

# Custom Ptfе Condenser Tube Reflux Reaction Condensation Purification Device Semiconductor Chemical Lab Equipment

Item Number: PL-CP57



## Introduction

High-performance custom PTFE condenser tubes for reflux reactions and condensation purification. Engineered for semiconductor and chemical processing, these corrosion-resistant units ensure extreme purity, non-stick performance, and long-term durability in aggressive acidic environments and industrial laboratory applications.

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Application	Description	Key Benefit
Semiconductor Wet Etching	Recovery and purification of high-purity acids used in wafer cleaning and etching processes.	Prevents metallic contamination and resists HF exposure.
Trace Metal Analysis	Digestion and refluxing of samples for ICP-MS and environmental testing in ultra-clean labs.	Zero leaching of trace elements ensures analytical accuracy.
Pharmaceutical Synthesis	Condensation of volatile organic compounds during the production of active pharmaceutical ingredients.	Non-reactive surface prevents product cross-contamination.
Hydrofluoric Acid Recovery	Distillation and purification of HF and other aggressive halogenated chemicals in industrial plants.	Superior resistance to pitting and chemical corrosion compared to alloys.
Petrochemical Refining	Fractional distillation of corrosive crude components and catalysts in testing environments.	Long-term durability against high-temperature organic vapors.
Fine Chemical Production	Continuous reflux reactions involving strong oxidizing agents and highly reactive intermediaries.	Maintains process consistency and reduces replacement costs.
Battery Material Research	Synthesis of electrolyte components and cathode materials under rigorous chemical conditions.	Excellent thermal and chemical stability during synthesis cycles.

Specification Category	Parameter Details for PL-CP57	Available Customization Options
<b>Model Identifier</b>	<b>PL-CP57</b>	Custom variants available (PL-CP57-CUS)
<b>Material Composition</b>	100% Virgin High-Purity PTFE	Modified PTFE or PFA options available
<b>Tube Configuration</b>	Custom Specified	Straight, Coiled, or Multi-Tube Bundles
<b>Effective Cooling Length</b>	Fully Customizable	Designed to user-defined millimeter specifications
<b>Inner/Outer Diameters</b>	Customizable Dimensions	Precision tolerance CNC machining for exact fit
<b>Connection Types</b>	Flanged, Threaded, or Custom Tapered	NPT, BSP, or proprietary laboratory interfaces
<b>Operating Temperature</b>	-200°C to +260°C (-328°F to +500°F)	Stable across the entire operating range
<b>Operating Pressure</b>	Design Dependent	Optimized for vacuum or low-pressure reflux
<b>Chemical Resistance</b>	Universal (pH 0-14)	Resistant to all acids, bases, and solvents

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<b>Surface Finish</b>	Smooth Bore (Low Ra)	Prevents scaling and facilitates easy cleaning
<b>Fabrication Method</b>	End-to-end CNC Machined	Supports complex non-standard geometries