing high-purity etching reagents in cleanroom environments.	Prevents ionic contamination of silicon wafers.
Trace Metal Analysis	Preparation and storage of ultra-pure acids and buffers (e.g., pH 4.5 acetate) for heavy metal detection.	Eliminates false positives by ensuring zero leaching.
Environmental Monitoring	Capturing volatile organic compounds (VOCs) and acidic pollutants from air samples into absorption liquids.	High capture efficiency with no material interference.
Pharmaceutical Synthesis	Serving as a reaction buffer and tail gas absorber for aggressive synthesis byproducts.	Maintains sterile and chemically pure conditions.
Petrochemical Testing	Analysis of sulfur content and other impurities in gas streams via liquid absorption.	Long-term resistance to hydrocarbons and H2S.
Electrochemical Research	Functioning as a reservoir or gas bubbler for electrochemical cells and battery testing setups.	Exceptional stability under electrical and chemical stress.
ICP-MS Sample Prep	Facilitating the Collaborative Etching and Precipitation (CEP) process for multi-metal ion components.	Ensures accurate stoichiometric ratios of components.

Feature	Specification	Details
Product Item Number	PL-CP425	Customizable Base Identifier
Primary Material	PFA (Perfluoroalkoxy)	High-purity, semi-transparent fluoropolymer
Complementary Materials	PTFE / FEP	Available for specific internal components
Standard Volumes	250ml, 500ml, 1000ml	Custom sizes available upon request
Operating Temperature	-200°C to +260°C	Sustained performance at temperature extremes
Chemical Resistance	Universal	Inert to HF, Aqua Regia, and strong alkalis
Metal Ion Leaching	< 0.01 ppb	Suitable for PPT-level trace analysis
Port Configurations	GL45, GL32, Custom NPT	Options for multiple inlets and outlets
Tubing Compatibility	1/8", 1/4", 3/8", 6mm, 8mm	Integrated compression fittings or flared ports
Fabrication Method	Precision CNC Machining	Ensures airtight seals and dimensional accuracy
Surface Finish	High-Purity Smooth Bore	Minimizes turbulence and facilitates cleaning

Corrosion Resistant Pfa Reaction Tank High Purity Laboratory Reaction Bottle Wide Mouth Ptfе Jar Multiple Specifications

Item Number: PL-CP189



Introduction

Premium PFA reaction tanks offer universal chemical resistance and ultra-low metal ion leaching for sensitive trace analysis. These customizable bottles ensure maximum sample recovery and integrity in corrosive industrial and research laboratory environments.

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Application	Description	Key Benefit
Trace Metal Analysis	Preparation and storage of samples for ICP-OES and ICP-MS analysis where PPT level purity is mandatory.	Eliminates background contamination from the vessel material.
Graphene Oxide Synthesis	Handling concentrated sulfuric and phosphoric acids during the oxidative synthesis and washing of graphene derivatives.	Total resistance to strong oxidizing agents and high-temperature reactions.
Semiconductor Processing	Storage and transport of ultra-pure wet chemicals used in wafer cleaning and etching processes.	Maintains the extreme purity levels required for sub-nanometer fabrication.
Pharmaceutical Synthesis	Reaction vessel for complex organic synthesis involving aggressive catalysts and multi-stage solvent exchanges.	Non-stick surface ensures maximum recovery of expensive active ingredients.
Hydrofluoric Acid Storage	Safe containment and measurement of HF and other fluoride-based reagents that dissolve traditional glass.	Safe, long-term storage without degradation of the container walls.
Environmental Monitoring	Collection and digestion of soil and water samples for trace pollutant detection in remote or harsh field conditions.	Robust and unbreakable design prevents sample loss during transport.
Battery Material Testing	Used as a digestion tube or reaction vessel for electrolyte and electrode material characterization.	Chemically inert to lithium salts and aggressive electrolyte solvents.

Parameter	Specification for PL-CP189
Product Item Number	PL-CP189
Primary Materials	High-Purity Perfluoroalkoxy (PFA) / Polytetrafluoroethylene (PTFE)
Standard Capacity	700ml (Base Reference)
Capacity Range	Fully Customizable per client requirements
Operational Temperature	-200°C to +260°C (Material Dependent)
Chemical Resistance	Full range (Acids, Bases, Solvents, Oxidants)
Fabrication Method	End-to-end Custom CNC Machining
Surface Energy	Ultra-low (Hydrophobic/Oleophobic)
Leaching Profile	Certified Trace Metal Background (PPT Level)
Thread Standards	Customizable (ISO, GL, or Proprietary)
Wall Thickness	Customizable for pressure or vacuum applications

Application	Description	Key Benefit
Parameter	Specification for PL-CP189	

Design Type Wide-mouth for ease of access and cleaning

High Purity Pfa Chromatography Column And Collection Bottle System Corrosion Resistant Filter Column With Sieve Plate Glass Alternative

Item Number: PL-CP420



Introduction

Upgrade your lab with our high-purity PFA chromatography column system. This corrosion-resistant glass alternative features an integrated sieve plate and collection bottle, ensuring ultra-trace analysis integrity through superior chemical inertness and custom CNC fabrication for demanding industrial applications.

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Application	Description	Key Benefit
Semiconductor Trace Analysis	Purification and analysis of ultra-pure chemicals used in wafer fabrication.	Eliminates silicon and sodium leaching common with glass containers.
Hydrofluoric Acid Filtration	Gravity or pressure-assisted filtration of HF solutions and other aggressive etchants.	Total resistance to HF, which dissolves standard borosilicate glass.
Rare Earth Separation	Ion exchange chromatography for the isolation of high-purity rare earth elements.	Maintains sample integrity through multiple stages of acidic separation.
Environmental Monitoring	Large-volume water and soil sample preparation for heavy metal detection via ICP-MS.	Prevents loss of analyte to vessel walls and ensures zero background noise.
Radioactive Isotope Isolation	Chemical separation of isotopes in nuclear medicine and radiochemistry research.	High durability and ease of decontamination in hazardous environments.
Pharmaceutical Synthesis	Small-batch production of active pharmaceutical ingredients (APIs) requiring high purity.	Compliance with stringent purity standards through inert contact materials.
Petrochemical Testing	Filtration of corrosive catalysts and heavy oil fractions under varied temperatures.	Long-term reliability in the presence of harsh hydrocarbon solvents.

Specification Category	Model PL-CP420 Details
Primary Material	High-Purity Perfluoroalkoxy (PFA)
Product Structure	Column + Sieve Plate + Collection Bottle (Integrated System)
Internal Filter Type	PFA Sieve Plate / Porous Support Plate
Column Diameter	Customizable (Tailored to specific flow requirements)
Column Length	Customizable (Tailored to bed volume requirements)
Bottle Capacity	Customizable (Range of standard and non-standard volumes)
Connection Interfaces	Threaded (GL45, NPT, etc.) or Flanged - Customizable
Operating Temperature	-200°C to +260°C
Chemical Resistance	Universal (Except molten alkali metals and elemental fluorine)

Application	Description	Key Benefit
Specification Category	Model PL-CP420 Details	
Fabrication Method	Precision CNC Machining & Specialized Molding	
Sieve Pore Size	Customizable (Based on media size and flow rate)	

Transparent Corrosion Resistant Pfa Thermometer Sleeve And Customizable Hydrogen Fluoride Condensation Device

Item Number: PL-CP180



Introduction

High-performance transparent PFA thermometer sleeves and hydrogen fluoride condensation systems offer superior corrosion resistance and customizable stopper configurations. Ideal for advanced trace analysis and aggressive chemical processing in laboratory environments requiring absolute purity and thermal monitoring reliability and precision.

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Application	Description	Key Benefit
Hydrofluoric Acid Condensation	Efficient recovery and cooling of HF vapors in chemical manufacturing and etching processes.	Prevents equipment corrosion and ensures operator safety.
Trace Metal Analysis	Providing an inert housing for thermometers and probes during high-purity acid digestions.	Eliminates sample contamination from the container material.
Semiconductor Wafer Cleaning	Integration into wet bench setups for monitoring the temperature of aggressive cleaning chemistries.	Maintains chemical purity essential for high-yield manufacturing.
Pharmaceutical Reflux	Cooling and condensing volatile organic compounds during complex drug synthesis.	High visibility of the reflux process with zero reagent reactivity.
Petrochemical Testing	Monitoring high-temperature reactions involving corrosive sulfur compounds and strong acids.	Durable performance in extreme industrial environments.
Environmental Monitoring	Condensing gaseous emissions for the analysis of pollutants in specialized sampling systems.	Accurate sample capture without loss due to surface adsorption.
Battery Material Research	Testing electrolyte stability at elevated temperatures in a sealed, inert environment.	Prevents secondary reactions with the testing apparatus.

