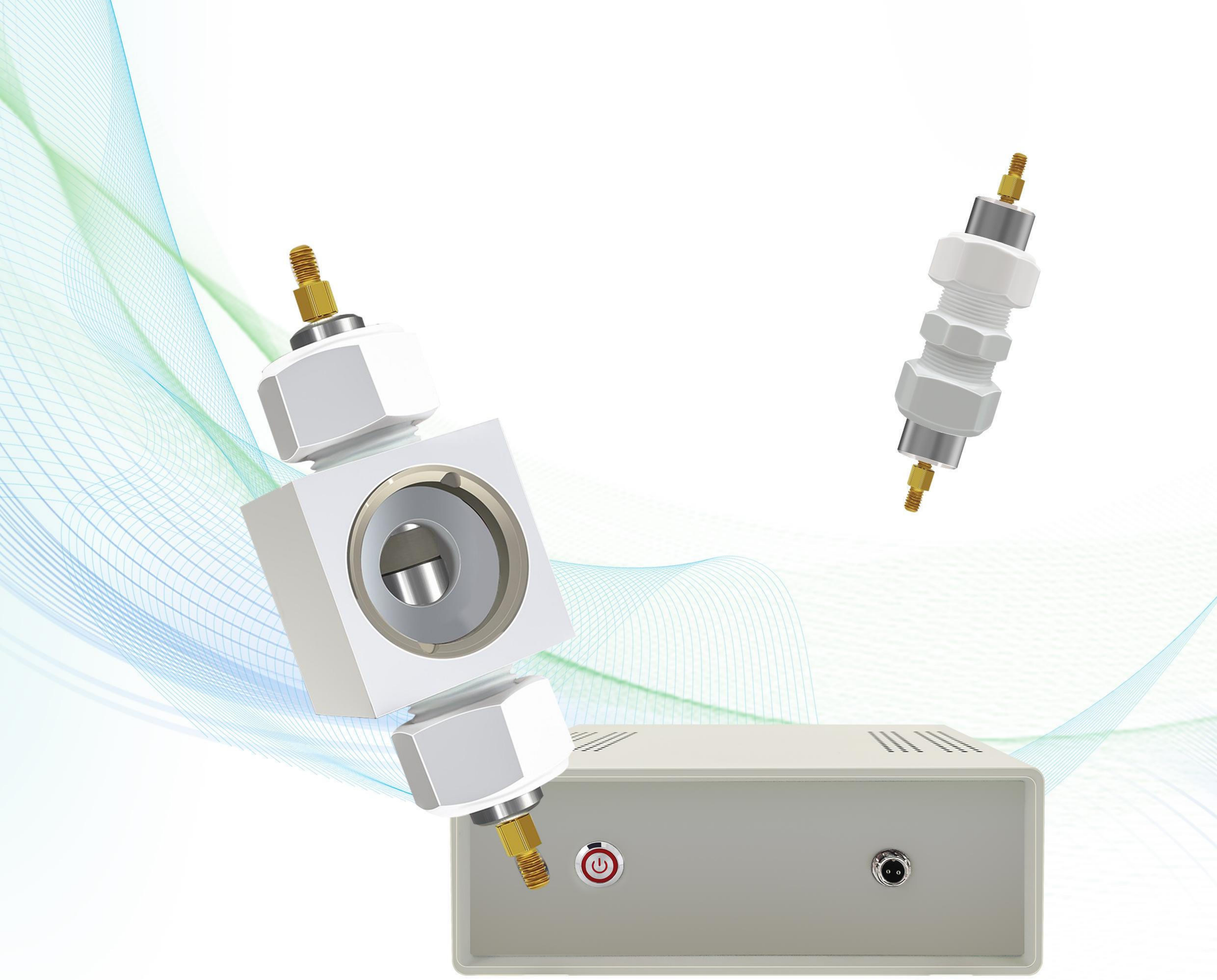
XNERGY

Solid/liquid battery molds/high-purity experimental materials
customized scientific research instruments



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Contents

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01

SOLID-STATE BATTERY MOLD

Solid-state battery

The lithium-ion conductivity of solid electrolyte materials can be measured by compacting the solid

The electrolyte material between the two working electrodes.

When conducting linear scanning voltammetry (LSV) tests, the electrolyte membrane is sandwigold between the working electrode and the lithium metal foil, which serves as both the counting and reference electrodes

GT01 CG - Simple version of solid-state battery mold

[It can be customized and modified as required, and the frame can be raised for free]

- **Sleeve diameter :**50mm
- **Assembly height :**65mm
- **Inner diameter range :**6mm-20mm
- **Product materials:** Stainless steel, peek, No. 4 steel
- **Working pressure :**≤500 MPa

- **Compressive strength**
- **Mild hypertrophy**
- **Insulating property**
- **Stability**

GT01 TC - Simple version of solid-state battery mold - Ceramic type

[It can be customized and modified as required, and the frame can be raised for free]

- **Sleeve diameter** :50mm
- **Assembly height**:65mm
- **Inner diameter range :**10mm
- **Product materials:** Stainless steel, PA, special steel, ceramic

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GT02 CG - Standard version of solid-state battery mold

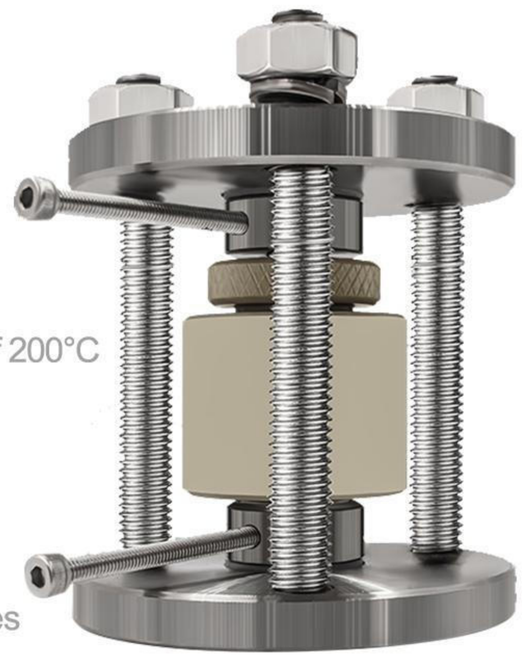
[It can be customized and modified as required, and the frame can be raised for free]

