

# Custom High Purity Ptfе Storage Tank Corrosion Resistant Chemical Reaction Vessel Drum

Item Number: PL-CP381



## Introduction

Engineer custom high-purity PTFE storage tanks and reaction vessels designed for extreme chemical resistance and thermal stability. Our precision-machined solutions ensure leak-free performance and zero contamination in demanding laboratory and industrial fluid handling applications across all global sectors.

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Application	Description	Key Benefit
Semiconductor Processing	Storage and transport of ultra-pure wet chemicals and etching agents used in wafer fabrication.	Zero metallic ion leaching ensuring high yield.
Pharmaceutical Synthesis	Reaction vessel for the production of active pharmaceutical ingredients (APIs) involving corrosive precursors.	Excellent biocompatibility and cross-contamination prevention.
Trace Analysis	Preparation and storage of samples for ICP-MS and other high-sensitivity analytical techniques.	Minimal background noise due to high material purity.
Petrochemical Testing	High-temperature digestion of hydrocarbon samples with concentrated acids and oxidizing agents.	Safe containment under extreme thermal stress.
Battery Research	Testing of aggressive electrolytes and conductive salts in next-generation energy storage development.	Total resistance to electrochemical oxidation and corrosion.
Specialty Chemical Production	Custom-configured reactors for small-batch synthesis of high-value, highly reactive specialty chemicals.	Tailored porting for precise reagent addition and monitoring.
Cryogenic Fluid Handling	Containment and transfer of liquid nitrogen or other low-temperature fluids in specialized research.	Retains flexibility and strength at sub-zero temperatures.
Waste Neutralization	Temporary storage and neutralization of hazardous acidic or alkaline laboratory waste streams.	Long-term durability against mixed chemical waste.

Attribute	Specification Details (Model PL-CP381 Series)
Model Number	PL-CP381
Material Composition	100% High-Purity Virgin Polytetrafluoroethylene (PTFE)
Fabrication Method	Precision CNC Machined / Custom Molded
Service Temperature	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Full resistance to acids, bases, solvents, and oxidizers
Internal Finish	Super smooth, crevice-free (Ra < 0.4 µm available)
Wall Construction	Heavy-duty, thickened walls (Customizable thickness)
Sealing Mechanism	Screw-cap with integrated sealing ridge / Optional O-ring seals
Customization Options	Dimensions, Volumes, Port Threads (NPT/G), Diptubes, Baffles
Compliance	Inert, non-toxic, and suitable for high-purity lab environments

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<b>Volume Capacity</b>	Fully customizable from 50ml to 50L+ per request	