Feature	Specification Details (Model PL-CP180)
Model Number	PL-CP180
Primary Material	High-Purity Perfluoroalkoxy (PFA)
Transparency	Semi-transparent to Transparent (Process-dependent)
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Universal (Except molten alkali metals and elemental fluorine)
Stopper Configuration	Fully Customizable (Tapered, Threaded, or Flanged)
Dimensions	Custom Fabricated to Client Specifications
Machining Process	Precision CNC Turning and Milling
Surface Finish	Ultra-smooth, Low Surface Energy
Compatibility	Suitable for HF, Aqua Regia, Nitric Acid, and Organic Solvents
Sealing Mechanism	Customizable O-ring or Friction Fit

Laboratory Pfa Rectangular Acid Soaking Tank Silicon Wafer Cleaning Bath Corrosion Resistant High Purity Vessel

Item Number: PL-CP412



Introduction

High purity PFA rectangular tank engineered for semiconductor silicon wafer cleaning and corrosive acid soaking. This chemically inert laboratory vessel offers superior thermal stability and ultra low trace metal backgrounds for critical trace analysis and industrial cleaning processes.

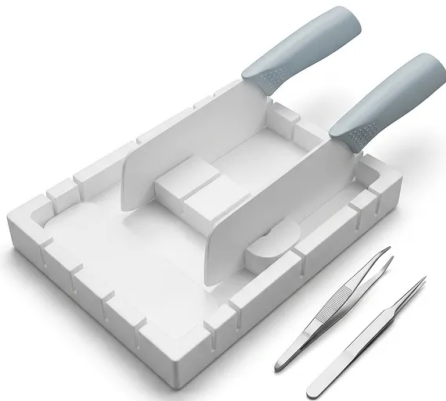
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Application	Description	Key Benefit
Semiconductor Cleaning	Soaking silicon wafers in hydrofluoric acid to remove surface oxide layers before electrochemical processing.	Preserves the rectification characteristics of the depletion layer space charge region.
Trace Arsenic Detection	Digestion and storage of samples for high-sensitivity arsenic analysis in environmental laboratories.	Prevents analytical bias caused by container adsorption or metal leaching.
Geochemical Acid Leaching	Processing geological samples with concentrated mineral acids for isotope and trace element extraction.	High-temperature resistance allows for accelerated digestion without container failure.
Pharmaceutical Bio-Cleaning	Deep cleaning of precision stainless steel components and fittings in a sterile, corrosive-resistant environment.	Eliminates cross-contamination and ensures the highest level of cleanliness for manufacturing tools.
Battery Research	Testing electrode materials and soaking battery components in aggressive electrolytes.	Exceptional stability against the varied chemical compositions found in modern lithium-ion research.
Electrochemistry Sample Prep	Cleaning electrodes and electrochemical cells to ensure no surface impurities affect sensitive voltage readings.	Guaranteed high cleanliness levels ensure reproducible data in sensitive voltammetry experiments.
Photovoltaic Cell Production	Etching and cleaning solar cell substrates in high-volume production environments.	Robustness and acid resistance lead to a longer service life compared to standard polypropylene tanks.

Specification	Details for Item PL-CP412
Standard Dimensions	400 mm (Length) x 300 mm (Width) x 120 mm (Height)
Material Composition	100% High-Purity Perfluoroalkoxy (PFA)
Temperature Operating Range	-200°C to +260°C
Chemical Resistance	Resistant to HF, HCl, HNO3, H2SO4, and Aqua Regia
Customization Options	Fully customizable dimensions, wall thicknesses, and lid configurations
Fabrication Method	Precision CNC Machining / High-Strength Welding
Surface Finish	Smooth, non-porous fluoropolymer finish
Impurity Content	Trace metal levels in the sub-ppb range

High Purity Ptfе Square Membrane Cutter And Filter Aliquot Device For Trace Analysis And Cleanroom Laboratory Applications

Item Number: PL-CP123



Introduction

Professional high-purity PTFE square membrane cutter and filter aliquot device engineered for contamination-free sample preparation. This cleanroom-compatible system offers non-stick surfaces and zero leaching, ideal for CDC, environmental testing, and trace analysis laboratories requiring precision customized fluoropolymer labware.

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Application	Description	Key Benefit
CDC Pathogen Monitoring	Dividing filter membranes used in air sampling for biological agent detection.	Prevents biological adhesion and ensures sterile sample handling.
Trace Metal Analysis	Preparation of filters containing particulate matter for ICP-MS or AAS analysis.	Zero leaching of metallic impurities from the device into the sample.
Environmental Water Testing	Portioning large-diameter membranes for multiple parallel chemical assays.	Chemical resistance allows for pre-treatment with harsh reagents.
Atmospheric Particulate Studies	Aliquoting PM2.5 or PM10 filter samples for longitudinal study comparisons.	High precision ensures statistical validity across divided portions.
Pharmaceutical Quality Control	Testing for particulate contamination in sterile injectable formulations.	Cleanroom compatibility and ease of sterilization maintain aseptic conditions.
Soil Leachate Filtration	Processing membranes used in the filtration of complex environmental matrices.	Non-stick surface allows for easy removal of sticky organic residues.
Radioactive Isotope Detection	Handling membranes in nuclear medicine or environmental radiation monitoring.	Excellent decontamination properties and resistance to radiation degradation.
Forensic Evidence Analysis	Precise division of evidence-bearing membranes for independent laboratory verification.	Ensures sample integrity and prevents forensic cross-contamination.

Feature	PL-CP123 Specification Details
Model Series	PL-CP123 (Base Configuration)
Primary Material	High-Purity Virgin PTFE (PFA Optional)
Surface Finish	High-precision CNC Machined / Ra < 0.4µm
Chemical Resistance	Universal (Except molten alkali metals and fluorine)
Operating Temperature	-200°C to +260°C
Cleaning Compatibility	Autoclave, Ultrasonic, or Acid Bath
Membrane Compatibility	Square, Rectangular, or Circular (Custom Grids)
Division Configuration	2-way, 4-way, 8-way, or Bespoke Aliquot Grids

Application	Description	Key Benefit
Feature	PL-CP123 Specification Details	
Dimensions	Custom products fabricated to user-specified dimensions	
Non-Stick Rating	Excellent (Hydrophobic and Oleophobic)	
Trace Element Purity	Cleanroom Grade / Ultra-Trace Analysis Compatible	

Corrosion Resistant Pfa Bottle Top Dispenser Translucent Squeeze Liquid Extraction System For Ultra Pure Chemical Handling

Item Number: PL-CP300



Introduction

High-purity PFA bottle-top dispensers offer exceptional chemical resistance and translucent visibility for safe squeeze extraction. Ideal for trace analysis and corrosive fluid handling, these custom-engineered systems ensure clean, precise liquid delivery without risk of external contamination or manual operator spills.

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Application	Description	Key Benefit
Trace Metal Analysis	Extraction of high-purity acids for sample digestion in environmental and geological studies.	Prevents leaching of trace contaminants into sensitive samples.
Semiconductor Wet Processing	Precise dispensing of ultra-pure etchants and cleaning agents in cleanroom environments.	Maintains chemical purity essential for microchip yield.
Hydrofluoric Acid Handling	Safe transfer and dispensing of HF for glass etching or metallurgical analysis.	Superior resistance to HF where glass and stainless steel fail.
Pharmaceutical Synthesis	Metering of reactive organic solvents and reagents in drug development laboratories.	Ensures bio-inertness and prevents cross-contamination.
Battery Research	Handling of electrolytes and corrosive additives in lithium-ion and next-gen battery testing.	Resilience against the aggressive chemistry of battery components.
Environmental Monitoring	Field and lab extraction of water or soil samples for pollutant detection.	Robustness for both laboratory and rigorous field use.
Petrochemical Testing	Dispensing of aromatic hydrocarbons and volatile solvents for fuel analysis.	High resistance to swelling or degradation by organic solvents.
Specialty Chemical Production	Transfer of small-batch high-value reagents in chemical manufacturing plants.	Maximizes recovery and minimizes waste of expensive chemicals.

Parameter Group	Specification Detail	Model/Reference
Core Identification	Item Number	PL-CP300
Material Science	Primary Material	High-Purity Perfluoroalkoxy (PFA)
	Secondary Components	Welded PFA Fittings and Tubing
Chemical Performance	Corrosion Resistance	Universal (Acids, Bases, Solvents, HF)
	Leaching Profile	Ultra-low trace metal background (PPT Grade)
Operational Design	Extraction Method	Squeeze-based pressure displacement
	Visibility	Translucent / Semi-transparent
	Joint Construction	Permanent Fusion Welding
Customization Range	Volume Capacities	Fully customizable based on client requirements
	Closure Sizes	Custom CNC machined to fit any bottle thread

Application	Description	Key Benefit
Parameter Group	Specification Detail	Model/Reference
	Tube Lengths	Adjustable/Customizable for varied bottle depths
Environmental Limits	Operating Temperature	Wide range (Customizable per application)
	Pressure Rating	Optimized for manual squeeze dispensing

High Purity Pfa Gas Washing Bottle Custom Gas Scrubbing Unit With Ptfе Bubbling Ball And Trace Analysis Absorption Vessel

Item Number: PL-CP23



Introduction

Premium PFA gas washing bottle featuring PTFE bubbling balls for high-purity gas scrubbing. Designed for trace analysis and corrosive gas filtration, these customizable absorption units ensure zero contamination and superior chemical resistance for critical laboratory processes and industrial applications.