- **Sleeve diameter :**40mm
- **Assembly height :**100mm
- **Inner diameter range :**6mm-20mm
- **Product materials:** Stainless steel, peek, No. 4 steel
- **Working pressure :**≤500 MPa

200°C

Withstand a high temperature of 200°C

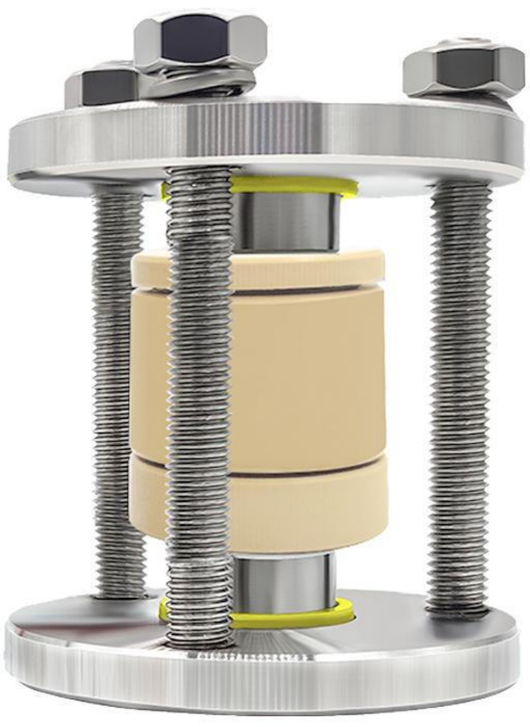
Stable chemical properties



GT02 TC - Standard ceramic version of solid-state battery mold

[It can be customized and modified as required, and the frame can be raised for free]

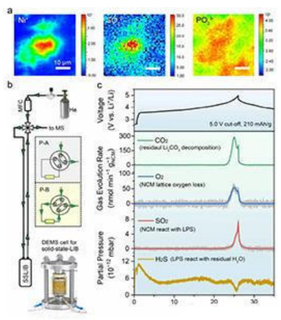
- **Sleeve diameter :**40mm
- **Assembly height :**100mm
- **Inner diameter range :**10mm
- **Product materials:** Stainless steel, PEEK, No. 4 steel, ceramic
- **Working pressure :**≤500 MPa

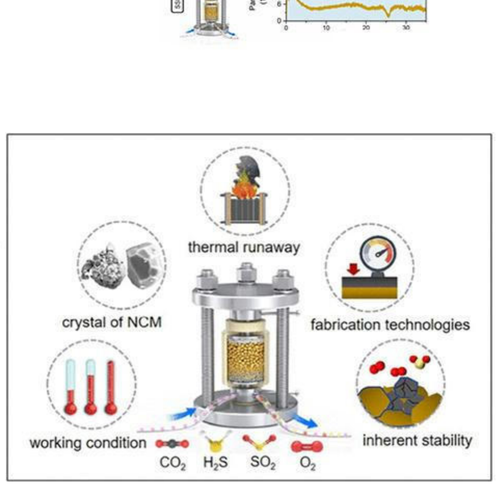


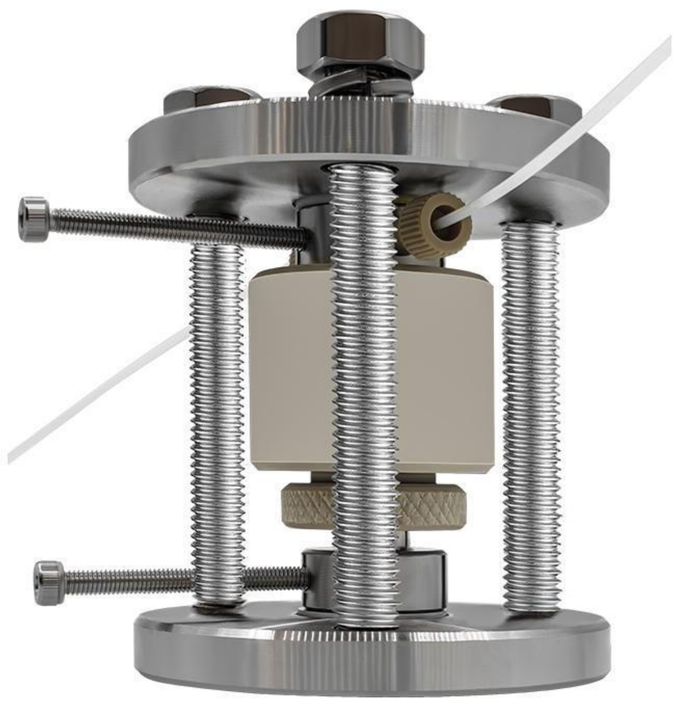
GT02 TQ -Solid-state battery mold ventilation version

[It can be customized and modified as required, and the frame can be raised for free]

- **Inner diameter size :**φ10-20mm(The ceramic version is only φ10mm)
- **Product size :**80x100mm
- **Product materials:** Stainless steel, special steel, Peek
- **Working pressure :**≤800MPa
- **Working conditions:** Use under normal temperature conditions







Ventilation version

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GT03 CG - Solid-state battery mold voltage stabilizing plate

[Can be customized and modified as required]

- **Sleeve diameter :**40mm
- **Assembly height :**200mm
- **Inner diameter range :**6-20mm (commonly 10/12mm)
- **Product materials:** Stainless steel, PEEK, special steel
- **Operating temperature :**≤250℃
- **Working pressure :**800MPa

