Custom Ptfe Reaction Kettle 2L Flanged Fluoropolymer Reactor Tank Acid And Alkali Resistant Polytetrafluoroethylene Vessel

Item Number: PL-CP424

Introduction

Expertly engineered custom PTFE reaction kettles featuring flanged designs for extreme chemical resistance. These 2L fluoropolymer vessels handle strong acids and alkalis, providing reliable, high-purity performance for critical industrial laboratory processes and premium bespoke chemical research applications everywhere.

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Application	Description	Key Benefit
Trace Metal Digestion	Preparing environmental or geological samples using concentrated nitric or hydrofluoric acid.	Prevents sample contamination from the vessel walls.
Semiconductor Etchant Mixing	Formulating high-purity chemical blends for silicon wafer processing and cleaning.	Ensures chemical stability and maintains ultra-pure grades.
API Pharmaceutical Synthesis	Synthesizing active pharmaceutical ingredients that involve corrosive catalysts or reagents.	Resists degradation from varied organic solvents and acids.
Polymerization Research	Conducting low-pressure polymerization reactions where material adhesion is a concern.	Easy cleaning and high recovery of synthesized polymers.
Petrochemical Catalyst Testing	Evaluating the performance of catalysts in the presence of sulfur-heavy or acidic feedstocks.	Long-term durability in highly corrosive testing environments.
Hydrothermal Synthesis	Small-scale synthesis of nanomaterials or crystals under controlled heat and pressure.	Material stability prevents vessel deformation during heat cycles.
Storage of High-Purity Acids	Long-term containment of ACS or electronic grade reagents.	No leaching of ions or organic impurities into the stored liquid.

Parameter Category	Specification Details for PL-CP424
Model Number	PL-CP424
Core Material	High-Purity Virgin PTFE (Polytetrafluoroethylene) / Optional PFA
Standard Capacity	2.0 Liters (Customizable from 50ml to 50L)
Closure Type	Bolted Flange Design with High-Integrity Gasket Seal
Customization Options	Fully Customizable Dimensions, Port Numbers, and Thread Types
Operating Temperature	Continuous use up to 260°C (Material limit; application dependent)
Chemical Compatibility	Universal (Except molten alkali metals and gaseous fluorine)
Internal Finish	Precision CNC Machined (Custom Ra values available)
Wall Thickness	Reinforced for structural stability (Customizable based on pressure)
Port Configurations	Optional GL threads, NPT, or custom taper joints
Stirring Compatibility	Compatible with PTFE-coated magnetic bars or overhead mechanical stirrers