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Application	Description	Key Benefit
Trace Metal Analysis	Collection of atmospheric gas samples for heavy metal detection using ICP-MS or AAS.	Eliminates background ion leaching from vessel walls.
Semiconductor Gas Scrubbing	Removal of acidic gases such as HF, HCl, and HBr from cleanroom process exhaust streams.	High resistance to the most aggressive etching chemicals.
Environmental Stack Sampling	Monitoring of industrial emissions for pollutants like SO ₂ , NO _x , and volatile organic compounds.	Robust and unbreakable for field use in harsh environments.
Petrochemical Quality Control	Absorbing sulfur compounds or other impurities from hydrocarbon gas streams for lab testing.	Inert to organic solvents and sulfur-containing species.
Synthetic Chemistry	Bubbling reactive gases (e.g., Chlorine, Ammonia) through liquid reagents in pilot-scale reactors.	Reliable gas dispersion and temperature stability.
Calibration Gas Preparation	Humidifying or conditioning calibration gases prior to instrument delivery.	Consistent gas-liquid interface without adding impurities.
Hydrogen Fuel Cell Testing	Cleaning and saturating feed gases for fuel cell performance evaluation and membrane testing.	High purity prevents poisoning of expensive catalysts.

Specification Category	Details for PL-CP23
Model Identifier	PL-CP23
Core Materials	High-purity PFA (Bottle body & Cap), PTFE (Bubbler & Internal Tubing)
Available Volumes	Fully customizable (Standard sizes: 50ml, 100ml, 250ml, 500ml, 1000ml, 2000ml)
Customization Options	Bespoke vessel dimensions, wall thickness, and specialized geometries
Inlet/Outlet Connections	Customizable (Flared, PFA Compression, NPT threads, or GL-style caps)
Bubbler Type	Choice of Sintered PTFE (fine bubbles) or Drilled PTFE Bubbling Ball
Internal Tube Length	Tailored to vessel depth and specific liquid volume requirements
Temperature Rating	-200°C to +260°C (-328°F to +500°F)
Pressure Capability	Dependent on wall thickness and connection type (Consult for vacuum/pressure limits)
Chemical Compatibility	Universal (Except molten alkali metals and elemental fluorine at high temperature)
Cleaning Protocol	Compatible with nitric acid boiling and ultrasonic cleaning methods

Pfa Sub Boiling Acid Purifier Electronic Grade Distillation System Laboratory Trace Analysis Equipment

Item Number: PL-CP114



Introduction

Engineered for the continuous 48-hour preparation of ultra-trace electronic-grade acids this high-purity PFA sub-boiling distillation system ensures maximum chemical resistance and non-contaminating performance for demanding laboratory trace analysis environments and semiconductor chemical processing workflows with bespoke configurations available.

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Application	Description	Key Benefit
ICP-MS Sample Prep	Purification of nitric and hydrochloric acids for ultra-trace metal analysis in academic and commercial research labs.	Minimizes background interference and lowers detection limits for critical analytes.
Semiconductor Processing	Preparation of electronic-grade cleaning agents and etchants used in silicon wafer fabrication and microelectronics.	Ensures zero metallic contamination in sensitive semiconductor manufacturing stages.
Geochemical Isotope Analysis	Distillation of high-purity hydrofluoric acid for the digestion of complex geological and silicate rock samples.	Provides the extreme purity required for high-precision mass spectrometry isotope ratios.
Pharmaceutical Quality Control	Production of high-purity reagents for the testing of active pharmaceutical ingredients (APIs) and heavy metal compliance.	Meets stringent pharmacopeia standards for chemical purity and reagent consistency.
Environmental Monitoring	Purification of acids used in the analysis of trace pollutants in drinking water, soil, and atmospheric samples.	Enhances the reliability of long-term environmental data by reducing reagent-induced errors.
Forensic Science	Preparation of specialized cleaning solvents and reagents for high-sensitivity evidence analysis and toxicology.	Maintains the chain of custody for chemical purity in sensitive forensic investigations.

Category	Specification Detail
Product Item Number	PL-CP114
Primary Material	High-Purity Virgin PFA (Perfluoroalkoxy)
Auxiliary Components	PTFE (Polytetrafluoroethylene) / FEP components available
Purification Method	Surface-evaporation sub-boiling distillation
Maximum Continuous Runtime	Up to 48 Hours per cycle
Operating Temperature	Precision-controlled (Customizable based on acid type)
Distillation Capacity	Fully customizable based on user requirements
Compatible Reagents	HF, HNO3, HCl, H2O, and other mineral acids
Connection Interfaces	Custom PFA fittings and tubing (Standard or Bespoke)
Fabrication Process	Precision CNC Machining and Thermal Bonding
Dimensions	Custom-tailored to laboratory space constraints

Application	Description	Key Benefit
Category	Specification Detail	
Power Requirements	Configurable for regional voltage and frequency	

High Purity Pfa Chromatography Column With Collection Bottle Corrosion Resistant Fluoropolymer Filtration System For Trace Analysis

Item Number: PL-CP54



Introduction

High-performance PFA chromatography column and collection bottle system offers exceptional chemical resistance and ultra-low metal ion leaching for trace analysis. Durable corrosion-resistant fluoropolymer construction serves as a premium glass alternative for demanding laboratory filtration and high-purity purification.

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Application	Description	Key Benefit
Geochemical Isotope Analysis	Separation of rare earth elements and isotopes from geological matrices using aggressive acid eluents.	Eliminates background contamination from boron and silicon found in glass.
Semiconductor Grade Chemicals	Final-stage filtration and purification of ultra-pure photoresists and etching reagents.	Ensures sub-ppb metal cation levels are maintained during processing.
Environmental Trace Metal Monitoring	Processing of seawater or wastewater samples to detect heavy metal concentrations at ppt levels.	Prevents sample adsorption to container walls, ensuring accurate recovery.
Pharmaceutical API Purification	Chromatography of sensitive active pharmaceutical ingredients (APIs) that react with glass surfaces.	Biocompatible and non-reactive fluid path preserves drug integrity.
Nuclear Chemistry	Handling and separation of radioactive isotopes in highly acidic environments.	High radiation resistance and chemical durability under extreme conditions.
Hydrofluoric Acid Filtration	Purification and volume measurement of HF-based solutions used in mineral digestion.	Total resistance to HF, which would otherwise etch and destroy glass labware.
Forensics and Toxicology	Extraction of trace toxins from complex biological or environmental samples.	Minimizes sample carry-over and cross-contamination between sensitive tests.

Feature	Specification Details for PL-CP54
Model Identifier	PL-CP54 Series
Material Composition	100% High-Purity Perfluoroalkoxy (PFA)
Column Dimensions	Fully Customizable (Diameter and Length per client specification)
Collection Bottle Capacity	Fully Customizable (Available in standard and bespoke volumes)
Filtration Element	Integrated PFA Sieve Plate / Sintered Frit (Custom micron ratings available)
Chemical Resistance	Universal resistance to almost all chemicals including HF, Aqua Regia, and organic solvents
Operating Temperature	-200°C to +260°C (-328°F to +500°F)
Leaching Rates	Trace metal leachables at ppt levels (Batch certificates available on request)
Connection Types	Customizable (Standard tapers, GL threads, NPT, or bespoke CNC fittings)

Application	Description	Key Benefit
Feature	Specification Details for PL-CP54	
Surface Finish	High-precision CNC finish with ultra-smooth internal bore to prevent analyte retention	
Transparency	Clear/Translucent for process visualization	
Safety Profile	Shatterproof, non-flammable, and chemically stable	

High Purity Semiconductor Grade Pfa Sampling Bottles For Ultrapure Reagent Storage And Trace Analysis Applications

Item Number: PL-CP194



Introduction

High-purity PFA sampling bottles designed for semiconductor grade reagent storage and trace analysis. These inert containers prevent metal ion leaching and contamination, ensuring baseline stability and data reproducibility for critical industrial laboratory processes and ultrapure fluid handling. Contact us today.

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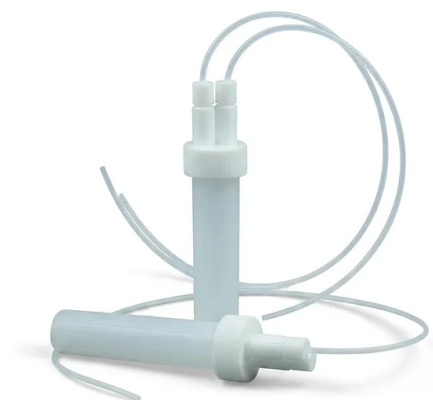
Application	Description	Key Benefit
Semiconductor Fabrication	Storage and transport of ultra-high purity (UHP) chemicals and photoresists used in wafer processing.	Prevents trace metal contamination that can cause wafer defects.
Trace Element Analysis	Containment of samples and standards for ICP-MS, ICP-OES, and AAS in environmental or geological research.	Ensures ultra-low background levels and high data reproducibility.
Catalyst Ink Storage	Holding slurries containing isopropanol, Nafion, and various catalysts for electrochemical testing.	Smooth walls prevent residue loss and maintain slurry consistency.
LC-MS/MS Sample Prep	Storage of high-purity solvents like ultrapure water and ammonium acetate for liquid chromatography.	Prevents solvent penetration and leaching of plasticizers or metal ions.
Silicon Concentration Detection	Sample transfer and storage for trace silicon analysis in plant tissues or industrial materials.	Prevents silicon leaching from walls and adsorption of sample components.
Acid Digestion Workflows	Storage of highly corrosive digested samples (e.g., HF, HNO ₃) awaiting dilution and measurement.	Superior resistance to mineral acids at elevated temperatures.
Standard Reference Materials	Long-term archiving of certified reference materials and primary calibration standards.	Maintains concentration stability by preventing evaporation and adsorption.
Battery Research	Handling of electrolyte components and specialized additives in controlled laboratory environments.	Chemical inertness ensures no interference with electrochemical results.

