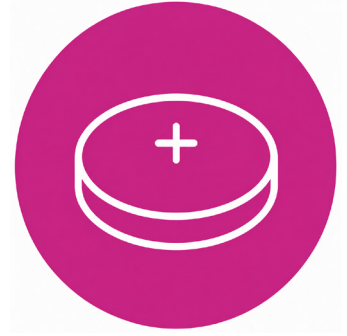


PI-KEM



COIN CELL RESEARCH KITS

From Start-Up to Scale-Up



Product Overview

A BOND WORTH FORMING

WE ENABLE INNOVATION

For over 30 years we've been enabling you to accelerate your research and development, proudly partnering with the most innovative minds in the science and technology sectors.

We're purpose designed to support your science and technology innovation, and take your ideas from lab-based concepts to full-scale production.

With our capabilities and extensive expertise we're the partner of choice for custom manufacturing solutions and niche product sourcing through our trusted network of UK and international suppliers.

Specialising in the following areas:

- Energy Research
- Hydrogen Technology
- Photonics + Optoelectronics
- Thin Films + Nanotech
- Materials Processing + Testing
- RF Shielding
- Electroforming
- Specialist Metallic Coatings

Accelerate your journey. We are PI-KEM.

MICRO-INFO

- 30+ years supplying advanced materials and equipment
- Custom manufactured components
- Niche product sourcing
- Comprehensive range of standard stock products and consumables
- Call off purchase options
- Support from an expert scientific team
- Low minimum order quantity
- UK, European & global delivery

We offer a wide range of advanced materials and equipment which are available as standard or custom manufacture.

Within this catalogue are our most requested lines, however we welcome any enquiry for other specifications.

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Beyond your Purchase

PI-KEM supports you long after first setup:

- **Full Range of Consumables:** We supply all materials and consumables needed for your ongoing research.
- **Equipment Upgrades:** We support you as your research scales and your needs evolve.
- **Technical Expertise:** 30+ years of expert technical guidance

Our Partner for Battery Research Equipment & Consumables

We distribute on behalf of MTI Corp, a leading manufacturer of scientific equipment, consumables and products for material science, analysis and new energy research.



Our Partners for Battery Research Materials

We distribute on behalf of leading specialist manufacturers within advanced materials and new energy research.



COIN CELLS: AN OVERVIEW

From first experiment to repeatable results:
your all-in-one laboratory solution.



Why Choose Coin Cells?

Coin cells enable precise, small-scale trials for future battery breakthroughs

- **Rapid Evaluation:** The fastest route to testing novel electrode materials and electrolytes. Ideal for high-throughput testing and early-stage validation.
- **Resource Efficient:** Requires minimal sample material, reducing waste and cost
- **Broad Application:** Suitable for Li-ion, Na-ion, solid-state, and other chemistries
- **Consistent repeatability:** Ensures cell assembly does not affect results

The Research Pathway

PI-KEM supports every stage of your battery journey, from initial discovery to pilot production

DISCOVERY

New material
synthesis & chemical
formulation

COIN CELLS

Rapid performance
testing & validation

SCALING

Transitioning to
Pouch or Cylinder
formats

PILOT LINE

Small-scale
pre-commercial
production

COIN CELL KITS

From first experiment to repeatable results - everything your lab needs in one package.

Whether setting up a new lab, training a new team member, or scaling up a development programme, our kits provide the essential equipment and consumables needed for reliable coin cell assembly.



**Complete material,
equipment &
consumable sets**



**Single-source supply,
designed to work
together**



**Supports repeatable
assembly every time**



**Suits Li-ion, Na-ion,
solid state & more**



**Flexible for lab
size or budget**



**Standardise
equipment across
teams & projects**

Why Choose a PI-KEM Coin Cell Kit?

Reliable equipment & quality consumables, selected to help you achieve your research goals

- **Flexible:** Suitable for any lab size or budget
- **Single-Source:** Avoid compatibility issues with a complete, integrated kit
- **Standardised:** Easy to replicate setups across project teams
- **Glove Box/ Dry Room:** Suitable for cell fabrication within a controlled atmosphere
- **Onsite Training & Setup:** Available for larger projects

Backed by Expertise: Access proven battery R&D knowledge to help you build reliable, repeatable workflows



COIN CELLS KITS

PRODUCT RANGE COMPARISON

Comprehensive technical overview and specification matrix across the PI-KEM Coin Cell Kits.