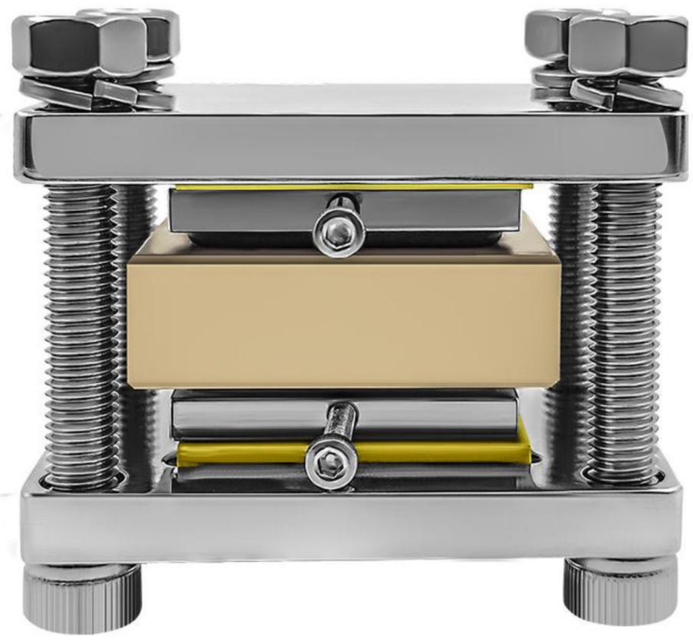
GT04 CG - Solid-state three-electrode mold

[Can be customized and modified as required]

- **Sleeve diameter :**40mm
- **Assembly height :**65mm
- **Minimum inner diameter :**4mm (adjustable)
- **Product materials:** Stainless steel, peek, No. 4 steel
- **Product set:** Three-electrode mold, airtight bottle, electrode column
- **Working pressure :**≤500 MPa

GT05 CG -Square battery test mold

[Can be customized and modified as required]



- **Operating temperature :**≤250℃
- **Assembly height :**75mm
- **Bonding area :**30x40mm
- **Product material:** Stainless steel, PEEK
- **Working pressure :**≤500 MPa

Electrode polishing

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GT07 CG - Monochrome X-ray testing mold

[Can be customized and modified as required]

- **Sleeve diameter :**20mm
- **Assembly height :**60mm
- **Inner diameter range :**1-6mm
- **Product material:** Stainless steel, PEEK

GT08 CG -Microscopic test mold

[Can be customized and modified as required]

- **PEEK sleeve diameter :**40mm
- **Assembly height :**100mm
- **Adjustable inner diameter range :**6mm-20mm
- **Material:** Stainless steel, peek, No. 4 steel
- **Maximum working pressure :**500 MPa

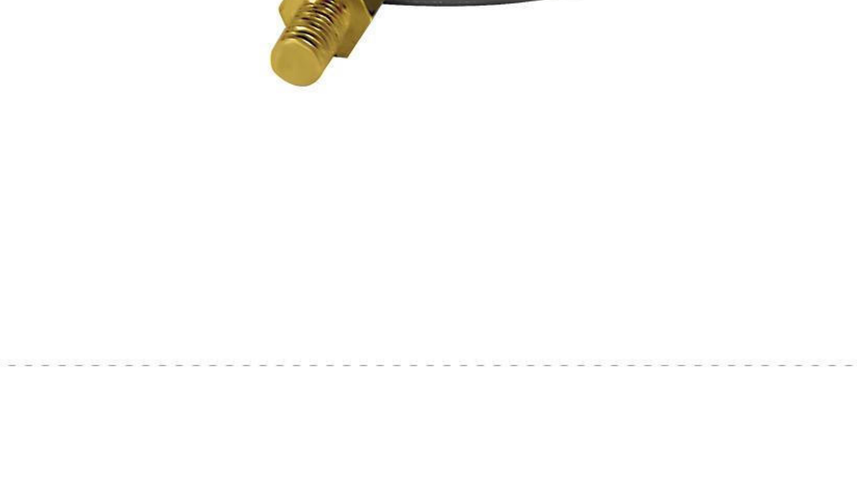
GT11 CG - Simple soft-pack battery mold

[Can be customized and modified as required]

- **Mold spring :**40mm
- **Assembly height :**70mm
- **Size range :**80x80mm-200x200mm (adjustable)
- **Product material:** Stainless steel, aluminum alloy
- **Working pressure :**≤50 MPa

Corrosion resistance

Good electrical conductivity



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GT06 CG - Raman test mold

[Can be customized and modified as required]

- **Sleeve diameter :**25mm
- **Assembly height :**90mm
- **Inner diameter range :**6-20mm (adjustable)
- **Product materials:** Stainless steel, peek, special steel
- **Working pressure :**≤500 MPa

GT17 CG -Single-stud Raman die

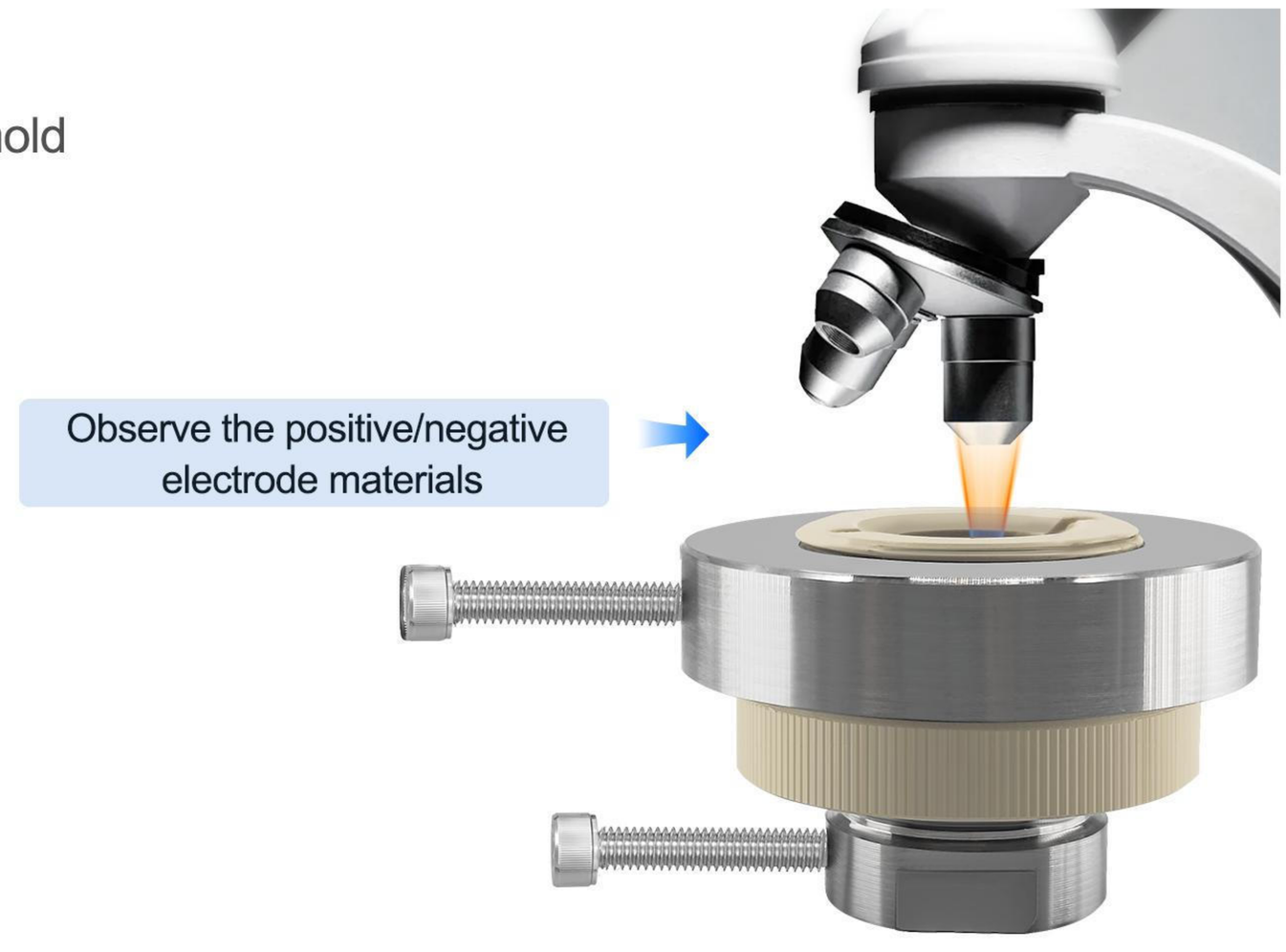
[Can be customized and modified as required]