Feature	Specification for PL-CP194 Series
Material	High-Purity Perfluoroalkoxy (PFA)
Product Identification	PL-CP194
Temperature Resistance Range	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Universal (except molten alkali metals, fluorine gas)
Trace Metal Background	< 10 ppt (parts per trillion) for major elements
Surface Tension/Wettability	Hydrophobic, extremely low surface energy
Standard Capacities (Examples)	500ml, 1000ml (Fully customizable)
Cap Design	Liner-less, high-torque screw cap for airtight seal
Fabrication Method	Precision Molding and/or Custom CNC Machining

Application	Description	Key Benefit
Feature	Specification for PL-CP194 Series	
Cleaning Protocol	Semiconductor-grade ultra-pure water/acid cleaned options available	
Dimensions	Custom-manufactured to client specifications	

High Purity Pfa Reaction Bottle With Tubing Connection For Corrosive Chemical Synthesis And Trace Analysis

Item Number: PL-CP364



Introduction

High-purity PFA reaction bottles engineered for low-background trace analysis and corrosive chemical processing. Features customizable configurations and seamless Teflon tubing integration to ensure zero contamination and superior chemical resistance in demanding laboratory environments and industrial synthesis applications.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Storage and digestion of samples for environmental heavy metal detection.	Minimizes ion adsorption and background noise in ICP-MS results.
Semiconductor Processing	Handling of high-purity etching chemicals and photoresist solvents.	Prevents metallic contamination that can compromise wafer integrity.
Hydrofluoric Acid Storage	Long-term containment and dispensing of HF for glass etching or mineral digestion.	Eliminates the risk of container erosion and hazardous leaks.
Pharmaceutical Synthesis	Reaction vessel for the production of high-purity active pharmaceutical ingredients (APIs).	Ensures no leaching of plastic additives into the final product.
Geochemical Digestion	Decomposition of rock and soil samples using concentrated mineral acids.	High thermal and chemical resistance for aggressive sample prep.
Standard Solution Prep	Preparation and storage of calibration standards for analytical chemistry.	Long-term stability and concentration accuracy of sensitive standards.
Closed-System Fluid Transfer	Integration into automated sampling systems via Teflon tubing ports.	Maintains sample purity by preventing exposure to ambient air.
Battery Research	Testing of corrosive electrolyte materials in advanced battery cell development.	Withstands aggressive lithium salts and organic carbonates.

Feature	Specification for PL-CP364	Customization Options
Base Model Number	PL-CP364	Supported
Material Construction	High-Purity Perfluoroalkoxy (PFA)	PTFE variants available upon request
Standard Capacity	60ml	Customizable to larger/smaller volumes
Connection Interface	Compatible with Teflon/PTFE Tubing	Custom port sizes and thread types available
Operating Temperature	-200°C to +260°C	Specific wall thicknesses for thermal loads
Chemical Resistance	Universal (including HF, Aqua Regia)	Specialized seals for volatile organics
Leaching Profile	Low Background / Trace Analysis Grade	Certified high-purity cleaning available
Surface Finish	Ultra-smooth CNC finish	Custom internal geometries available
Dimensions	Standard 60ml Profile	Bespoke height/diameter ratios per CNC spec
Closure Type	High-seal Screw Cap with Porting	Septa, valve-integrated, or solid caps

High Purity Pfa Chromatography Column Double Layer Constant Pressure Filter Column With Sieve Plate Acid Resistant Fluoropolymer Filtration System

Item Number: PL-CP185



Introduction

Advanced high-purity PFA chromatography columns featuring double-layer constant pressure design and integrated sieve plates. This acid-resistant filtration system effectively replaces traditional glass sand cores for ultra-trace analysis in semiconductor, geological, and high-performance chemical manufacturing industrial environments globally.

[Learn More](#)

Application	Description	Key Benefit
Geological Isotope Analysis	Separation of trace elements in rock and soil samples using concentrated mineral acids.	Zero metal background contamination ensures precise isotopic ratios.
Semiconductor Grade Chemicals	Purification and filtration of high-purity etching solutions and photoresist components.	Maintains PPT-level purity by preventing leaching from the column walls.
Environmental Monitoring	Preparation and filtration of water and soil extracts for heavy metal detection via ICP-MS.	High recovery rates for trace metals due to low surface absorption properties.
Nuclear Radiochemistry	Handling of radioactive isotopes and corrosive reagents in hot cell environments.	Exceptional radiation resistance and mechanical stability at high temperatures.
Pharmaceutical Synthesis	Purification of active pharmaceutical ingredients (APIs) involving highly reactive intermediates.	Prevents product contamination and withstands aggressive solvent exposure.
Hydrofluoric Acid Processing	Chromatography and filtration involving HF, which dissolves standard glass laboratory equipment.	Complete acid immunity allows for long-term use with concentrated HF.
Battery Material Testing	Filtration and analysis of electrolyte components and lithium salt precursors.	Chemical inertness prevents interference with sensitive electrochemical measurements.

Feature	Specification Details (Model PL-CP185 Series)
Primary Identification	PL-CP185 PFA Chromatography System
Material Composition	High-Purity Virgin Perfluoroalkoxy (PFA)
Maximum Operating Temperature	260°C (500°F)
Minimum Operating Temperature	-200°C (-328°F)
Filtration Mechanism	Double-layer jacketed design with integrated PFA sieve plate
Filter Core Type	Replaceable or fixed PFA porous plate (custom mesh sizes available)
Chemical Resistance	Full resistance to HF, HNO ₃ , H ₂ SO ₄ , HCl, and organic solvents
Body Dimensions	Fully customizable (Diameter and Height per client specification)

Application	Description	Key Benefit
Feature	Specification Details (Model PL-CP185 Series)	
Connection Interfaces	Customizable (NPT, Flange, Flare, or Threaded connections)	
Surface Finish	High-precision CNC machined, ultra-smooth internal bore	
Configuration Options	Single-stage, multi-stage, or jacketed for temperature control	

High Purity Ptfе Circular Filter Membrane Cutter With Ceramic Blade For Trace Analysis And Cdc Laboratory Sample Preparation

Item Number: PL-CP174



Introduction

Ensure sample integrity with this high-purity PTFE circular filter membrane cutter featuring a precision ceramic blade. Designed for trace analysis and CDC laboratories, it eliminates metal contamination and leaching, providing a customizable, durable solution for critical filtration prep workflows.

[Learn More](#)

Application	Description	Key Benefit
CDC Trace Metal Analysis	Preparation of air and water filters for the detection of heavy metals in public health monitoring.	Eliminates background interference from tool-derived metal ions.
Environmental Monitoring	Cutting large-format membrane rolls into specific circular sizes for field testing and site evaluation.	Ensures that the cutting tool does not add contaminants to the environmental sample.
Pharmaceutical Bio-burden	Precision cutting of filters used in sterility testing and microbial limit testing within ISO-rated cleanrooms.	High chemical resistance to cleaning agents and zero leaching into delicate media.
Semiconductor Water Purity	Preparing filtration systems for the analysis of ultra-pure water (UPW) used in wafer fabrication.	Maintains the absolute purity levels required for semiconductor-grade trace analysis.
Battery Research	Cutting specialized separators and membranes for lithium-ion and advanced electrochemical cell testing.	Prevents metallic short-circuits or chemical interference within the cell environment.
Forensic Toxicology	Preparation of filter membranes for the extraction of specific compounds from complex biological matrices.	Guarantees that no exogenous materials are introduced into the evidentiary chain.
Oceanographic Research	Analyzing micro-particulates and trace minerals in seawater samples collected during research voyages.	Resists corrosion from saline environments while preventing trace metal contamination.

Feature	Specification Details (Model: PL-CP174)
Base Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Blade Composition	Advanced Technical Ceramic (Zirconia/Alumina variants available)
Construction Method	Full Precision CNC Machined Body
Metal Content	0% (Completely Metal-Free Design)
Cutter Shape	Circular / Round (Customizable)
Cutting Diameter Range	Custom Product (Manufactured to specific client requirements)
Chemical Compatibility	Universal (Resistant to acids, bases, solvents, and oxidizers)
Temperature Resistance	Cryogenic to +260°C (Material capability)
Maintenance Level	Low (Self-lubricating PTFE and wear-resistant ceramic)

Application	Description	Key Benefit
Feature	Specification Details (Model: PL-CP174)	
Customization Options	Fully Customizable (Dimensions, blade depth, handle geometry)	
Compliance	Suitable for use in CDC, FDA, and EPA regulated laboratories	

High Purity Pfa Filtration Reagent Bottle With Squeezable Body And Integrated Bottom Sieve Plate For Trace Analysis

Item Number: PL-CP390



Introduction

Engineered from ultra-high purity PFA, this squeezable filtration bottle features an integrated bottom sieve plate for trace analysis. Ensure ultra-low metal ion background and exceptional chemical resistance for demanding laboratory applications and high-sensitivity sample preparation and filtration analytical workflows.

