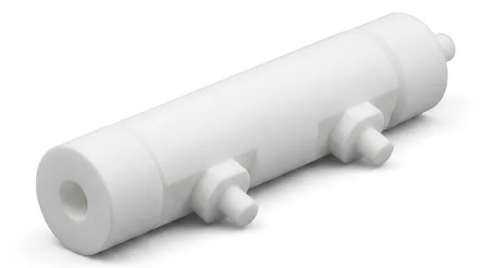
Custom Ptfe Electrolytic Cell Corrosion Resistant Low Background Reaction Vessel With Inlet Outlet Ports

Item Number: PL-CP250



Introduction

Discover professional high-purity custom PTFE electrolytic cells designed for precision electrochemical analysis. Featuring extreme corrosion resistance and low background interference, these reaction vessels offer customizable inlet/outlet ports for seamless integration into demanding industrial or laboratory fluid systems.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Analysis of ultra-low concentration metallic impurities in environmental or pharmaceutical samples.	Zero ion leaching ensures background signals remain below detection limits.
Battery Research	Testing of next-generation electrolytes and electrode materials for lithium-ion and flow batteries.	Excellent resistance to highly corrosive lithium salts and organic carbonate solvents.
Semiconductor Etching	Small-scale testing and monitoring of silicon wafer cleaning and etching solutions.	Elimination of silicon or boron contamination common in glass-based reaction vessels.
Molten Salt Electrolysis	High-temperature electrochemical reactions involving fused salts or aggressive molten media.	Thermal stability up to 260°C allows for specialized low-temperature molten salt studies.
Electroplating Development	Development of precision plating baths for jewelry, electronics, and aerospace components.	Durable construction withstands acidic plating additives and repetitive cleaning cycles.
Corrosion Testing	Long-term immersion and electrochemical impedance spectroscopy (EIS) on metallurgical samples.	Provides a chemically neutral environment that does not interfere with the sample's corrosion profile.
Flow Chemistry	Integration into continuous flow systems for synthesized chemical intermediates using aggressive reagents.	Customizable inlet/outlet ports enable precise fluidic control and integration.

Specification Category	Parameter	Capability / Value (PL-CP250)
Material Properties	Primary Material	100% Virgin PTFE (Polytetrafluoroethylene)
	Color	Natural White / Opaque
	Chemical Resistance	Universal (Except molten alkali metals, fluorine gas)
	Operating Temperature	-200°C to +260°C
	Dielectric Strength	≥ 10 kV/mm
Design Variables	Internal Volume	Customizable (10mL to 5000mL+)
	Configuration	Single Compartment, H-Cell, or Multi-Chamber
	Port Connectivity	Threaded (NPT/UNF), Flanged, or Push-fit
	Inlet/Outlet Quantity	2 to 8+ Ports (User Defined)
	Sealing Mechanism	PTFE Screw Cap, O-Ring Seal, or Ground Joint

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Specification Category	**Parameter**	**Capability / Value (PL-CP250)**
Manufacturing	Fabrication Method	High-Precision CNC Machining
	Surface Finish	Ra < 0.8 ¼m (Standard) or High-Polish
	Dimensional Tolerance	± 0.05mm (Critical Dimensions)