



KINTEK

## Caps & Septa 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 Temperature Tfm Microwave Digestion Vessel Lid Compatible With Acid Evaporation Systems And Laboratory Pretreatment Equipment

Item Number: PL-CP315



## Introduction

High-performance TFM microwave digestion vessel lids engineered for extreme chemical resistance and thermal stability. These customizable lids ensure leak-proof seals for various digestion systems, providing reliable performance in trace analysis and high-pressure laboratory sample preparation specialized workflows.

[Learn More](#)

Application	Description	Key Benefit
Environmental Trace Analysis	Digestion of soil, sediment, and wastewater samples for heavy metal detection via ICP-MS.	Prevents cross-contamination and ensures total sample recovery.
Pharmaceutical Quality Control	Preparation of active pharmaceutical ingredients (APIs) for elemental impurity testing according to USP standards.	High purity TFM prevents leaching of organic or inorganic contaminants.
Petrochemical Testing	Decomposition of crude oil, lubricants, and polymer samples for catalyst residue analysis.	Withstands high temperatures required for breaking down complex hydrocarbons.
Food Safety & Nutrition	Mineralization of food matrices and agricultural products for pesticide and mineral content screening.	Maintains volatile species recovery for accurate nutritional labeling.
Geochemical Exploration	Dissolution of rock ores and mineral concentrates using hydrofluoric acid mixtures.	Exceptional resistance to HF ensures durability in harsh geological digestion.
Clinical Research	Digestion of biological tissues, blood, and hair samples for metabolic and toxicological studies.	Small-batch precision and easy decontamination between sensitive samples.
Battery Material Synthesis	Pretreatment and analysis of cathode materials and electrolytes in lithium-ion battery development.	Chemical inertness ensures the purity of high-performance electronic materials.
Metallurgy and Mining	High-pressure digestion of alloys and metal powders for precise stoichiometric determination.	Robust construction handles the intense pressure of metallic decomposition.

Parameter	Specifications for PL-CP315
Model Identifier	PL-CP315
Primary Material	Ultra-High Purity TFM (Modified PTFE)
Secondary Material Options	High-Purity PFA or Virgin PTFE (Customizable)
Compatibility Range	Customizable for various microwave digestion vessel models and acid evaporation systems
Fabrication Method	Full Precision CNC Machined (Non-Molded)
Sealing Mechanism	Customizable Interface (Tapered, Flat, or O-ring Groove)
Dimensions	Custom Product - Manufactured to user-provided specifications

Application	Description	Key Benefit
Parameter	Specifications for PL-CP315	
<b>Thermal Capacity</b>	Optimized for high-temperature digestion protocols (Customizable)	
<b>Pressure Rating</b>	Configurable based on vessel wall thickness and closure design	
<b>Chemical Resistance</b>	Universal resistance to acids, bases, and organic solvents	
<b>Surface Finish</b>	High-polish, low-porosity surface for trace analysis purity	

# Custom Ptfе Multi Port Reaction Bottle Caps Corrosion Resistant High Purity GL32 GL45 Laboratory Closures

Item Number: PL-CP363



## Introduction

Discover high-performance custom PTFE multi-port reaction bottle caps designed for extreme chemical resistance and zero-precipitation laboratory environments. Our precision-engineered GL32 and GL45 closures offer customizable configurations, ensuring secure, leak-proof fluid transfer and reliable performance for demanding industrial applications.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Used in analytical chemistry to seal vessels containing highly corrosive mineral acids used for sample digestion.	Prevents sample contamination from leaching or atmospheric particulates.
Pharmaceutical Synthesis	Facilitates multi-port access for reagent addition and temperature monitoring during complex organic reactions.	Enables precise control of reaction parameters in an inert environment.
Semiconductor Etching	Manages the delivery and storage of ultra-high purity etching chemicals used in wafer fabrication processes.	Ensures the highest level of chemical purity and prevents equipment corrosion.
Battery Research	Serves as a closure for electrolyte testing vessels where air-sensitive materials must be handled in an inert atmosphere.	Provides a gas-tight seal that prevents air ingress and moisture contamination.
Environmental Monitoring	Used in the collection and storage of field samples that require immediate preservation with aggressive acids.	Guarantees sample stability and prevents chemical reactions with the container closure.
Pilot Plant Scale-up	Acts as a customized interface for glass reactors in small-scale manufacturing and process development.	Custom porting allows for seamless integration of industrial sensors and tubing.
Biotech Fermentation	Provides an inert, autoclavable closure for small-scale bioreactors requiring sterile gas exchange and sampling.	Withstands repeated sterilization cycles without loss of sealing performance.