[Learn More](#)

Application	Description	Key Benefit
Trace Element Analysis	Storage and filtration of samples for ICP-MS and ICP-OES detection in geochemistry and environmental science.	Prevents background noise by eliminating metal ion leaching from container walls.
Semiconductor Wet Chemistry	Handling and filtration of ultra-pure photoresists, etchants, and cleaning solvents used in wafer processing.	Ensures the highest levels of chemical purity to prevent microscopic defects in components.
Pharmaceutical Quality Control	Preparation of high-sensitivity standards and mobile phases for HPLC and LC-MS/MS analysis of drug compounds.	Minimizes secondary contamination and sample loss due to adsorption on surfaces.
Heavy Metal Detection	Preparation and storage of 2% Nitric Acid (HNO ₃) diluents and rinsing solutions for analytical equipment maintenance.	Maintains the stability of acid concentrations without introducing metallic impurities.
Acid Digestion Workflows	Integrated filtration of mineral acid digests after hydrothermal or microwave-assisted sample preparation.	Streamlines the workflow by combining filtration and storage into a single high-purity vessel.
Environmental Monitoring	Collection and on-site filtration of water samples for the detection of trace organic and inorganic pollutants.	High durability and chemical resistance ensure sample integrity during transport and processing.

Specification Category	Parameter Details (Model PL-CP390)	Customization Capability
Material Construction	100% High-Purity PFA (Perfluoroalkoxy)	Bespoke material blends (e.g., PTFE components) available
Body Configuration	Soft-walled, squeezable design for pressure-assisted filtration	Variable wall thicknesses for specific flexibility needs
Filtration Component	Integrated PFA bottom sieve plate	Customizable pore size, hole distribution, and plate thickness
Volumetric Capacity	Standard sizes available from 30ml to 2000ml	Fully customizable volumes and height/diameter ratios
Temperature Tolerance	-200°C to +260°C continuous operating range	Specialized designs for high-pressure or cryo-specific use
Chemical Resistance	Compatible with HF, HNO ₃ , H ₂ SO ₄ , HCl, and organic solvents	Verified against all standard laboratory reagents
Closure Type	High-precision PFA screw cap with standard or GL thread	Custom cap designs including septum ports or tubing inlets
Surface Finish	Ultra-smooth, non-porous CNC machined and molded surfaces	Specific roughness (Ra) requirements can be met
Processing Method	Injection molding and precision CNC machining	Able to produce complex, non-standard geometries

Pfa Distillation Flask For Water Quality Alkylmercury Determination And Laboratory Trace Analysis Heating Applications

Item Number: PL-CP423



Introduction

Precision-engineered PFA distillation flask designed for trace alkylmercury analysis. Featuring a 60ml capacity and ultra-high purity material for contamination-free heating. This fully customizable unit ensures optimal performance in demanding laboratory water quality testing and specialized environmental research applications and workflows.

[Learn More](#)

Application	Description	Key Benefit
Alkylmercury Speciation	Distillation of water samples to separate methylmercury and ethylmercury for subsequent detection.	Minimal analyte adsorption compared to glass vessels.
Trace Metal Digestion	Sample preparation involving strong acids (HNO ₃ , HCl, HF) for environmental water quality testing.	Total resistance to hydrofluoric acid and high-purity recovery.
Oceanographic Research	Analysis of seawater samples for ultra-trace levels of heavy metals in coastal and deep-sea environments.	Resistant to salt-spray corrosion and low trace-element leaching.
Petrochemical Analysis	Distillation of volatile contaminants and catalysts from organic matrices and fuel samples.	High thermal tolerance and compatibility with various hydrocarbon solvents.
Pharmaceutical Quality Control	Testing for residual catalysts or heavy metal impurities in active pharmaceutical ingredients (APIs).	Compliance with high-purity standards and non-contaminating surfaces.
Environmental Monitoring	Routine testing of wastewater and industrial effluent to meet regulatory discharge standards.	Durable construction for long-term use in high-volume testing labs.
Acid Purification	Small-scale distillation of acids to produce sub-boiling trace-metal grade reagents.	High-purity PFA ensures no re-introduction of metallic impurities.

Feature	Details for PL-CP423
Product Identifier	PL-CP423
Nominal Capacity	60ml
Primary Material	High-Purity Perfluoroalkoxy (PFA)
Temperature Range	-200°C to +260°C
Chemical Compatibility	Universal (including HF, HNO ₃ , H ₂ SO ₄ , and organic solvents)
Surface Property	Hydrophobic, Non-stick, Smooth internal finish
Fabrication Method	Precision CNC Machining / Molding
Customization Options	Customizable: Neck length, joint types, wall thickness, and integrated sensor ports
Design Type	Distillation / Reaction Flask

Application	Description	Key Benefit
Feature	Details for PL-CP423	
Cleanability	Autoclavable; compatible with acid-washing and sub-boiling cleaning	

High Purity Pfa Ion Exchange Column Corrosion Resistant High Purity Chromatography Glass Alternative Customizable Vessel

Item Number: PL-CP361



Introduction

This high-purity PFA ion exchange column provides exceptional chemical resistance and transparency for trace analysis. A customizable glass alternative, it ensures zero contamination for semiconductor and pharmaceutical laboratories requiring precise, bespoke fluid separation solutions and ultimate durability.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Separation and concentration of metal ions in environmental or clinical samples using ion exchange resins.	Eliminates background contamination from the vessel itself, ensuring accurate PPB/PPT level detection.
Semiconductor Grade Chemicals	Purification of photoresists, etchants, and solvents used in microchip fabrication processes.	Maintains the extreme purity levels required to prevent defects in semiconductor manufacturing.
Pharmaceutical Extraction	Isolation of active pharmaceutical ingredients (APIs) through column chromatography in sterile environments.	Superior chemical resistance to organic solvents and ease of sterilization at high temperatures.
Radioactive Isotope Separation	Processing and separation of isotopes in nuclear medicine and research facilities.	Exceptional radiation resistance and leak-proof reliability for handling hazardous materials.
Hydrofluoric Acid Processing	Chromatography and fluid handling involving concentrated HF, which aggressively attacks glass.	Total resistance to HF, allowing for safe and consistent separation processes where glass would fail.
High-Purity Reagent Production	Refining and filtering high-purity reagents for laboratory use and industrial chemical synthesis.	Minimizes leaching of impurities, ensuring the final reagent meets strict quality standards.
Geochemical Research	Dissolution and separation of mineral samples for geological dating and isotopic fingerprinting.	Withstands the aggressive acid digestion processes required for mineral analysis.

Feature	Specification Details for PL-CP361 Series
Base Material	High-Purity Perfluoroalkoxy (PFA)
Reference Dimensions	30mm Inner Diameter (ID) x 36mm Outer Diameter (OD)
Customization Range	Fully Customizable Lengths, Diameters, and Wall Thicknesses
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Acids (including HF), Bases, Organic Solvents, Oxidizing Agents
Surface Finish	High-precision CNC Machined Interior/Exterior
Transparency	High (Visual Monitoring Capable)
Fitting Interfaces	Customizable (NPT, Flared, Compression, or Bespoke CNC Threads)
Leaching Profile	Negligible Metal Ion and Organic Carbon Leaching
Manufacturing Method	End-to-end CNC Fabrication and Precision Assembly

Corrosion Resistant White PTFE Syringe For Laboratory Sampling Low Background Trace Analysis

Item Number: PL-CP61



Introduction

High-purity PTFE sampling syringe with clear graduations for precise laboratory fluid handling. Exceptional corrosion resistance and ultra-low background levels ensure analytical integrity in trace metal analysis and aggressive chemical processing environments.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Sampling and preparation for ICP-OES and ICP-MS where metal contamination must be strictly avoided.	Zero metal leaching from barrel
Hydrofluoric Acid Handling	Precise dispensing and transfer of HF acid, which rapidly etches and destroys standard glass syringes.	Absolute resistance to HF acid
Semiconductor Processing	Delivery and sampling of high-purity photoresists, etchants, and cleaning solvents in cleanroom environments.	Maintains ultra-high process purity
Pharmaceutical Synthesis	Transfer of reactive intermediates and aggressive organic solvents during drug discovery and development.	No chemical degradation or reaction
Environmental Monitoring	Collecting water, soil extracts, or waste samples containing volatile organic compounds (VOCs).	Low adsorption of organic analytes
Battery Research	Handling of corrosive electrolytes and aggressive additives in lithium-ion and next-gen battery testing.	Stability against organic carbonates
Petrochemical Testing	Sampling of high-temperature hydrocarbons and acidic crude oil components for quality control.	Thermal and chemical robustness

Parameter	Specification Details
Product Item Number	PL-CP61
Primary Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Visual Appearance	Natural White, Opaque
Graduation Type	Permanent, Precision-Etched Scale
Capacity Range	Fully Customizable (e.g., 50ml and bespoke volumes)
Operating Temperature	-200°C to +260°C
Chemical Resistance	Universal (except molten alkali metals and fluorine gas)
Connection Interface	Customizable (CNC Machined / Threaded / Luer-Lock compatible)
Manufacturing Process	Precision CNC Machined from solid fluoropolymer stock
Surface Finish	High-Grade Smooth Finish to minimize sample adhesion
Purity Standard	Laboratory/Experimental Grade for trace analysis
Customization Options	Available for length, diameter, and needle configuration

Electronic Grade Acid Preparation Pfa Acid Purifier Sub Boiling Distillation System Corrosion Resistant Petrochemical Pharmaceutical Chemical Equipment

Item Number: PL-CP333



Introduction

Premium PFA acid purifier for electronic grade acid preparation. This corrosion-resistant sub-boiling distillation system features dry-burn protection and 48H continuous operation, providing ultra-pure reagents for demanding petrochemical and pharmaceutical trace analysis applications ensuring consistent laboratory results.