- **Inner diameter size :**φ6-10mm (customizable)
- **Window panel material:** Quartz
- **Product Version:** Voltage stabilizing version
- **Product material:** Stainless steel, PEEK
- **Usage conditions:** Use at room temperature

GT16 CG - End face Raman testing mold

[Can be customized and modified as required]

- **Inner diameter range :**φ6-10mm (customizable)
- **Window panel material:** Quartz
- **Adjustable inner diameter range :**1-6mm
- **Material:** Stainless steel, PEEK



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NK01 CG - Button battery case CR2032

[Multiple specifications]

- **Product material :**304 stainless steel
- **Product diameter :**20mm
- **Product thickness :**3.2mm
- **Product planning:** Positive electrode shell, spring pad, spring piece, negative electrode shell

NK02 DK - Perforated button battery case

[Can be customized and modified as required]

Opening 2mm

- **Product material :**304 stainless steel
- **Product diameter :**20mm
- **Product thickness :**3.2mm

Button battery housing - Made of stainless steel, it has stable chemical properties, good electrical conductivity, and stable electrochemical performance, making it a quality choice。

YP01 CG - Circular tablet pressing die

[Can be customized and modified as required]

- **Product material:** Stainless steel
- **Product dimensions :**10mm, 20mm
- **Usage conditions:** Use under normal temperature conditions

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YP03 CG - Square tablet press die

[Can be customized and modified as required]

- **Head size :**45x4mm (customizable)
- **Product size :**50x40mm
- **Product material :**304 stainless steel, PA

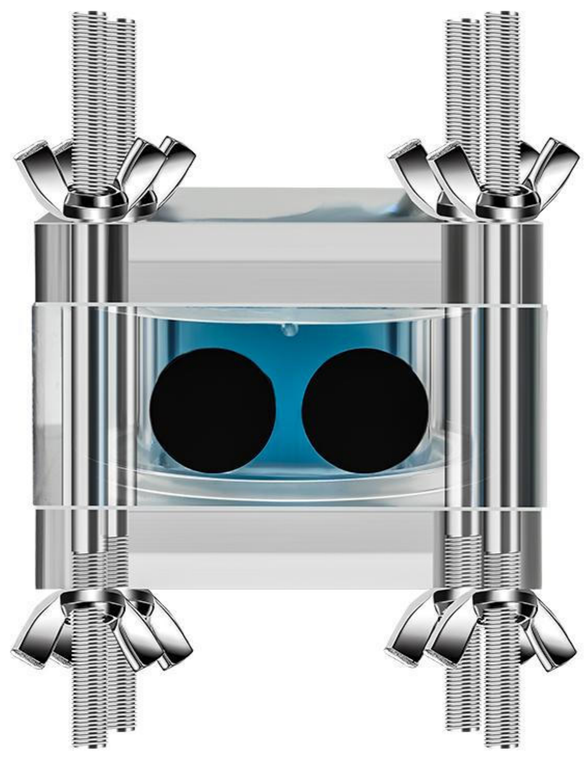
KQ01 CG - Air battery mold

[Can be customized and modified as required]

- **Product material :**PMMA, stainless steel
- **Assembly height :**90mm
- **Product size :**60x42mm
- **Working pressure :**0MPa
- **Usage conditions:** Use under normal temperature conditions

Silicone seal

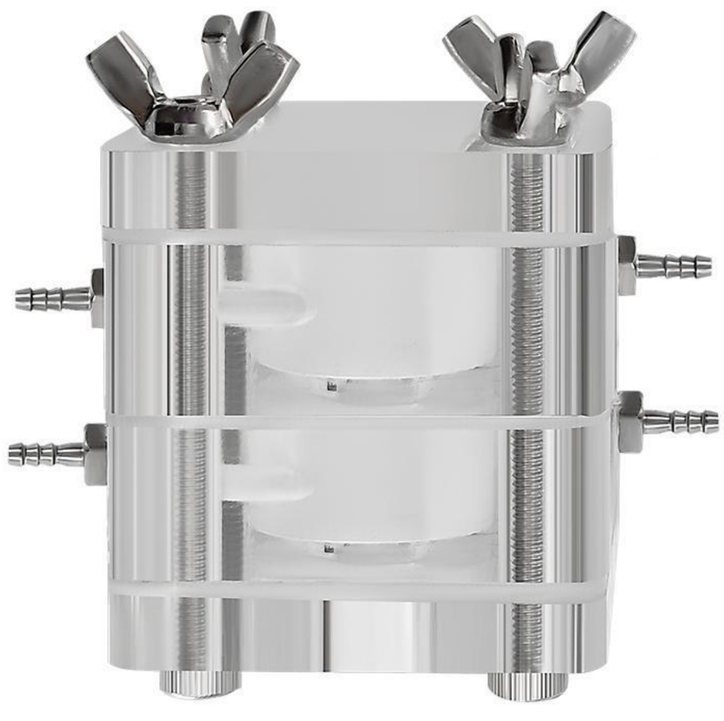
High transparency and observability



KQ02 CG -Zinc-air battery mold

[Can be customized and modified as required]

