



KINTEK SOLUTION

# Battery Slurry Filtration System Catalog

Contact us for more catalogs of Laboratory Press Machine, Battery Lab Consumables & Materials, Battery Testing & Electrochemical Equipment, Electrode Fabrication Equipment, Cell Assembly & Filling Equipment, etc.

# KINTEK SOLUTION

## COMPANY PROFILE

### >>> About Us

KINTEK Solution is a technology-driven innovator specializing in comprehensive laboratory equipment for battery R&D and advanced materials research. Our portfolio spans the entire cell fabrication workflow—from mixing, coating, and precision pressing (automatic, heated, isostatic) to cell assembly and testing. Also essential in ceramics and powder metallurgy, our systems prioritize precision, safety, and repeatability, empowering researchers and industrial labs to achieve groundbreaking results.



# 5L Laboratory Slurry Iron Removal Filtration System For Lithium Battery Electrode Production

Item Number: GL01



## Introduction

5L laboratory slurry iron removal filtration system combines vacuum filtration and 8000-10000 gauss magnetic separation for consistent lithium battery electrode coatings before coating with cleanable stainless construction flexible filter mesh selection reliable pilot scale processing and routine maintenance

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| Application                                    | Description                                                                                                                        | Key Benefit                                                                                        |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Lithium-ion battery cathode slurry preparation | Treats cathode slurry after ingredient mixing and before coating by combining magnetic iron removal with vacuum filtration.        | Helps reduce ferrous contamination and supports more consistent cathode coating quality.           |
| Lithium-ion battery anode slurry preparation   | Processes anode slurry within the recommended viscosity and solid-content range before it enters a coating operation.              | Provides a controlled pre-coating treatment step for repeatable electrode fabrication.             |
| Battery formulation research                   | Supports small-batch testing of new binder systems, active materials, conductive additives, and solvent combinations.              | The 5L cycle size limits material consumption while enabling practical process evaluation.         |
| Pilot-scale electrode coating                  | Prepares slurry for pilot coating runs where filtration quality directly affects coating behavior and product uniformity.          | Helps stabilize the feed material before coating and reduces avoidable process variation.          |
| Laboratory process verification                | Provides an intermediate filtration and separation stage for validating slurry preparation procedures and quality-control methods. | Makes treatment conditions easier to repeat across development batches.                            |
| Advanced materials research                    | Can be used for compatible slurry-based research involving fine powders, composite materials, and other formulated suspensions.    | Offers adjustable mesh selection and batch operation for flexible experimental workflows.          |
| Academic battery research                      | Fits laboratory-scale electrode fabrication programs requiring clean, manageable, and repeatable slurry processing.                | Supports research teams working with limited material quantities and frequent formulation changes. |

| Parameter                                          | Specification                                                     |
|----------------------------------------------------|-------------------------------------------------------------------|
| Product item number                                | GL01                                                              |
| Processing functions                               | Vacuum filtration; magnetic iron removal; intermittent processing |
| Processing capacity                                | 5L per cycle                                                      |
| Vacuum level                                       | Absolute vacuum 65 KPa                                            |
| Filter mesh specification                          | Below 1000 mesh                                                   |
| Recommended filter mesh for lithium battery slurry | 80-120 mesh                                                       |
| Iron removal capability                            | 8000-10000 gauss                                                  |
| Recommended slurry viscosity                       | ≤20000 CP                                                         |
| Recommended slurry solid content                   | ≤80%                                                              |
| Slurry processing state                            | Recommended viscosity ≤20000 CP and solid content ≤80%            |

| Parameter                            | Specification                                                                        |
|--------------------------------------|--------------------------------------------------------------------------------------|
| Magnetic system                      | Permanent magnet; removable for cleaning                                             |
| Construction                         | Full stainless steel design                                                          |
| Power supply voltage                 | Single-phase 100-240 VAC $\pm 10\%$                                                  |
| Power supply frequency               | 50 Hz / 60 Hz                                                                        |
| Rated power                          | 100 W                                                                                |
| Installation dimensions              | L500 × W300 × H850 mm                                                                |
| Weight                               | 40 Kg                                                                                |
| Cleaning after each filtration cycle | Remove dirt from the filter inner chamber and filter mesh; keep the equipment clean. |
| Fastener inspection                  | Regularly inspect screws, nuts, pins, and other fasteners to prevent loosening.      |
| Filter mesh handling                 | Do not allow the filter mesh to contact sharp objects to prevent damage.             |

# Battery Slurry Filtration Device Laboratory Slurry Filter

Item Number: GL02



## Introduction

Laboratory battery slurry filtration device removes hard particles at 124 microns with stainless steel construction, low pressure drop, 500 mL capacity, vacuum assistance, flexible mesh options for clean consistent electrode research samples and convenient operation

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| Application                       | Description                                                                                                                                                           | Key Benefit                                                                                  |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Battery Positive Electrode Slurry | Filters positive electrode slurry samples before subsequent laboratory processing or evaluation, using the supplied electrode filtration configuration.               | Removes hard particles at 124 micrometers or larger and supports cleaner sample preparation. |
| Battery Negative Electrode Slurry | Processes negative electrode slurry samples in laboratory battery research workflows where controlled particle removal is required.                                   | Provides a dedicated filtration approach for repeatable experimental preparation.            |
| Electrode Material Development    | Supports researchers screening slurry formulations, raw material combinations, and laboratory preparation conditions.                                                 | The 500 mL capacity accommodates practical development-scale sample volumes.                 |
| Battery R&D Sample Preparation    | Provides vacuum-assisted filtration for experimental batches during cell-material development and related laboratory studies.                                         | Compact dimensions and simple operation make the unit convenient for repeated bench work.    |
| Advanced Materials Research       | Filters laboratory slurry samples containing unwanted hard particles during materials formulation and process investigation.                                          | Stainless steel construction supports corrosion resistance, cleaning, and repeated use.      |
| Powder and Ceramic Slurry Testing | Can be used for laboratory slurry filtration in powder metallurgy, ceramics, and other materials research applications where the process requires particle screening. | Flexible mesh selection supports different experimental filtration conditions.               |

| Parameter                           | Specification                                                    |
|-------------------------------------|------------------------------------------------------------------|
| Product Item Number                 | GL02                                                             |
| Product Type                        | Laboratory slurry filtration device                              |
| Primary Function                    | Filters hard particles in laboratory slurry samples              |
| Filtration Target                   | Hard particles with a particle size of 124 micrometers or larger |
| Filtration Accuracy                 | 124 micrometers                                                  |
| Standard Filter Screen              | 150 mesh                                                         |
| Optional Filter Screen              | Below 1000 mesh                                                  |
| Filter Configuration                | Positive and negative electrode particle filtration screens      |
| Filter Material / Main Construction | SUS304 stainless steel                                           |
| Filter Exterior Dimensions          | 145 x 150 x 200 mm                                               |
| Air Generator Exterior Dimensions   | 140 x 70 x 150 mm                                                |
| Capacity                            | 500 mL                                                           |
| Absolute Vacuum                     | 65 kPa                                                           |
| Air Pump Flow Rate                  | 3 L/min                                                          |

| Parameter     | Specification          |
|---------------|------------------------|
| Power Adapter | AC 220 V +/-10%, 50 Hz |
| Weight        | 4 kg                   |



## Kintek Solution

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