

Corrosion Resistant Ptfе Valves Customizable 2 Way 3 Way 4 Way High Temperature Teflon Fluid Control Solutions

Item Number: PL-CP105



Introduction

Engineered for extreme chemical environments, these customizable PTFE valves provide exceptional corrosion resistance and thermal stability. Our precision-machined two-way, three-way, and four-way solutions ensure reliable fluid control across demanding industrial applications with absolute chemical inertness and zero contamination.

[Learn More](#)

Application	Description	Key Benefit
Semiconductor Etching	Controlling the flow of aggressive etching acids and ultra-high purity deionized water in wafer processing.	Zero ionic contamination and resistance to HF acids.
Pharmaceutical Synthesis	Managing the distribution of reactive reagents and solvents during the manufacturing of active pharmaceutical ingredients.	High purity and easy sterilization for batch consistency.
Trace Metal Analysis	Routing samples in laboratory environments where the presence of metal parts would skew analytical data.	Metal-free fluid path ensures data integrity.
Battery Electrolyte Prep	Handling corrosive lithium-ion battery electrolytes and additives during the research and production phases.	Long-term resistance to aggressive organic solvents.
Petrochemical Refining	Sampling and controlling flow of highly acidic or caustic byproducts in refining and testing processes.	Exceptional durability in high-temperature caustic environments.
Environmental Monitoring	Automated sampling systems for monitoring industrial wastewater or hazardous chemical runoff.	Maintenance-free operation in outdoor or harsh settings.
Specialty Chemical Production	Custom fluid paths for mixing precise ratios of corrosive chemicals in pilot plant reactors.	Tailored 3-way and 4-way porting for complex mixing.
Food and Beverage	Handling acidic food additives or aggressive cleaning-in-place (CIP) chemicals in sanitary lines.	FDA-compliant material with excellent cleanability.

Feature	Specification Details for PL-CP105	Customization Options
Base Material	Virgin PTFE / High-Purity PFA	Available in various fluoropolymer grades
Valve Type	Plug, Ball, or Needle Configuration	Fully customizable based on flow control needs
Flow Path Ports	2-Way, 3-Way, or 4-Way	Bespoke port positioning and angles
Connection Type	Threaded (NPT/G), Flanged, or Compression	Custom interface standards and dimensions
Temperature Range	-200°C to +250°C	Optimized for specific thermal cycles
Pressure Rating	Dependent on Body Style (Solid vs. Lined)	Customizable for high-vacuum or high-pressure
Body Construction	Full PTFE Monolithic or PTFE-Lined Metal	Reinforced options for industrial scale
Actuation Method	Manual Handle or Automated Interface	Compatible with pneumatic or electric actuators
Orifice Diameter	Precision Machined per Requirement	Custom bore sizing for flow optimization

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Sealing Material	Integrated PTFE Seats / PFA Diaphragms	Zero-leakage bespoke sealing profiles