- **Product material :**PMMA, stainless steel
- **Assembly height :**80mm
- **Product size :**50x50mm
- **Inner circle size:** φ10-φ35(customizable)
- **Working pressure :**0MPa
- **Usage conditions:** Use under normal temperature conditions



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QM01 GT - Solid-state battery airtight bottle

02

Airtight bottle series

The uses of airtight bottles

Airtight bottles are indispensable tools in the fundamental research of solid-state batteries. They ensure the accuracy, repeatability and safety of experiments by providing a controllable, sealed and pressure-applicable environment.

Specification

Specification	Bottle No. 1	Bottle No. 2	Bottle No.3	Bottle No. 4
Capacity	 250ml	 500ml	 550ml	 1000ml
Bottle mouth diameter	65mm	65mm	99mm	99mm
Height	110mm	150mm	99mm	165mm
Diameter of the bottle body	100mm	100mm	110mm	110mm

Product Information

[Can be customized and modified as required]

- **Product material:** High borosilicate glass, PP
- **Bottle body temperature resistance :**≤121℃
- **Wiring styles:** Battery holder, alligator clip, blue electric clip, banana head (customizable)

Blue electric clip

Crocodile clip

Battery holder

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QM02 GT - Button battery airtight bottle

[Can be customized and modified as required]

- **Product material:** High borosilicate glass, PP
- **Bottle body temperature resistance :**≤121℃
- **Wiring style:** Battery socket

	Bottle No. 1	Bottle No. 2	Bottle No. 3	Bottle No. 4
Specification	 250ml	 500ml	 550ml	 1000ml
Bottle mouth diameter	65mm	65mm	99mm	99mm
Height	110mm	150mm	99mm	165mm
Diameter of the bottle body	100mm	100mm	110mm	110mm

120℃

Withstand a high temperature of 120℃

Stable chemical properties

QM03 CG - Vacuum battery test bottle

[Can be customized and modified as required]

- **Product material :**PMMA
- **Product dimensions:** Inner φ100mm, outer φ120mm
- **Bottle height :**180mm
- **Usage conditions:** Use under normal temperature conditions

Regular style	Enhanced version
Positive pressure: 0.1MPa	Positive pressure: 0.1MPa. Negative pressure: ≤0.2MPa

*The bottle connection wire can be replaced as needed

Enhanced version

Regular style

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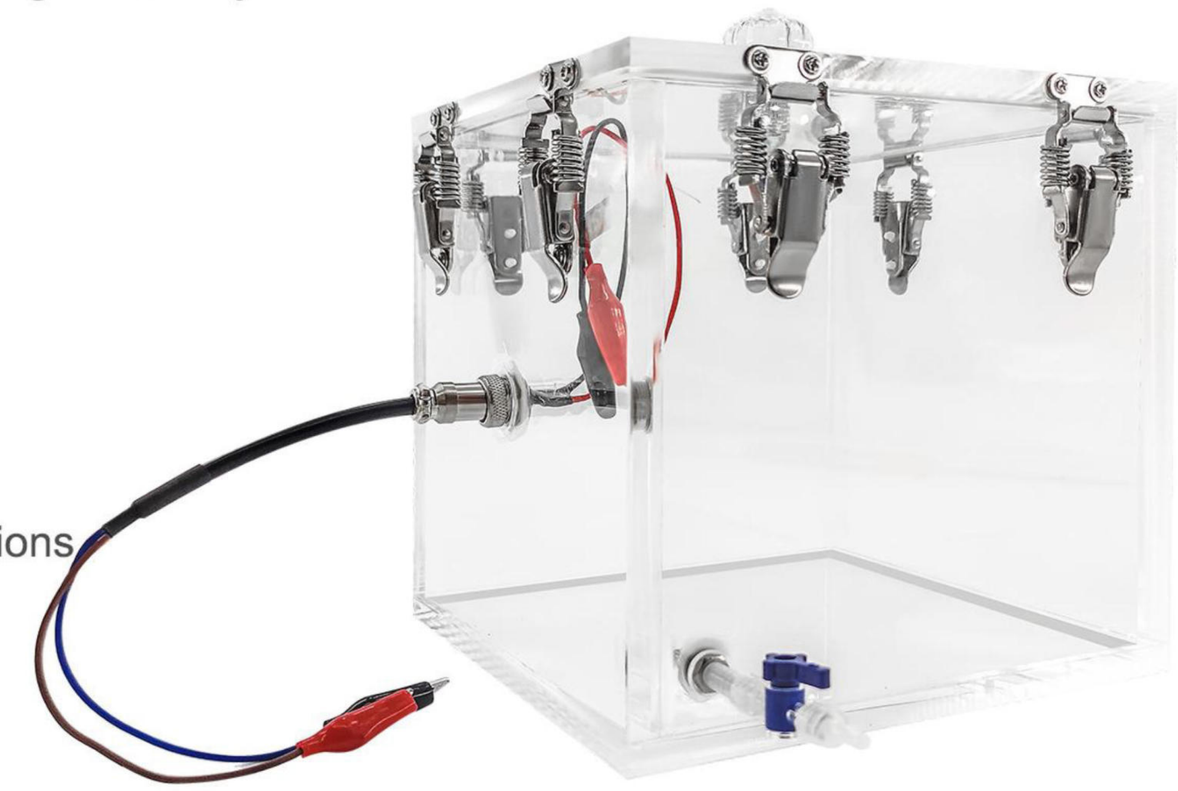
QM04 CG - Customized transparent airtight battery box

