

Custom Ptfе Reaction Apparatus Flange Sealed Corrosion Resistant Jacketed Vessel With Stirring Bar And Thermometer Ports

Item Number: PL-CP334



Introduction

Engineering custom PTFE reaction apparatus with flange seals and jacketed designs. These corrosion-resistant systems feature precision-machined stirring bars and thermometer ports, ensuring reliable performance in demanding chemical synthesis and high-purity industrial trace analysis laboratory environments for modern research and development.

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Application	Description	Key Benefit
Pharmaceutical Synthesis	Production of active pharmaceutical ingredients (APIs) involving aggressive reagents.	Prevents contamination and resists corrosive catalysts.
Semiconductor Processing	Handling and mixing of high-purity etching chemicals and ultra-pure water.	Ensures zero metallic leaching for sub-ppb purity levels.
Petrochemical Analysis	Testing of fuel additives and lubricants under varied thermal conditions.	High temperature stability and resistance to hydrocarbons.
Food & Flavor Chemistry	Extraction and synthesis of flavor compounds requiring inert environments.	Compliance with high-purity standards and easy cleaning.
Acid Digestion	High-temperature digestion of geological or environmental samples for ICP-MS.	Resists hydrofluoric and nitric acids at elevated temperatures.
Electrochemical Research	Housing for electrochemical cells during corrosive electrolyte testing.	Modular porting allows for easy electrode placement.
Polymerization Reactions	Synthesizing specialty polymers that require precise agitation and heating.	Non-stick surface prevents polymer buildup and fouling.

Specification Category	Parameter Details for PL-CP334 Series	Customization Options
Base Material	High-Purity Virgin PTFE / PFA	Reinforced or modified fluoropolymers available
Vessel Capacity	1L (PL-CP334-1L) / 2L (PL-CP334-2L)	Fully customizable from 50ml to 50L
Structural Design	Jacketed Dual-Layer Vessel	Single-wall or vacuum-insulated variants
Sealing Interface	Multi-Bolt Flange System	Custom flange diameters and bolt patterns
Gasket Technology	PTFE Waffle Seal / Integrated O-ring	Choice of PFA, PTFE, or FKM encapsulated seals
Port Configurations	Stirrer Port, Thermometer Well, Feed Ports	Custom quantity, size, and thread type (NPT/G)
Stirring Integration	Compatible with PTFE-Coated Stirring Bars	Custom shaft lengths and impeller geometries
Operating Temperature	-200°C to +260°C	Dependent on sealing material and pressure
Chemical Compatibility	Universal (pH 0-14)	Resistant to HF, Aqua Regia, and organic solvents
Fabrication Method	5-Axis CNC Machined	Precision tolerances and custom geometries