[Learn More](#)

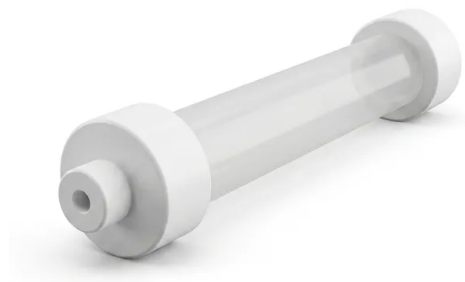
Application	Description	Key Benefit
Semiconductor Manufacturing	Preparation of ultra-pure hydrofluoric and nitric acids for silicon wafer etching and cleaning processes.	Minimizes metallic contamination on wafer surfaces, increasing yield.
Pharmaceutical Quality Control	Purifying acids used in the digestion of active pharmaceutical ingredients (APIs) for heavy metal testing.	Ensures compliance with strict USP and EP standards for trace metal limits.
Petrochemical Analysis	Production of high-purity reagents for the analysis of catalysts and crude oil feedstocks.	Prevents false positives in sensitive trace element detection.
Environmental Monitoring	Purification of nitric acid for the stabilization of water and soil samples intended for ICP-MS analysis.	Reduces background noise and improves detection limits for environmental toxins.
Geological Research	Acid digestion of rock and mineral samples for isotopic analysis and rare earth element quantification.	Eliminates cross-contamination between samples in high-precision geological studies.
Battery Technology R&D	Preparation of electrolyte-grade chemicals and high-purity acids for lithium-ion battery material testing.	Enhances accuracy in characterizing material purity and degradation.
Nuclear Industry	Purification of specialty acids for the separation and analysis of radioisotopes.	Provides a chemically inert environment that withstands radiation exposure and aggressive reagents.

Feature	Specification Details (Model PL-CP333)
Product Identifier	PL-CP333
Core Material	High-Purity Virgin PFA (Perfluoroalkoxy)
Distillation Method	Sub-Boiling Infrared/Surface Evaporation
Compatible Reagents	HF, HNO ₃ , HCl, H ₂ SO ₄ , H ₂ O, and various organic solvents
Operational Duration	Up to 48 Hours Continuous (Customizable)
Safety Mechanisms	Automatic Dry-Burn Cut-off / Over-Temperature Protection
Temperature Control	Digital PID Regulation (Bespoke ranges available)
Purification Efficiency	Reagent Grade to PPT/PPB Level (Process Dependent)
Throughput Capacity	Customizable based on laboratory volume requirements

Application	Description	Key Benefit
Feature	Specification Details (Model PL-CP333)	
Heating Element	Fully Encapsulated Corrosion-Resistant Heater	
Cooling System	Integrated PFA Cooling Coil (Air or Water cooled options)	
Fabrication Method	Full Custom CNC Machining and Precision Welding	
Dimensions	Bespoke sizing to fit specific fume hood footprints	

Translucent Pfa Ion Exchange Column With Sieve Plate For Corrosive Chemical Processing And High Purity Trace Analysis

Item Number: PL-CP360



Introduction

Enhance trace analysis using this translucent PFA ion exchange column featuring integrated sieve plates for superior chemical resistance and visual monitoring. Fully customizable for high-purity laboratory applications and aggressive chemical processing environments. Request your bespoke industrial solution today for performance.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Separation of rare earth elements and transition metals for environmental and geological samples.	Zero background interference and minimal analyte loss.
Semiconductor Processing	Purification of high-purity etchants and cleaning solutions used in wafer fabrication.	Resistance to hydrofluoric acid and ultra-low ionic leaching.
Pharmaceutical Purification	Isolation of active pharmaceutical ingredients (APIs) in corrosive or highly acidic conditions.	Compliance with high-purity standards and solvent compatibility.
Isotope Geochemistry	Precise separation of isotopes for geochronology and oceanography research.	Maximum recovery of trace samples and extreme chemical durability.
Nuclear Engineering	Recovery and purification of radioactive isotopes from corrosive aqueous streams.	Long-term stability under radiation and aggressive chemical stress.
Specialty Chemical R&D	Testing of new catalysts and chemical reactions involving highly reactive reagents.	Safe containment and real-time visual observation of reactions.
Waste Water Treatment	Analysis of heavy metals in industrial effluent using specialized ion exchange resins.	Robust performance in varying pH levels and harsh industrial waste.

Parameter	Specifications for PL-CP360
Product Item Number	PL-CP360
Material Construction	High-Purity Translucent PFA / PTFE
Volume Options	200ml, 1000ml, and Fully Customizable
Sieve Plate (Frit)	Integrated Fluoropolymer Sieve Plate (Custom Pore Size Available)
Operating Temperature Range	-200°C to +260°C
Chemical Resistance	Universal (Except molten alkali metals and fluorine gas)
Visual Property	Semi-transparent (Translucent) for visual bed monitoring
Pressure Rating	Designed for gravity flow or low-pressure liquid chromatography
Connector Type	Standard GL or NPT threads (Customizable upon request)
Surface Finish	High-precision CNC machined smooth internal bore

Application	Description	Key Benefit
Parameter	Specifications for PL-CP360	
Customization	Available for length, diameter, wall thickness, and specialized fittings	

Customizable Pfa Square Tray Corrosion Resistant High Temperature Large Petri Dish Electrolytic Cell

Item Number: PL-CP285



Introduction

Acquire premium customizable PFA square trays engineered for extreme chemical resistance and high-temperature stability. Ideal for electrolytic cells and large-scale Petri applications, these precision-machined fluoropolymer solutions ensure unmatched purity and long-term durability in demanding laboratory research environments.

[Learn More](#)

Application	Description	Key Benefit
Semiconductor Etching	Used as a containment tray for silicon wafer cleaning and etching using aggressive hydrofluoric acid solutions.	Prevents metallic contamination and withstands corrosive acids without degradation.
Electrochemical Research	Serves as the primary vessel body for custom-designed electrolytic cells and battery testing fixtures.	Provides electrical insulation and chemical resistance for long-term stability.
Trace Metal Analysis	Acts as a large-scale evaporation or digestion dish for samples intended for ICP-OES and ICP-MS testing.	Ultra-low background levels ensure the highest analytical accuracy for trace detection.
Pharmaceutical Synthesis	Utilized for the containment of active pharmaceutical ingredients (APIs) during corrosive chemical reactions.	High-purity PFA ensures no leaching of impurities into the pharmaceutical product.
Aerospace Component Testing	Employed as a bath for testing the corrosion resistance of aerospace alloys in simulated extreme environments.	High thermal and chemical resistance allows for accelerated aging tests at high temperatures.
Fuel Cell Development	Integrated into testing systems for hydrogen fuel cells where high humidity and acidity are prevalent.	Low permeability and chemical inertness protect the integrity of reaction gases and sensors.
High-Purity Storage	Used for the storage and transport of ultra-pure reagents and sensitive chemical precursors.	Eliminates the risk of container-sourced contamination over long storage periods.

Specification Parameter	Details for PL-CP285
Product Item Number	PL-CP285
Material Options	High-Purity PFA or PTFE (Virgin Grade)
Dimensions (LxWxH)	Fully Customizable to User Specifications
Wall Thickness	Customizable (Heavy-wall options available for structural rigidity)
Operating Temperature Range	-200°C to +260°C (PFA) / -190°C to +250°C (PTFE)
Chemical Compatibility	Universal (Except for molten alkali metals and fluorine at high temperatures)
Surface Finish	Precision CNC Machined (Ultra-smooth, anti-adsorption finish)
Fabrication Method	End-to-end Custom CNC Fabrication / High-Precision Molding
Internal Geometry	Available with flat, sloped, or multi-compartment bases as requested
Tensile Strength	Optimized for industrial load-bearing during fluid transfer

Application	Description	Key Benefit
Specification Parameter	Details for PL-CP285	
Permeability	Extremely low for moisture and reaction gases	
Adsorption Rate	Negligible for metal ions and organic compounds	

Pfa Chemical Reaction Tank With Customizable Fittings For Corrosive Solvent Synthesis And High Purity Lab Applications

Item Number: PL-CP48



Introduction

Premium 6L PFA reaction tank delivers exceptional chemical resistance for aggressive solvents. This customizable vessel features high-purity construction and precision fittings, ideal for advanced material synthesis, pharmaceutical research, and demanding industrial laboratory processes.

