

Rotating Disk Electrode Horizontal Support Stand

Item Number: PL-DZ01



Introduction

High-purity PTFE rotating disk electrode horizontal support stand with leveling base holds up to six electrodes. Engineered for electrochemical research, battery testing, and corrosion analysis, it offers exceptional chemical resistance and stability. Request a quote for custom configurations.

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Application	Description	Key Benefit
Electrocatalyst Screening	Parallel evaluation of multiple catalyst formulations under identical hydrodynamic conditions, often using oxygen reduction or hydrogen oxidation reactions.	Higher throughput with minimized cross-contamination risk; direct comparative data from a single experimental run.
Lithium-Ion Battery Research	Studying oxygen evolution/reduction reactions on rotating disk electrodes for next-generation battery cathodes and anodes.	Stable, inert platform prevents side reactions from metal supports that could distort electrochemical signatures.
Corrosion Rate Testing	Measuring corrosion currents of metallic samples in aggressive media using multiple electrodes simultaneously, e.g., for inhibitor efficiency studies.	Reliable, reproducible data thanks to precise leveling and chemical resistance; no contribution from support material itself.
Electroplating Bath Analysis	Assessing additive performance and mass transport properties in electroplating solutions by monitoring current-potential curves.	PTFE inertness avoids interference with plating chemistry, ensuring accurate bath constituent evaluation.
Sensor Development	Characterizing amperometric or voltammetric sensor responses with rotating electrodes to determine sensitivity and limit of detection.	Multi-electrode setup enables rapid prototyping and comparison of sensor coatings or electrode materials.
Fuel Cell Membrane Studies	Evaluating the activity of electrocatalysts for proton exchange membrane fuel cells via rotating disk electrode techniques.	Clean, metal-free environment maintains sample integrity and avoids poisoning from support-derived metal ions.
Academic Research & Teaching	Demonstrating fundamental electrochemical principles such as mass transport, kinetics, and hydrodynamic voltammetry in teaching labs.	Robust design withstands frequent handling and student use; easy setup reduces lab preparation time.
Photoelectrochemistry	Investigating light-induced electrochemical processes on semiconductor electrodes mounted on RDE tips for solar fuel generation research.	Transparent, non-contaminating base allows for unobstructed light paths while maintaining stable rotation.

Specification	Value
Model	PL-DZ01
Material	Virgin PTFE (polytetrafluoroethylene)
Electrode Mounting Capacity	Up to 6 rotating disk electrodes
Base Design	Leveling base with adjustable feet; supplementary plastic base for additional stability
Compatible Electrode Types	Standard RDE tips (shaft diameters 3–6 mm typical; custom upon request)
Chemical Compatibility	Resistant to most acids, bases, and organic solvents; pH range 0–14
Operating Temperature Range	-200°C to +260°C (PTFE limits)
Manufacturing Method	CNC machined from solid PTFE blocks
Surface Finish	Smooth, non-porous, and non-stick
Dimensions (typical)	Customizable; please contact KINTEK for exact specifications