Contents are based on Li-ion chemistry, however other chemistries, including Na-ion are also available.

Feature	01 START-UP (Manual) ¹	02 INTERMEDIATE (Manual) ¹
Actuation / Operation	Manual	Manual
Starting Cost (Ex Works)	From £6000	From £8000
Primary Focus & Throughput	Entry point; low-volume manual assembly	Growing R&D; regular manual testing
Ideal Target Lab	First-time users, teaching labs, early R&D	Growing R&D teams, multi-user labs
Electrode Sourcing	Pre-cut disks (included)	Pre-cut disks (included)
Configuration Options	Standard Kit	Standard Kit

¹ Kit includes the materials and consumables required to assemble your first 100 predefined coin cells. Replacement consumables and materials are available separately, allowing you to continue production without purchasing another kit.

² Onsite installation and training is recommended

Pricing Information

Prices shown are starting prices and are correct at the time of printing. They are provided as a guide only and may change without notice. Final pricing may vary depending on product specification, order quantity, availability and market conditions. Please contact our team for a current quotation.



3 SEMI-AUTOMATIC ¹	4 HIGH THROUGHPUT ^{1 2}	5 FULLY AUTOMATED ²
Semi-Automatic	Scaled / Electrode Prep	Fully Automated
From £11,750	From £38,000	Contact for Quote
Scaling up; transitioning from manual processes	Creating and preparing electrodes at scale	Pilot-scale production for maximum output
Multi-user labs looking for process repeatability	Experienced teams; high-output, pilot prep	Industrial pilot-line; automated, high-output
Pre-cut disks (included)	Custom mixed & fabricated by user	Automated handling of user/pre-cut materials
Standard Kit	Standard Kit	1-Channel, 8-Channel, 16-Channel, or Full Assembly Line

“PI-KEM stands out with its efficient and transparent approach to handling highly complex projects such as our order.”

Emilia Ciechanowicz

Senior Specialist, Project Coordination Department

Łukasiewicz Research Network

Institute of Non-Ferrous Metals Centre for Electrochemical Energy Storage

Learn the basics of battery assembly

Pre-cut, coated materials to assemble your first 100 predefined coin cells. An ideal entry point for new battery laboratories or teaching environments.

Contents based on Li-ion - other chemistries e.g. Na-ion also available



Ideal for:

- First-time users
- Teaching laboratories
- Undergraduate and postgraduate practical courses
- New battery research groups

Contents:

Qty

Equipment

Hydraulic Crimper for All Types of Coin Cells

1

Precision Electronic Single Channel Pipette: 20 - 200uL with Battery & Charger

1

Materials

Electrolyte: 1M LiPF₆ in EC:EMC (3:7)

200g

Lithium Discs 15.6mm x 0.45mm

50g

Single Side Coated Cathode Electrode Discs LiNiCoMnO₂

100 Pack

Graphite Coated Anode Electrode Discs

100 Pack

Consumables

Polypropylene (PP) Disk as Battery Separator 19mm

100 Pack

CR2032 Coin Cell Cases (20mm D x 3.2 mm T) with SS304 & SS316 Option

100 Pack

Stainless Steel Spacer (15.5mm Dia. x 0.5 mm) with SS304 & SS316 Option

100 Pack

Stainless Steel Wave Spring with SS304 & SS316 Option

100 Pack

Build research capability

Manually operated equipment, consumables and pre-coated materials to assemble your first 100 predefined coin cells. Contents based on Li-ion - other chemistries e.g. Na-ion also available



- Ideal for:**
- Growing R&D teams
 - Regular testing programmes
 - Multi-user laboratories
 - Expanded development work

Contents:**Qty****Equipment**

Compact Precision Disc Cutter with 4 Sets of Cutting Die (15, 19, 20 & 24 mm)	1
Hydraulic Crimper for All Types of Coin Cells	1
Precision Electronic Single Channel Pipette: 20 - 200uL with Battery & Charger	1

Materials

Electrolyte: 1M LiPF ₆ in EC:EMC (3:7)	200g
Lithium Discs 15.6mm x 0.45mm	50g
Cathode: Aluminum Foil Single Side Coated by LiNiCoMnO ₂	5 Sheets
Anode: Single Layer CMS Graphite Coated on Cu Foil (241 L x 200 W x 0.05 T, mm)	5 Sheets

Consumables

Polypropylene (PP) Disk as Battery Separator 19mm	100 Pack
CR2032 Coin Cell Cases (20mm D x 3.2 mm T) with SS304 & SS316 Option	100 Pack
Stainless Steel Spacer (15.5mm Dia. x 0.5 mm) with SS304 & SS316 Option	100 Pack
Stainless Steel Wave Spring with SS304 & SS316 Option	100 Pack

03 SEMI-AUTOMATIC

From £11,750 Ex Works

Increase consistency, moving beyond manual processes

Semi-automatic equipment, consumables and materials to assemble your first 100 predefined coin cells with improved consistency and throughput.

