CELLERATE

E-PREP | THE ELECTRODE PREPARATION SYSTEM

Automate Your Electrode Preparation for Superior Battery Research

The Electrode Preparation System (E–PREP) from Cellerate offers a fully automated solution for cutting, weighing, and measuring electrodes for coin cells and small pouch cells with unparalleled precision.

Developed in collaboration with the Centre for Process Innovation (CPI), the E-PREP System streamlines your workflow, from material preparation to cell assembly, reducing manual handling and ensuring consistent, high-quality results every time.

Why Choose the E-PREP System?

Maximise Efficiency: Free up skilled staff for high-value research tasks.
Improve Data Quality: Consistent, repeatable sample preparation improves research reliability.
Reduce Manual Errors: Automation minimises human error in the electrode preparation process.
Simplify Your Workflow: Seamless integration with the Cellerate CASS for a streamlined lab experience.

E-PREP | TECHNICAL SPECIFICATIONS

Size and Weight	780 x 400 x 320 mm (WxHxD) 30 kg
Power Requirements	80 - 260 V accepted, 240 W peak power
Throughput	Up to 60 electrodes per hour
Operating Environment	Glovebox or dry room
Punching	**Cut Geometry:** Up to 20 mm diameter discs (alternative systems available for rectangular cells) **Tool:** Sub-micron EDM cutting die **Radial Contour Tolerance:** 2 µm **Input Sheet Dimensions (max):** 150 x 100 mm
Thickness Measurement	**Probe:** Micro-Epsilon µε DTD-1G8 **Resolution:** 0.25 µm **Repeatability:** ≤ 0.15 µm
Weighing	**Microbalance:** Mettler Toledo SPC115-111 **Precision:** 0.01 mg
Resistance Measurement (Optional Module)	**Probe:** Hioki RM2610 **Measurement Parameters:** Composite resistivity (Ωcm) and interface resistance (contact resistivity) between the composite layer and current collector (Ωcm^2) **Number of Probes:** 46
Autoloader (Optional Module)	Allows for the automatic loading of up to 30 electrode sheets

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