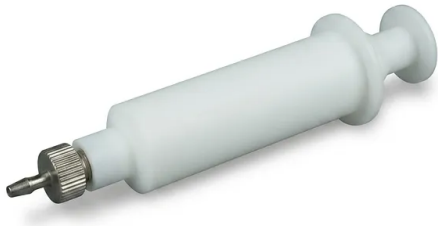
[Learn More](#)

Application	Description	Key Benefit
Semiconductor Etchant Prep	Mixing and storing high-purity acids used in silicon wafer cleaning and etching processes.	Zero metallic contamination
Pharmaceutical API Synthesis	Conducting organic synthesis reactions involving highly corrosive reagents or aggressive solvents.	Superior batch purity control
New Material Research	Synthesis of advanced nanomaterials and specialty polymers requiring precise environmental control.	Wide temperature/pressure range
Trace Element Analysis	Sample digestion and preparation for ICP-MS or ICP-OES analysis in environmental monitoring.	Lowest possible detection limits
Battery Electrolyte Testing	Formulation and testing of novel lithium-ion or solid-state battery electrolytes.	Excellent electrochemical stability
Petrochemical Additives	Evaluating the performance of corrosive fuel additives and lubricants under thermal stress.	High-temperature durability
Fine Chemical Production	Small-batch production of high-value specialty chemicals requiring universal corrosion resistance.	Long equipment service life

Feature	Specification	Model Identifier
Base Material	High-Purity Virgin PFA (Perfluoroalkoxy)	PL-CP48
Standard Volume	6 Liters	PL-CP48
Temperature Range	-200°C to +260°C (Customizable based on seal type)	PL-CP48
Pressure Rating	Customizable to application requirements	PL-CP48
Fittings & Connections	Fully customizable (NPT, GL, Flange, Barb)	PL-CP48
Lid Configuration	Multi-port design; customizable number and size of ports	PL-CP48
Wall Thickness	Customizable for vacuum or pressure applications	PL-CP48
Interior Finish	Ultra-smooth CNC machined; non-stick surface	PL-CP48
Support Structure	Optional customizable heating jackets or stands	PL-CP48
Sealing Gaskets	Customizable PTFE or PFA-encapsulated O-rings	PL-CP48

High Temperature Chemical Resistant 50MI Ptfе Syringe Customized Teflon Injector With Threaded Seal For Trace Analysis

Item Number: PL-CP14



Introduction

Engineered from virgin PTFE, this 50ml high-purity injector offers exceptional chemical resistance and thermal stability from -200°C to +250°C. Perfect for trace analysis, aggressive solvent handling, and precision dispensing in demanding laboratory environments.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Preparation and dispensing of samples for ICP-MS and ICP-OES.	Eliminates metallic contamination from the injector body.
Semiconductor Etching	Handling of high-purity hydrofluoric acid and etching mixtures.	Resistance to HF which dissolves glass and standard plastics.
Pharmaceutical Formulation	Dosing of aggressive solvents and active ingredients in sterile environments.	Non-leaching properties ensure drug purity and stability.
Cryogenic Research	Transfer of liquid nitrogen or ultra-cold reagents in specialized labs.	Maintains flexibility and structural integrity at -200°C.
Petrochemical Testing	Sampling and analysis of high-temperature oil and fuel derivatives.	Withstands thermal stress up to 250°C without deformation.
Electrochemical Cells	Serving as a reagent delivery or gas sampling port in corrosive cells.	High dielectric strength and universal chemical resistance.
Environmental Monitoring	Collection of field samples containing volatile organic compounds (VOCs).	Low permeability and non-reactive surface prevent sample loss.

Specification	Detail for PL-CP14 Series
Product Item Number	PL-CP14
Standard Capacity	50ml (Custom volumes available upon request)
Material Type	100% Virgin PTFE (Teflon)
Color	Opaque Pure White
Continuous Operating Temp	-200°C to +250°C
Maximum Short-term Temp	Up to +260°C
Chemical Resistance	Full resistance to Acids, Alkalis, and Solvents
Flammability Rating	UL94 V0 (Non-flammable)
Surface Finish	Smooth, Non-porous CNC Machined Finish
Sealing Mechanism	Customizable Threaded Seals or Friction Fit
Permeability	Extremely Low for gases and liquids
Dielectric Loss	Minimum across all frequencies
Contamination Level	Trace Analysis Grade (Low elemental background)

High Purity Graphite Acid Digestion System Customizable Aluminum Alloy Heating Block For Trace Analysis Sample Preparation

Item Number: PL-CP404



Introduction

Optimize sample preparation with this customizable graphite acid digestion system. Engineered for superior thermal uniformity and corrosion resistance, it supports multi-well configurations for precise trace analysis and high-throughput laboratory workflows in demanding industrial environments and research facilities.

[Learn More](#)

Application	Description	Key Benefit
Environmental Soil Analysis	Digesting soil and sediment samples for heavy metal detection using EPA 3050B or similar methods.	Ensures total recovery of trace elements without volatile loss.
Pharmaceutical Purity Testing	Preparation of active pharmaceutical ingredients (APIs) for trace catalyst and impurity analysis.	Minimizes contamination risks to meet stringent FDA/EMA standards.
Geochemical Exploration	Large-scale digestion of mineral ores and rock samples for precious metal assaying.	High-throughput capacity accelerates exploration and mining workflows.
Semiconductor Grade Chemicals	High-purity acid digestion of silicon wafers and electronic-grade precursors for ultratrace analysis.	Maintains the extreme purity levels required for sub-ppb detection limits.
Food Safety & Compliance	Monitoring of toxic metals (Pb, Cd, Hg, As) in food products and agricultural exports.	Delivers uniform heating for consistent results across large batch samples.
Wastewater Monitoring	Digestion of industrial effluents to monitor compliance with environmental discharge regulations.	Robust construction withstands continuous exposure to aggressive reagents.
Metallurgical Quality Control	Acid dissolution of steel, alloys, and refractory materials for elemental composition verification.	Precision temperature control enables accurate decomposition of tough matrices.
Petrochemical Analysis	Decomposition of crude oil and petroleum derivatives for sulfur and metal content analysis.	Provides the thermal stability needed for high-temperature organic digestion.

Feature	Specification Details (Model PL-CP404)
Model Identifier	PL-CP404 (Customizable Series)
Material Options	High-Purity Isostatically Pressed Graphite / Anodized Aluminum Alloy
Hole Capacity	8-hole, 16-hole, or 24-hole standard configurations (Custom layouts available)
Hole Dimensions	Standard: 40mm Diameter x 40mm Depth (Customizable per requirements)
Temperature Range	Ambient to 260°C (Graphite) / Ambient to 400°C (Aluminum variants)
Temperature Stability	±0.5°C at steady state
Temperature Uniformity	±1.0°C across all sample positions
Control System	External or Integrated PID Digital Controller with LCD Display

Application	Description	Key Benefit
Feature	Specification Details (Model PL-CP404)	
Heating Method	Resistance heating with high-contact efficiency block design	
Protective Coating	Multi-layer anti-corrosion fluoropolymer treatment (Model-specific)	
Customization Options	Bespoke hole diameters, depths, spacing, and block dimensions available	
Power Supply	220V/110V (50/60Hz) tailored to regional standards	

High Purity Pfa Chromatography Columns Series Filtration Resin Ion Exchange System With Sieve Plate Rack

Customizable Corrosion Resistant Laboratory Fluid Handling

Item Number: PL-CP40



Introduction

Engineered for trace analysis and semiconductor applications, these high-purity PFA chromatography columns offer exceptional corrosion resistance and modular series connectivity. Featuring customizable sieve plate racks and bespoke dimensions, our systems ensure ultra-clean resin exchange and precise fluid separation.

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Application	Description	Key Benefit
Trace Metal Analysis	Separation of rare earth elements and heavy metals in geochemical samples using high-purity resin exchange.	Eliminates background ion contamination for ppt-level accuracy.
Semiconductor Processing	Filtration and purification of high-purity etching chemicals and photoresist stripping agents.	Unrivaled resistance to HF and ultra-clean fluid path.
Pharmaceutical Purification	Column chromatography for sensitive active pharmaceutical ingredients (APIs) requiring metal-free environments.	Biocompatible and non-reactive surface prevents sample degradation.
Isotope Geochemistry	Multi-stage series chromatography for the isolation of specific isotopes from geological or environmental matrices.	Modular series connection allows for complex, sequential separation steps.
Nuclear Waste Management	Processing of corrosive radioactive liquid waste for ion-selective separation and analysis.	Exceptional radiation resistance and chemical durability.
Environmental Monitoring	Large-volume filtration and extraction of pollutants from seawater or industrial wastewater samples.	High flow rates through custom sieve plates with zero adsorption.
Fine Chemical Synthesis	Use as a micro-reactor or filtration column for synthesized compounds involving aggressive catalysts.	Thermal stability up to 260°C enables high-temperature reactions.
Acid Purification	Sub-boiling distillation components and filtration for the production of ultra-pure reagents.	Maintains the highest purity levels for lab-grade acid production.