Contents based on Li-ion - other chemistries e.g. Na-ion also available



Ideal for:

- Scaling research
- Increasing throughput
- Improving repeatability
- Reducing manual handling

Contents:	Qty
Equipment	
Hi-Throughput Pneumatic Disc Cutter with 15 & 19 mm Die for Coin Cell Separator & Electrode	1
Fast Pneumatic Crimper for Assembling CR20XX Series Coin Cells, Cleanroom & Ar Gas Compatible	1
Precision Electronic Single Channel Pipette: 20 - 200uL with Battery & Charger	1
Materials	
Electrolyte: 1M LiPF ₆ in EC:EMC (3:7)	200g
Lithium Discs 15.6mm x 0.45mm	50g
Cathode: Aluminum Foil Single Side Coated by LiNiCoMnO ₂	5 Sheets
Anode: Single Layer CMS Graphite Coated on Cu Foil (241 L x 200 W x 0.05 T, mm)	5 Sheets
Consumables	
Polypropylene (PP) Disk as Battery Separator 19mm	100 Pack
CR2032 Coin Cell Cases (20mm D x 3.2 mm T) with SS304 & SS316 Option	100 Pack
Stainless Steel Spacer (15.5mm Dia. x 0.5 mm) with SS304 & SS316 Option	100 Pack
Stainless Steel Wave Spring with SS304 & SS316 Option	100 Pack

Scale your research

Equipment and materials to prepare electrodes and assemble your first 100 predefined coin cells, supporting larger research programmes and advanced development.

Contents based on Li-ion chemistry - other chemistries (e.g. Na-ion) also available

High-Output
Labs

Advanced
Research

Pilot Scale

Complex
Projects

Ideal for:

- High-output laboratories
- Advanced battery research teams

- Pilot-scale development environments
- Organisations running multiple / more complex projects



Kit contents overleaf...

04 HIGH THROUGHPUT (Continued...)

Equipment and materials to prepare electrodes and assemble your first 100 predefined coin cells, supporting larger research programmes and advanced development.

Contents based on Li-ion chemistry - other chemistries (e.g. Na-ion) also available

Contents:	Qty
Equipment	
High Energy 3D Ball Mill with Optional Jars	1
Desk-Top Dual-Shaft Planetary Vacuum Mixer w/ Optional Containers (50-500ml) up to 600 RPM	1
100C Max. 4" Width Electric Hot Rolling Press with Variable Speed (Air Gas Compatible)	1
25 L 200 °C Vacuum Oven (12" x 12" x 11")	1
Hi-Throughput Pneumatic Disc Cutter with 15 & 19 mm Die for Coin Cell Separator & Electrode	1
Fast Pneumatic Crimper for Assembling CR20XX Series Coin Cells, Cleanroom & Ar Gas Compatible	1
Precision Electronic Single Channel Pipette: 20 - 200uL with Battery & Charger	1
Materials	
Electrolyte: 1M LiPF ₆ in EC:EMC (3:7)	200g
Lithium Discs 15.6mm x 0.45mm	50g
Natural Graphite Powder for Li-ion Battery Anode	200g
Carboxymethyl Cellulose (CMC) for Li-ion Battery Anode	100g
Styrene-Butadiene Rubber (SBR) Binder for Li-ion Battery Anode	500g
Super P Conductive Carbon Black	80g
LiFePO ₄ (Lithium Iron Phosphate, LFP) Powder for Li-ion Battery Cathode,	150g
PVDF Binder for Li-ion Battery Electrodes	80g
SUPER C45 Conductive Carbon Black as Conductive Additive for Lithium-Ion Batteries	30g
Carboxymethyl Cellulose (CMC) for Li-ion Battery Anode	100g
Consumables	
Polypropylene (PP) Disk as Battery Separator 19mm	100 Pack
CR2032 Coin Cell Cases (20mm D x 3.2 mm T) with SS304 & SS316 Option	100 Pack
Stainless Steel Spacer (15.5mm Dia. x 0.5 mm) with SS304 & SS316 Option	100 Pack
Stainless Steel Wave Spring with SS304 & SS316 Option	100 Pack
Display	
Coin Cell Encapsulation Acrylic Display with PI-KEM logo branding	1

Automated pilot production

Pilot-scale automated coin cell assembly for maximum throughput and precision.

