

Electronic Grade Acid Preparation Pfa Acid Purifier Sub Boiling Distillation System Corrosion Resistant Petrochemical Pharmaceutical Chemical Equipment

Item Number: PL-CP333



Introduction

Premium PFA acid purifier for electronic grade acid preparation. This corrosion-resistant sub-boiling distillation system features dry-burn protection and 48H continuous operation, providing ultra-pure reagents for demanding petrochemical and pharmaceutical trace analysis applications ensuring consistent laboratory results.

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Application	Description	Key Benefit
Semiconductor Manufacturing	Preparation of ultra-pure hydrofluoric and nitric acids for silicon wafer etching and cleaning processes.	Minimizes metallic contamination on wafer surfaces, increasing yield.
Pharmaceutical Quality Control	Purifying acids used in the digestion of active pharmaceutical ingredients (APIs) for heavy metal testing.	Ensures compliance with strict USP and EP standards for trace metal limits.
Petrochemical Analysis	Production of high-purity reagents for the analysis of catalysts and crude oil feedstocks.	Prevents false positives in sensitive trace element detection.
Environmental Monitoring	Purification of nitric acid for the stabilization of water and soil samples intended for ICP-MS analysis.	Reduces background noise and improves detection limits for environmental toxins.
Geological Research	Acid digestion of rock and mineral samples for isotopic analysis and rare earth element quantification.	Eliminates cross-contamination between samples in high-precision geological studies.
Battery Technology R&D	Preparation of electrolyte-grade chemicals and high-purity acids for lithium-ion battery material testing.	Enhances accuracy in characterizing material purity and degradation.
Nuclear Industry	Purification of specialty acids for the separation and analysis of radioisotopes.	Provides a chemically inert environment that withstands radiation exposure and aggressive reagents.

Feature	Specification Details (Model PL-CP333)
Product Identifier	PL-CP333
Core Material	High-Purity Virgin PFA (Perfluoroalkoxy)
Distillation Method	Sub-Boiling Infrared/Surface Evaporation
Compatible Reagents	HF, HNO ₃ , HCl, H ₂ SO ₄ , H ₂ O, and various organic solvents
Operational Duration	Up to 48 Hours Continuous (Customizable)
Safety Mechanisms	Automatic Dry-Burn Cut-off / Over-Temperature Protection
Temperature Control	Digital PID Regulation (Bespoke ranges available)
Purification Efficiency	Reagent Grade to PPT/PPB Level (Process Dependent)
Throughput Capacity	Customizable based on laboratory volume requirements

Application	Description	Key Benefit
Feature	Specification Details (Model PL-CP333)	
Heating Element	Fully Encapsulated Corrosion-Resistant Heater	
Cooling System	Integrated PFA Cooling Coil (Air or Water cooled options)	
Fabrication Method	Full Custom CNC Machining and Precision Welding	
Dimensions	Bespoke sizing to fit specific fume hood footprints	