

Custom Ptfе Valve 2-Way 3-Way Corrosion Resistant Low Background Virgin Fluoropolymer Industrial Fluid Control

Item Number: PL-CP65



Introduction

Precision engineered custom corrosion resistant PTFE valves for high purity fluid control. Manufactured using virgin fluoropolymer for low background analysis and extreme chemical compatibility across 2-way or 3-way configurations for demanding high performance laboratory and industrial applications.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Used in fluid delivery for ICP-OES and ICP-MS sample preparation where contamination must be avoided.	Extremely low leachable profile ensures analytical accuracy.
Semiconductor Etching	Manages the flow of hydrofluoric acid and other aggressive etching agents in wafer processing.	Total corrosion resistance prevents equipment failure and downtime.
Pharmaceutical Synthesis	Controls the addition of volatile reagents and catalysts in glass-lined or PTFE reactors.	High thermal stability and chemical purity maintain drug batch integrity.
Battery Research	Handles electrolyte filling and testing for lithium-ion and next-generation battery technologies.	Resists degradation from highly reactive electrochemical fluids.
Environmental Monitoring	Utilized in automated water and soil sampling systems for detecting organic pollutants.	Low-adhesion surfaces prevent carryover and cross-contamination between samples.
Pilot Plant Operations	Integrated into modular scale-up systems for new chemical process development.	Custom CNC sizing allows for seamless integration into unique pilot designs.
Petrochemical Testing	Manages high-temperature hydrocarbon streams and acidic byproducts during refined product analysis.	Maintains seal integrity under harsh chemical and thermal stress.
High-Purity Bottling	Controls the dispensing of electronic-grade or reagent-grade acids into final packaging.	Ensures the material maintains its grade from bulk storage to the bottle.

Specification Category	Parameter Details for PL-CP65	Available Customization Options
Base Material	100% Virgin PTFE / PFA	Optional conductive or reinforced grades available
Flow Path Design	2-Way (Straight) / 3-Way (L-port / T-port)	Fully custom internal geometry via CNC
Temperature Range	-200°C to +250°C	Optimized designs for specific thermal cycles
Chemical Compatibility	Universal (pH 0-14)	Compatibility certifications for specific reagents
Interface Types	NPT Threaded, Flanged, or Compression	Custom sizing for exotic tubing standards
Actuation Method	Manual Handle / Pneumatic / Electric	Integration with standard industrial actuators
Surface Finish	High-Purity Machined Surface	Electropolishing and ultra-smooth finishing
Internal Volume	Low Dead-Volume Design	Custom internal diameters to minimize holdup
Structural Housing	Full PTFE Body or Metal-Lined	Stainless steel or PEEK reinforcement options

Application	Description	Key Benefit
Specification Category	Parameter Details for PL-CP65	Available Customization Options

**Trace Analysis
Grade**

Ultra-Low Background

Specialized cleaning and leaching protocols