[Can be customized and modified as required]

- **Product material :**PMMA, stainless steel
- **Product size :**200x200mm
- **Product height :**200mm
- **Wiring style:** Alligator clip (can be replaced as needed)
- **Usage conditions:** Use under normal temperature conditions



QM05 CG - Stainless steel battery airtight tank

[Can be customized and modified as required]

- **Product material:** Stainless steel
- **Product dimensions:** Inner φ65mm, outer φ70mm (customizable)
- **Wiring styles:** Battery holder, alligator clip, blue electric clip, banana head (customizable)
- **Bottle height :**80mm
- **Bottle temperature resistance :**≤150℃

QM06 CG - High-voltage battery tank

[Can be customized and modified as required]

- **Product material :**PEEk, stainless steel
- **Product dimensions:** Inner φ20mm, outer φ80mm
- **Working characteristics:** Positive pressure 0.1Mpa
- **Bottle height :**180mm
- **Usage conditions:** Use under normal temperature conditions

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03

Liquid battery mold

- **Battery production**
It is used to manufacture key components such as electrodes and separators for liquid batteries, ensuring the accuracy of their dimensions and shapes.

- **Material research and development**
In the development of new battery materials, molds are used to test the performance of different materials and help optimize battery design.

- **Quality Control**
Battery components produced through molds have a high degree of consistency, ensuring stable battery performance and enhancing overall quality.

- **Experimental production**
It is suitable for laboratories and small-scale production, facilitating the rapid verification of new designs or processes.

YT01 - Swagelok dual-electrode

[Can be customized and modified as required]

Product material	PTFE，copper
Work pressure	10MPa
Assembly height	99mm
Conditions of use	≤200℃
Inner diameter dimension	10-20mm
Motor material	Titanium alloy, pure titanium, high-purity molybdenum

YT01 TH

YT01 CG

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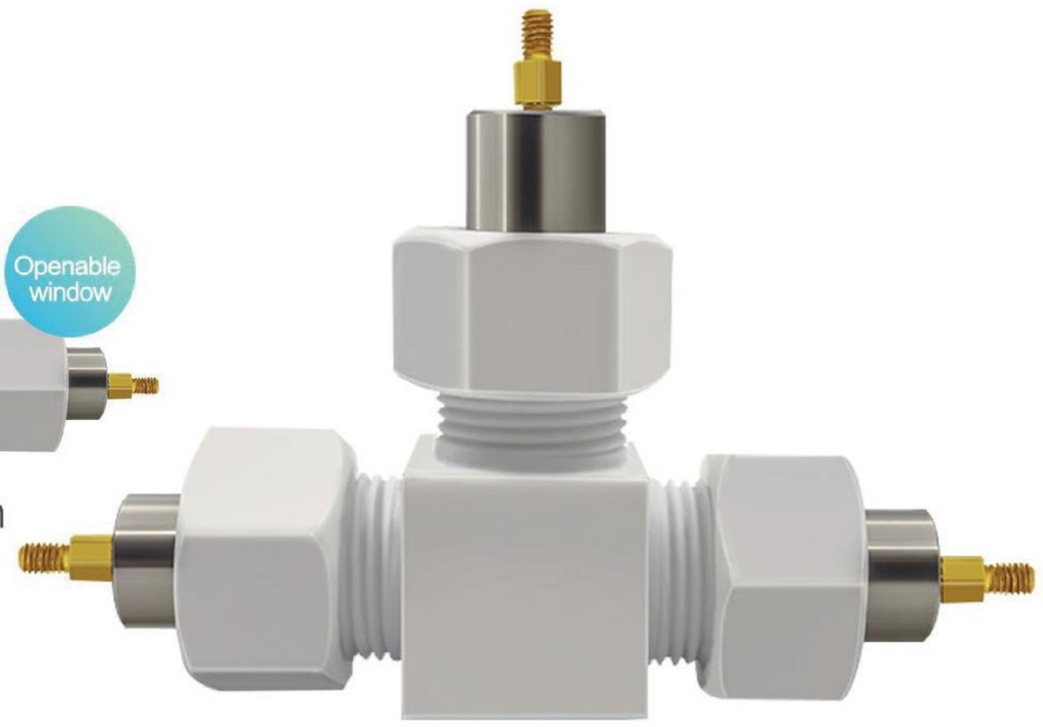
YT02 CG - Swagelok three-electrode

[Can be customized and modified as required]



- **Sleeve diameter :**PTFE, copper
- **Assembly height :**170mm
- **Inner diameter range :**10mm-20mm
- **Electrode materials:** titanium alloy, pure titanium, high-purity molybdenum
- **Working pressure :**10 MPa
- **Operating conditions :**≤200℃

YT08 CG - Swagelok battery molds

[Can be customized and modified as required]

- **Electrode diameter :**φ10-20mm, reference φ6mm
- **Product material :**PTFE, copper
- **Electrode material:** Titanium alloy, pure titanium, high-purity molybdenum
- **Operating conditions :**≤200℃
- **Working pressure :**50 MPa

YThe reference electrode design of YT02 CG is more convenient for placing the diaphragm compared to the silver chloride reference electrode style of YT08 CG

YT07 CG - Swagelok air battery

[Can be customized and modified as required]

Corrosion resistance

Good electrical conductivity

- **Pore diameter :**φ2mm
- **Working pressure :**10MPa
- **Product materials :**PTFE, copper
- **Inner diameter range :**φ10-20mm
- **Electrode material:** Titanium alloy, pure titanium, high-purity molybdenum

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Customized research

Liquid battery molds are mainly used in experiments for material testing, prototype making, performance evaluation, process validation, safety testing and customized research, helping researchers to conduct battery development and optimization efficiently and accurately。

YT04 CG

Electrolyte film battery

[Can be customized and modified as required]

YT06 CG

Liquid battery mold

[Can be customized and modified as required]]

YT05 CG

Swagelok battery mold with dual electrolyte

[Can be customized and modified as required]]