Contents based on Li-ion chemistry - other chemistries (e.g. Na-ion) also available

Option 1: 1 Channel



Entry-level automation for single-channel, controlled coin cell assembly.

- Bench-top automatic single channel assembly
- Automatic assembly process: injecting electrolytes, & sealing cells.
- Servo motor drives sealing process, to ensure stable & reliable pressure.
- Compatible with glove boxes or dry rooms.

Option 2: 8 Channel



Eight simultaneous channels - multiply throughput without effecting consistency.

- As per Option 1 with 8 Channels for multiple throughput

Option 3: 16 Channel



High-capacity solution for sustained, high-volume production environments.

- As per Option 1 with 16 Channels for highcapacity throughput

Option 4: Fully Automated Assembly Line



Fully automated end-to-end line - the ultimate pilot-scale coin cell solution.

- Robotic arm with vacuum suction will pick up materials from pre-loading station & transfer to assembling station.
- Handles max. 64 cells in dual-station glovebox under controlled atmosphere
- Electrolyte injection mechanism, followed by sealing function
- Finished cells are transferred to tray area

More Than Coin Cell Kits

Building a coin cell is only one part of your research.

Reliable results depend on having the right materials, equipment and technical support at every stage.

Whether you're preparing electrodes, assembling cells, testing performance or scaling your research, PI-KEM provides the products and expertise to help keep your project moving.

Explore the complete battery research range:

Coin Cell Consumables – Everything you need for consistent cell assembly.

Battery Materials – Electrodes, foils, powders, electrolytes, separators and more.

Electrode Fabrication Equipment – Coat, press, cut and prepare samples.

Cell Assembly Equipment – Tools & equipment for accurate, repeatable assembly.

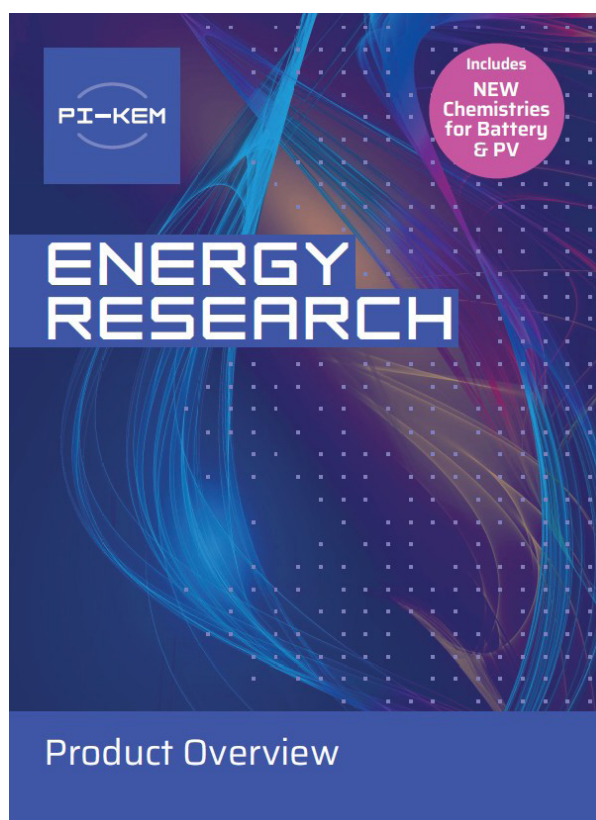
Testing & Characterisation – Equipment to evaluate battery performance.

Laboratory Equipment – Supporting equipment for efficient battery research.

From conversation to completion, we're here to help you find the right products for every stage of your battery research.

Looking for More?

Browse our complete Energy brochure and discover products for every stage of battery research.



NOTES

[illegible]



Ready to equip your lab?

Our team works with university researchers and commercial R&D organisations to specify the right kit for your goals, budget, and chemistry.

Collaboration · Partnership · Long-term Relationships

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