

Sealed Glass Electrochemical Cell With Jacketed Temperature Control And Chemical Resistant Ptfе Lid

Item Number: PL-DJ03



Introduction

Optimize your analytical research with our premium five port sealed electrochemical cell featuring a chemical resistant polytetrafluoroethylene lid and jacketed temperature control. Engineered for precise three electrode systems, this robust vessel delivers outstanding reliability for critical laboratory research applications.

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Application	Description	Key Benefit
Corrosion & Passivation Analysis	Testing metal alloys in corrosive media such as concentrated acids, brines, or alkaline solutions.	Delivers highly reproducible polarization curves and precise EIS data by ensuring stable electrode positioning.
Electrocatalyst Evaluation	Characterizing novel catalysts for the Hydrogen Evolution Reaction (HER) and Oxygen Evolution Reaction (OER).	Facilitates rapid gas purging to eliminate dissolved oxygen and maintains a pure inert atmosphere during active electrolysis.
Energy Storage & Battery Research	Evaluating redox flow battery electrolytes, supercapacitor materials, and anode/cathode chemistry.	Allows wide-range temperature control through the jacketed wall to simulate real-world battery operating conditions.
Electroplating & Surface Finishing	Analyzing electrodeposition kinetics, coating efficiency, and chemical bath additives.	Wide-mouth configuration easily accommodates large-area substrate electrodes and dynamic working setups.
Environmental Electrochemistry	Investigating electrochemical oxidation of organic pollutants or heavy metal removal in wastewater samples.	Chemical-resistant PTFE and borosilicate glass construction prevent sample contamination and withstand aggressive chemical matrices.
Sensor & Biosensor Calibration	Designing and testing electrochemical biosensors for clinical, agricultural, or environmental monitoring.	Highly stable three-electrode configuration yields high signal-to-noise ratios for trace-level voltammetric detection.

Parameter	Specification Details (Standard Model: PL-DJ03)	Upgrade Variant (Absolute Sealed: PL-DJ03-2)
Cell Body Material	High Borosilicate Glass	High Borosilicate Glass
Lid Material	Precision CNC-Machined PTFE	Precision CNC-Machined PTFE
Volume Options	30ml, 50ml, 100ml, 150ml, 250ml, 500ml (Customizable)	30ml, 50ml, 100ml, 150ml, 250ml, 500ml (Customizable)
Structural Configurations	Single-layer / Double-layer (Jacketed with water bath ports)	Single-layer / Double-layer (Jacketed with water bath ports)
Lid Thread Diameters	35mm (30-50ml), 50mm (100-150ml), 60mm (250ml), 70mm (500ml)	35mm (30-50ml), 50mm (100-150ml), 60mm (250ml), 70mm (500ml)
Sealing System Type	Relatively Sealed (Standard O-ring extrusion)	Absolutely Sealed (High-vacuum hermetic compression)
Electrode Port Interface	Threaded compression with elastomeric O-rings	Threaded compression with high-performance fluorinated O-rings
Port Configuration	5-Port layout for three-electrode setup	5-Port layout for three-electrode setup
Salt Bridge System	Sand-core salt bridge OR Luggin capillary (Select one)	Sand-core salt bridge OR Luggin capillary (Select one)
Aeration Assembly	Built-in gas inlet with sparger nozzle and gas outlet port	Built-in gas inlet with sparger nozzle and gas outlet port
Dynamic Integration	Supports Rotating Disk Electrode (requires custom lid modification)	Supports Rotating Disk Electrode (requires custom lid modification)