Parameter	Specification Detail for PL-CP363
<b>Model Identifier</b>	PL-CP363
<b>Primary Material</b>	High-Purity Virgin PTFE / PFA
<b>Interface Type</b>	Standard GL32, GL45 (Other sizes customizable)
<b>Configuration</b>	Fully Customizable Multi-Port Design
<b>Number of Ports</b>	Customizable (1 to 6+ ports depending on diameter)
<b>Port Thread Types</b>	Metric, NPT, or UNF threads available per custom request
<b>Temperature Range</b>	-200°C to +260°C (Material dependent)
<b>Chemical Resistance</b>	Universal (except elemental fluorine and molten alkali metals)
<b>Fabrication Method</b>	End-to-end custom CNC machining

Application	Description	Key Benefit
Parameter	Specification Detail for PL-CP363	
<b>Purity Standard</b>	No leaching of metal ions or organic contaminants	
<b>Dimensions</b>	Custom manufactured to user-defined CAD or specifications	
<b>Sealing Gasket</b>	Integrated PTFE seal or optional FKM/EPDM O-rings	

# Custom Ptfе Sealing Caps And Corrosion Resistant Low Background Teflon Adapters

Item Number: PL-CP221



## Introduction

Discover high-purity custom PTFE sealing caps and corrosion-resistant Teflon adapters designed for demanding industrial environments. Our low-background fluoropolymer components offer exceptional chemical inertness and precision CNC fabrication to ensure leak-free performance and long-term durability in critical laboratory systems.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Custom sealing lids for digestion vessels and storage bottles used in ICP-MS and ICP-OES workflows.	Eliminates background interference from leachable contaminants.
Semiconductor Processing	Precision adapters for high-purity chemical delivery lines in cleanroom environments.	Prevents chemical erosion and maintains ultra-pure fluid pathways.
Pharmaceutical Synthesis	Custom reaction vessel covers and sealing caps for aggressive organic synthesis processes.	Ensures total containment and zero reactivity with active ingredients.
Battery Research	Specialized adapters and cell caps for testing corrosive electrolytes in lithium-ion and flow batteries.	Resists electrochemical degradation and prevents electrolyte leakage.
Cryogenic Storage	Sealing components for ultra-low temperature sample preservation in liquid nitrogen environments.	Retains flexibility and sealing efficacy at -80°C and below.
Environmental Monitoring	Custom adapters for field sampling equipment used in the collection of hazardous wastewater or soil extracts.	Provides reliable, airtight seals in harsh outdoor and industrial field conditions.
Hydrothermal Synthesis	Liners and sealing caps for high-pressure and high-temperature autoclave systems.	Maintains dimensional stability and seal integrity under extreme pressure.
Petrochemical Testing	Heavy-duty adapters for transferring volatile fuels and high-temperature lubricants during quality control.	Withstands a wide range of oils, fuels, and thermal stressors.