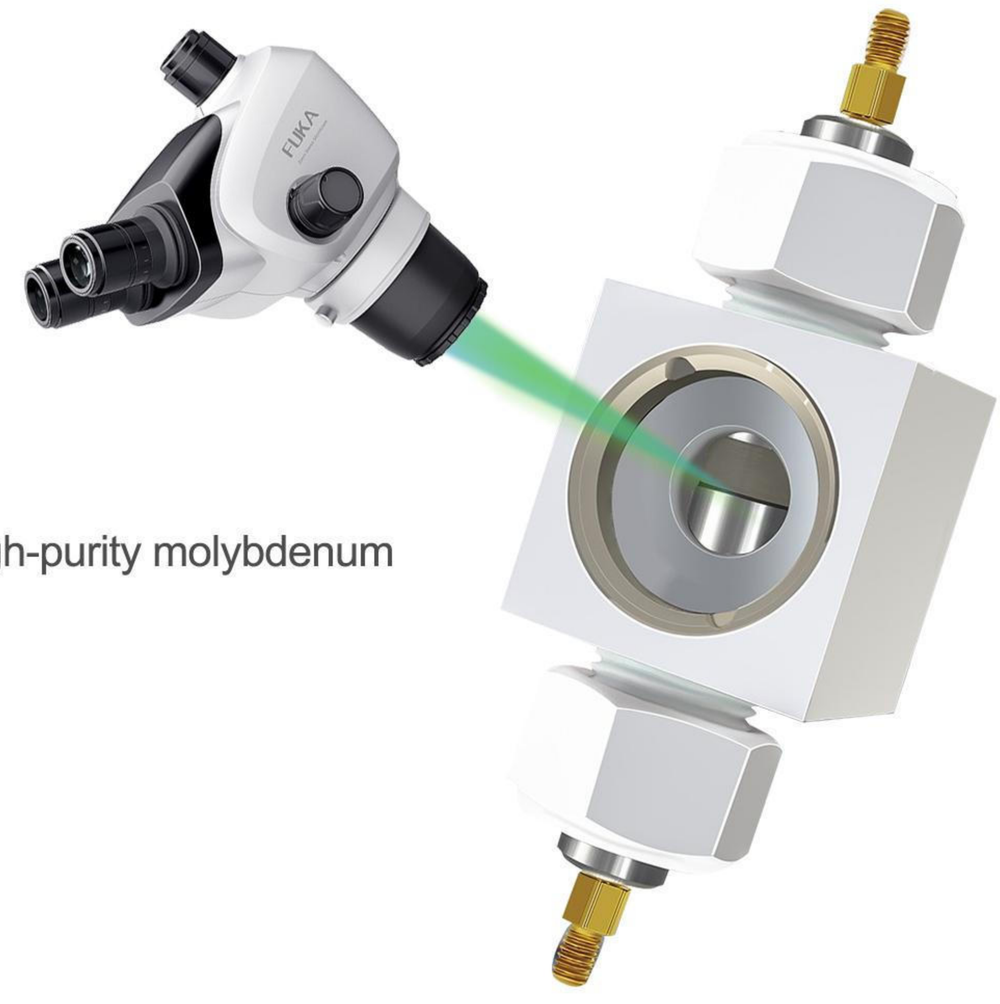
Corrosion resistance

Stable performance

YT09 CG - Dendrite in-situ observation mold

[Can be customized and modified as required]]

- **Operating conditions :**≤200℃
- **Working pressure :**10MPa
- **Product materials :**PTFE, copper
- **Inner diameter range :**φ10-20mm
- **Electrode material:** Titanium alloy, pure titanium, high-purity molybdenum



Corrosion resistance

High-transparency quartz window

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DJZ01 WXW

04

Solid electrolyte powder series

LPSC
Sulfide solid electrolyte

LPSC sulfide solid electrolyte has high ionic conductivity. This compound may have high ionic conductivity.It is applicable to fields such as solid-state batteries. LPSCl may be used in the research and application of solid electrolyte materials. LPSCl is A solid electrolyte with high ionic conductivity can be used in applications such as solid-state batteries. Its chemical structure is stable.It helps to improve the cycle life and safety of the battery.

LIC
Halide solid electrolyte

Lithium indium chloride halide solid electrolyte (hereinafter referred to as LIC) is suitable for the cathode electrolyte of halide all-solid-state batteries and can be prepared Electrolyte membranes, etc., effectively improve the electrochemical performance of materials. Solid batteries

Specification

Product	Li6PS5Cl solid electrolyte	Li3InCl6 solid electrolyte	Nano LIC solid electrolyte	LLZTO solid electrolyte	NZSP solid electrolyte	LATPsolidelectrolyte
ID	WXW001	WXW003-1	WXW003-2	SZBSE002-1.1	SZBSE002-2	SZBSE002-3.2
Diameter	2-50um	~1-3 m	500-1000 nm	<300 nm	<1um	300nm
size distribution	D50 10um	/	/	/	/	/
Ionic conductivity	>4.5 mS/cm (Cold pressing300 MPa@30℃)	>1.0 mS/cm (Cold pressing300 MPa@27℃)	~1.5 mS/cm (27℃)	0.8-1.0 mS/cm (Ceramic plate @27°C)	>1.0 mS/cm (Ceramic sheet @27°C)	>0.6mS/cm
Phase	PDF2004#34-06	Monoclinic phase	Monoclinic phase	Cubic phase	Monoclinic phase	/
Appearance	Grayish white powder, no caking, no foreign matter	White powder, no caking, no foreign matter	White powder	White powder, no caking, no foreign matter	White powder, no caking, no foreign matter	Whitepowder,nocaking, noforeignmatter

Storage Conditions

Store in glove box after opening bottle。

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DJZ02 ZWY

Customizable solid electrolyte

The particle size can be controlled. Different types or doping can be customized

XRD,SEM and particle size statistics can be provided. Additionally, particle size can be controlled as required.

Customized according to requirements, different types or doped (anionic, cationic) solid electrolytes can be customized. Larger quantities (over 5 kilograms) are preferred.Different types or doped (anionic, cationic) solid electrolytes can be customized.