Specification Category	Parameter Description	PL-CP40 Customization Capability
Material Construction	Primary Body Material	100% High-Purity Perfluoroalkoxy (PFA)
Design Configuration	Connection Type	Modular Series Connectivity with Threaded Interfaces
Column Dimensions	Inner Diameter (ID)	Fully Customizable per Project Requirements (PL-CP40)
Column Dimensions	Effective Length	Bespoke Lengths to Accommodate Specific Resin Volumes
Filtration Components	Sieve Plate/Frit Material	Machined PFA with Customizable Porosity
Filtration Components	Plate Support System	Integrated Sieve Plate Rack and Adjustable Height Brackets
Operating Limits	Temperature Range	-200°C to +260°C (-328°F to +500°F)

Application	Description	Key Benefit
Specification Category	Parameter Description	PL-CP40 Customization Capability
Chemical Resistance	Chemical Compatibility	Universal (except molten alkali metals and elemental fluorine)
Surface Properties	Surface Roughness	Precision CNC Machined for Ultra-Smooth Internal Bore
Support Structure	Rack Material	Acid-Resistant High-Performance Polymer or PFA-Coated Steel
Fitting Options	Connection Ports	Standard or Custom NPT, Flare, or Compression Fittings
Manufacturing Standard	Fabrication Process	Precision CNC Machining and Thermal Forming

High Purity Pfa Volumetric Flask 1000MI 2000MI Constant Volume Bottle Acid Resistant Trace Analysis Custom Laboratory Labware

Item Number: PL-CP39



Introduction

High-purity PFA volumetric flasks for 1000ml and 2000ml precision measurement. Engineered for extreme acid resistance and ultra-trace analysis in semiconductor and pharmaceutical labs, these shatterproof vessels offer unmatched chemical inertness and custom CNC fabrication for demanding industrial research applications.

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Application	Description	Key Benefit
Semiconductor Manufacturing	Preparation of high-purity etching solutions and cleaning reagents.	Prevention of metallic ion contamination.
ICP-MS Trace Analysis	Dilution and storage of standards for ultra-trace element detection (ppt levels).	Minimal background noise and leaching.
Geochemical Research	Dissolution of rock samples using hydrofluoric acid in controlled volumes.	Resistance to HF which dissolves glass.
Pharmaceutical Synthesis	Volumetric measurement of sensitive catalysts and reactive organic compounds.	Non-reactive surface preserves purity.
Environmental Monitoring	Field sampling of seawater and soil extracts for isotopic analysis.	Shatterproof safety during transport.
Petrochemical Testing	Measurement of corrosive petroleum derivatives at elevated temperatures.	High thermal and chemical durability.
Nuclear Medicine	Handling of radioactive isotopes and aggressive radiopharmaceuticals.	Easy decontamination and chemical resistance.
Battery Research	Preparation of electrolyte solutions for lithium-ion and flow battery testing.	Long-term stability with reactive salts.

Parameter	Specifications for PL-CP39 series
Model Identification	PL-CP39
Standard Capacities	1000ml, 2000ml (Standard configurations)
Customization Options	Supports bespoke mold opening and custom CNC machining
Material Composition	100% High-Purity Perfluoroalkoxy (PFA)
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (Except molten alkali metals and elemental fluorine)
Surface Energy	~18-20 mN/m (Highly Hydrophobic)
Contamination Profile	Metal-free; no plasticizers or fillers
Trace Analysis Rating	Suitable for ICP-OES / ICP-MS sample preparation
Mechanical Properties	High flexibility and impact resistance
Cleaning Protocol	Autoclavable; compatible with acid-leaching procedures

High Purity Pfa Water Cooled Micro Chromatography Column Corrosion Resistant High Temperature Thermal Condensation System

Item Number: PL-CP352



Introduction

Premium PFA micro chromatography column with integrated water-cooling jacket provides rapid condensation and exceptional chemical resistance. Engineered for high-purity trace analysis and corrosive chemical separation, ensuring zero contamination and long-term structural integrity in demanding laboratory environments.

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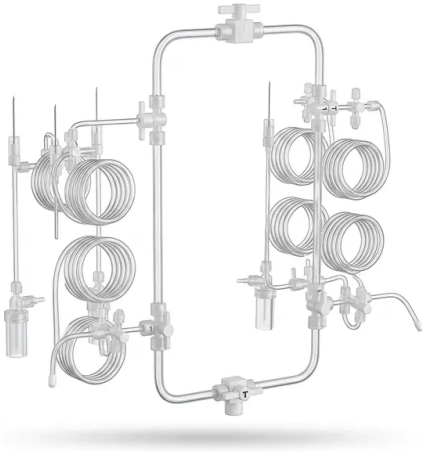
Application	Description	Key Benefit
Semiconductor Grade Acid Purification	Separation of trace metallic impurities from high-purity electronic grade acids using ion exchange.	Prevents leaching of boron, sodium, and heavy metals back into the sample.
Geochemical Isotope Analysis	Processing of geological samples for mass spectrometry, requiring the use of concentrated hydrofluoric acid.	Absolute resistance to HF attack while maintaining high thermal stability during digestion.
Radiopharmaceutical Production	Separation and purification of radioactive isotopes for medical diagnostic and therapeutic applications.	Radiation resistance and ease of decontamination due to non-stick surface properties.
Pharmaceutical Solvent Recovery	Condensing and recovering high-purity organic solvents from micro-scale reaction mixtures.	Rapid cooling efficiency prevents loss of volatile active pharmaceutical ingredients (APIs).
Environmental Trace Metal Detection	Pre-concentration of heavy metals from industrial wastewater or seawater samples prior to ICP-MS analysis.	Lowest possible detection limits due to the absence of material-based contamination.
Battery Material Research	Testing and separating components of advanced electrolytes and cathode materials in hydrothermal conditions.	Withstands high temperatures and pressures without loss of dimensional accuracy or sealing.

Parameter Category	Specification Details for PL-CP352
Model Identifier	PL-CP352
Core Material	High-Purity Perfluoroalkoxy (PFA)
Jacket Material	Integrated PFA Cooling Jacket
Thermal Range	Continuous service up to 260°C (500°F)
Chemical Resistance	Universal (Except molten alkali metals and fluorine at high temp)
Leaching Profile	Ultra-low trace metal and organic extractables
Condensation Method	Active water-cooled jacket (pumped circulation)
Internal Dimensions	Custom-fabricated to user specifications (length/ID)
Outer Dimensions	Customizable based on cooling volume requirements
Connection Types	Customizable (Standard threads, flare fittings, or NPT)
Transparency	Translucent for visual flow and resin monitoring

Application	Description	Key Benefit
Parameter Category	Specification Details for PL-CP352	
Fabrication Method	100% Precision CNC Machined	

Pfa Nitrogen Blowdown System 4-Position 6-Position Corrosion Resistant Multi Sample Evaporator With Customizable Pfa Valves

Item Number: PL-CP50



Introduction

Accelerate sample concentration with our high-purity PFA nitrogen blowdown system. Featuring customizable 4 or 6-position configurations and precision PFA valves, this corrosion-resistant unit ensures zero-leakage and trace-metal-free processing for demanding semiconductor and analytical laboratory environments today.

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Application	Description	Key Benefit
Semiconductor Trace Analysis	Concentration of ultra-pure chemicals and wafer cleaning solutions for ICP-MS analysis.	Prevention of metallic contamination at the ppt level.
Geochemical Digestion	Evaporation of hydrofluoric and perchloric acid after rock sample digestion.	Total resistance to aggressive mineral acids.
Environmental Monitoring	Concentration of water and soil extracts for the detection of heavy metals and pollutants.	Consistent recovery rates for trace volatile components.
Pharmaceutical Quality Control	Solvent removal from active pharmaceutical ingredients (APIs) during purity testing.	Inert fluid path prevents degradation of sensitive compounds.
Isotope Geochemistry	Preparation of high-purity samples for thermal ionization mass spectrometry (TIMS).	Maximum material cleanliness for precise isotopic ratios.
Forensic Toxicology	Concentration of biological extracts for complex drug screening and chemical analysis.	Reliable solvent evaporation without sample loss.
Petrochemical Testing	Analysis of trace additives and contaminants in specialized fuels and lubricants.	Robust performance in the presence of organic solvents.

Feature Group	Parameter	Specification (PL-CP50 Series)
Material Properties	Primary Material	High-Purity Perfluoroalkoxy (PFA)
	Thermal Resistance	Up to 260°C (500°F)
	Chemical Compatibility	Universal resistance to acids, bases, and solvents
System Configuration	Position Options	4-Position, 6-Position, or Custom Arrays
	Control Mechanism	Individual PFA Needle Valves (PL-CP50-V)
	Port Connections	CNC Machined PFA Compression Fittings
Dimensions & Customization	Bottle Compatibility	Standard PFA Bottles or Custom Sizes
	Manifold Design	Customizable spacing and height adjustments
	Gas Inlet	Standard 1/4" or 6mm PFA Tubing Connection
Performance	Gas Flow Control	Precision adjustable per position
	Leak Rate	Zero-leakage at standard operating pressures



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