Specification Category	Parameter Details for PL-CP221	Technical Metric / Value
Material Base	Primary Polymer Type	High-Purity PTFE / PFA
Customization Range	Dimensional Capability	Fully Customizable via CNC Fabrication
Thermal Performance	Minimum Service Temperature	-80°C
Thermal Performance	Maximum Service Temperature	+250°C / 500°F
Thermal Performance	Melting Point	Highest among fluoropolymers (per material class)
Pressure Rating	Maximum Operating Pressure	Up to 3.5 MPa (500 psi)

Application	Description	Key Benefit
Specification Category	Parameter Details for PL-CP221	Technical Metric / Value
<b>Mechanical Properties</b>	Surface Speed Tolerance	Up to 30 m/s
<b>Mechanical Properties</b>	Coefficient of Friction	Lowest among polymer sealing materials
<b>Chemical Properties</b>	Inertness Profile	Resistant to Acids, Bases, Solvents, and Oxidants
<b>Chemical Properties</b>	Water Absorption	Near-Zero / Hydrophobic
<b>Dimensional Data</b>	Specific Item Number	PL-CP221
<b>Machining Precision</b>	Tolerance Level	Precision CNC Machined to User Specifications
<b>Maintenance</b>	Cleaning Compatibility	Autoclavable, compatible with aggressive cleaning agents

# Custom Ptfе Reaction Lid With Integrated Valve And Fitting Corrosion Resistant No Leaching Pfa Fep Bottle Cap System

Item Number: PL-CP326



## Introduction

Custom PTFE reaction lids with integrated valves and fittings for PFA/FEP bottles. Engineered for zero leaching and ultimate chemical resistance, ensuring trace-level purity in aggressive synthesis and corrosive laboratory environments across specialized industrial applications.

[Learn More](#)

Application	Description	Key Benefit
Graphene Oxide Synthesis	Handling concentrated sulfuric acid and potassium permanganate during the oxidation process.	Total resistance to strong oxidants without vessel degradation.
Trace Metal Analysis	Preparation and digestion of samples for ICP-MS or ICP-OES analysis in environmental labs.	Eliminates metal ion leaching, ensuring the highest data accuracy.
Semiconductor Grade Chemicals	Dispensing and transferring high-purity etching solutions like hydrofluoric acid (HF).	Prevents ionic contamination and maintains ultra-high purity levels.
ZIF-8@GO Composite Prep	Acid washing and high-purity chemical processing during advanced material synthesis.	Protects the chemical purity of composite materials from impurities.
Pharmaceutical Synthesis	Reacting sensitive organic precursors in a fully inert environment with controlled gas flow.	Prevents solvent absorption and maintains batch-to-batch consistency.
High-Purity Solvent Storage	Utilizing the valve system to draw solvents without exposing the bulk material to air.	Maintains reagent dryness and prevents moisture or particulate ingress.
Corrosive Fluid Transfer	Managing the flow of aggressive industrial fluids through tubing and integrated valves.	Robust durability in continuous-use industrial fluid handling systems.

Specification Category	Details for PL-CP326 Series
<b>Model Identification</b>	PL-CP326
<b>Material Construction</b>	High-Purity PTFE / PFA (Customizable)
<b>Configuration Type</b>	Fully Customized Reaction Lid System
<b>Fitting Compatibility</b>	NPT, Flare, Compression, or Custom Threaded Ports
<b>Valve Options</b>	Integrated PTFE Needle Valves, Diaphragm Valves, or Stopcocks
<b>Bottle Compatibility</b>	Optimized for PFA / FEP Reagent and Reaction Bottles
<b>Dimensional Data</b>	Custom-machined to client-specified bottle neck sizes
<b>Port Count</b>	Single, double, triple, or multi-port configurations available
<b>Leaching Profile</b>	Trace analysis grade; virtually zero metallic or organic extractables
<b>Temperature Range</b>	Typically -200°C to +260°C (Depending on specific configuration)
<b>Customization Scope</b>	Port placement, dip tube length, valve type, and material grade



## Kintek

Head Quarter: No.89 Science Avenue, High-Tech Zone,  
Zhengzhou, China

