

Custom Ptfе Condenser Tube 100MI Serpentine And Straight Fluoropolymer Laboratory Heat Exchanger With Flask Adapters

Item Number: PL-CP224



Introduction

Engineered for extreme chemical resistance, this custom 100ml PTFE condenser tube features straight or serpentine designs with integrated adapters for laboratory flasks. Ideal for high-purity trace analysis and corrosive solvent recovery in demanding industrial research environments worldwide.

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Application	Description	Key Benefit
Trace Metal Analysis	Used in the digestion and reflux of environmental samples involving concentrated nitric and hydrofluoric acids.	Prevents sample contamination from the container material.
Semiconductor Grade Chemicals	Purification of ultra-high purity solvents and photoresists through distillation processes.	Ensures the highest level of chemical cleanliness and zero leaching.
Pharmaceutical Synthesis	Solvent recovery and reflux in the production of active pharmaceutical ingredients (APIs) using aggressive reagents.	Resistant to a wide range of organic solvents and high-temperature reactions.
Hydrofluoric Acid Handling	Specialized condensation of HF vapors where glass condensers would be etched and destroyed within hours.	Absolute resistance to HF, providing a safe and durable solution.
Petrochemical Testing	Distillation of heavy oils and corrosive refined products in harsh laboratory environments.	Durable performance in the presence of high-chloride and sulfurous compounds.
Desalination Research	Evaluation of heat exchange efficiency in high-salinity brine environments for water treatment technologies.	Corrosion-free operation in high-chloride and steam-heavy conditions.
Battery Material Processing	Used in the hydrothermal synthesis and electrolyte preparation for lithium-ion and next-generation batteries.	High thermal stability and chemical inertness under reactive conditions.

Feature	Specification for PL-CP224
Primary Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Internal Configuration	Customizable: Straight Tube / Serpentine (Coiled) / Graham-style
Nominal Volume	100ml (Custom volumes available upon request)
Connection Type	Fully Customizable (Tapered Ground Joints, Threaded NPT, or Flanged)
Adapter Compatibility	Designed for seamless fit with standard or custom laboratory flasks
Operational Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (Except molten alkali metals and elemental fluorine)
Surface Finish	Smooth, Non-porous, Non-stick surface
Wall Thickness	Customizable based on pressure and heat transfer requirements
Total Length/OD	Tailored to client-specific installation footprints