

Transparent Corrosion Resistant Pfa Thermometer Sleeve And Customizable Hydrogen Fluoride Condensation Device

Item Number: PL-CP180



Introduction

High-performance transparent PFA thermometer sleeves and hydrogen fluoride condensation systems offer superior corrosion resistance and customizable stopper configurations. Ideal for advanced trace analysis and aggressive chemical processing in laboratory environments requiring absolute purity and thermal monitoring reliability and precision.

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Application	Description	Key Benefit
Hydrofluoric Acid Condensation	Efficient recovery and cooling of HF vapors in chemical manufacturing and etching processes.	Prevents equipment corrosion and ensures operator safety.
Trace Metal Analysis	Providing an inert housing for thermometers and probes during high-purity acid digestions.	Eliminates sample contamination from the container material.
Semiconductor Wafer Cleaning	Integration into wet bench setups for monitoring the temperature of aggressive cleaning chemistries.	Maintains chemical purity essential for high-yield manufacturing.
Pharmaceutical Reflux	Cooling and condensing volatile organic compounds during complex drug synthesis.	High visibility of the reflux process with zero reagent reactivity.
Petrochemical Testing	Monitoring high-temperature reactions involving corrosive sulfur compounds and strong acids.	Durable performance in extreme industrial environments.
Environmental Monitoring	Condensing gaseous emissions for the analysis of pollutants in specialized sampling systems.	Accurate sample capture without loss due to surface adsorption.
Battery Material Research	Testing electrolyte stability at elevated temperatures in a sealed, inert environment.	Prevents secondary reactions with the testing apparatus.

Feature	Specification Details (Model PL-CP180)
Model Number	PL-CP180
Primary Material	High-Purity Perfluoroalkoxy (PFA)
Transparency	Semi-transparent to Transparent (Process-dependent)
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Universal (Except molten alkali metals and elemental fluorine)
Stopper Configuration	Fully Customizable (Tapered, Threaded, or Flanged)
Dimensions	Custom Fabricated to Client Specifications
Machining Process	Precision CNC Turning and Milling
Surface Finish	Ultra-smooth, Low Surface Energy
Compatibility	Suitable for HF, Aqua Regia, Nitric Acid, and Organic Solvents
Sealing Mechanism	Customizable O-ring or Friction Fit