Types	Name	Specification	Re-recording
Lithium ion Solid electrolyte	LPSCl	1.5 umAs follows	10g
	Li_3PS_4	2-20um	10g
	$Li_{10}GeP_2S_{12}$	1-10um	10g
	LiSiPSCl	2-20um	10g
	Li_3InCl_6	3um	10g
	Li_2ZrCl_6	1-10um	10g
	$Li_2In1/_3Sc_1/_3Cl_4$	1-10um	10g
	$Li_7P_3S_{11}$	1-10um,Stable to lithium	10g
Sodium ion Solid electrolyte	Na3PS4	700 nm	10g
	NPSCl	1-5um	10g
Sodium ion Solid electrolyte	Na2Sn/Na15Sn4	/	10g
	Li22Sn5	/	10g

Upgrade of manufacturing process

1 Mixing materials

2 Broken

3 Sieve

4 Sintering

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DJZ03 HB

■ Li_2S ■ 10g

■ LPSCI ■ 10g

■ LLZTO nanoscale ■ 100g

■ LLZTO ■ 100g

■ LIC316 ■ 10g

■ LATP ■ 100g

■ LAGP ■ 10g

■ NZSPO ■ 100g

Quality assurance

Technical support

Bulk purchase discount

If you need any other materials,
please feel free to consult and learn

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YL01 CG - Flow battery mold

05

Liquid flow test mold

Safety - Controllable

Placing silicone gaskets between the electrode columns of the flow battery mold can ensure that both sides are airtight, do not interfere with each other, and flow independently. In the same way, the gasket flows in a circular pattern on both sides

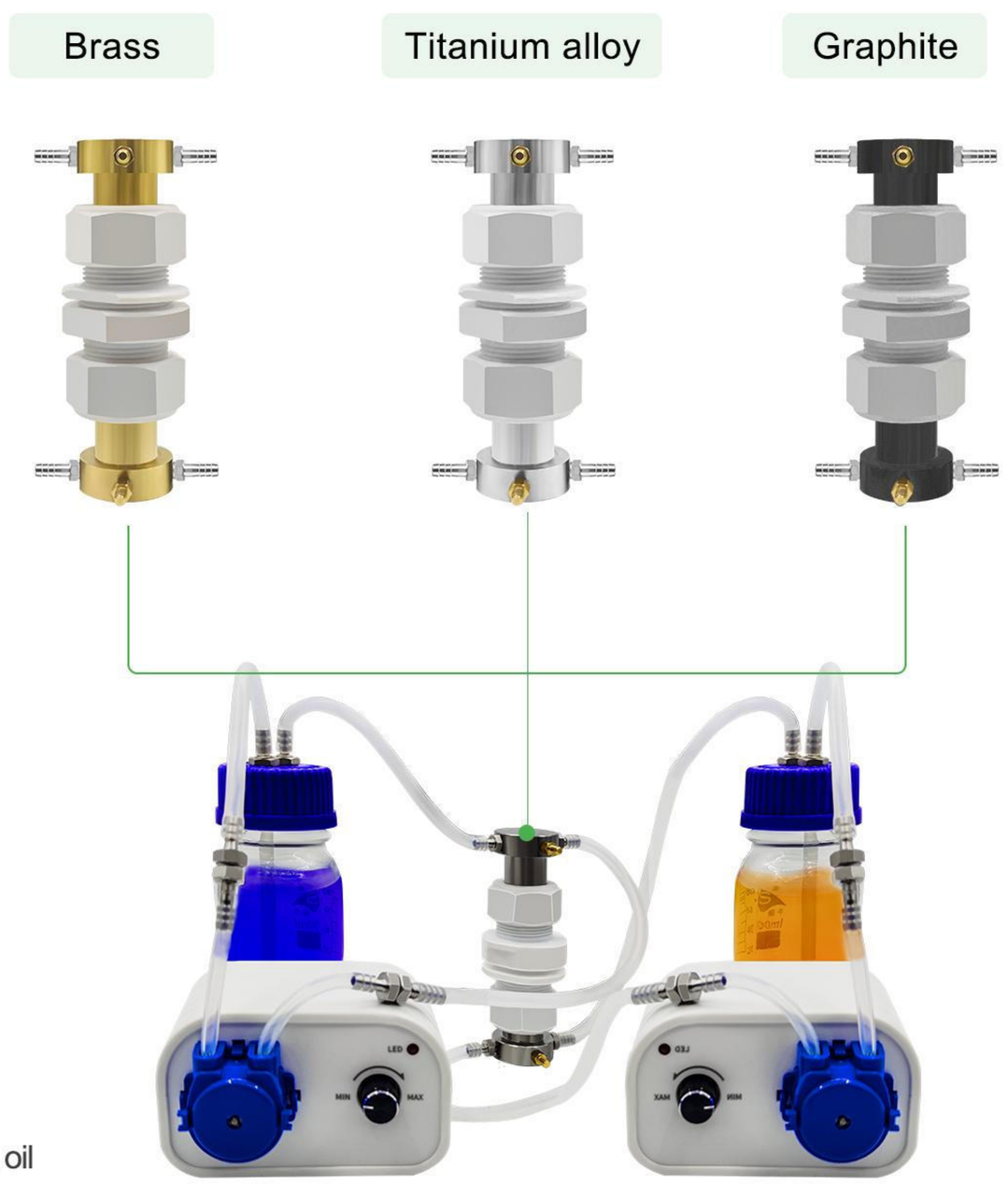
Corrosion resistance

Sealing property

Acid and alkali resistant

Specification

Product Name	Flow battery mold set
Mold materialc	Titanium alloy, PTFE, copper
Mold set	2 airtight bottles / 2 peristaltic pumps / 1 flow battery mold
Product accessories	Silicone hose
Peristaltic pump flow rate	4~14ml/min
Peristaltic pump voltage	12V
Conditions of use	Use under normal temperature conditions
Product performance	Corrosion-resistant and acid and alkali resistant



Recyclable electrolytic cell

Due to the characteristics of fluororubber, such as high-temperature resistance, oil resistance, high vacuum resistance, acid and alkali resistance, and resistance to various

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YL02 CG -Square flow battery mold

[Can be customized and modified as required]

- **Mold material:** brass, graphite, stainless steel
- **Mold set:** 2 airtight bottles, 2 peristaltic pumps, 1 liquid flow mold
- **Product accessories:** Silicone hose
- **Product performance:** Acid and alkali resistant, corrosion resistant
- **Working voltage:** The peristaltic pump voltage is 12V

YL03 CG - Flow battery mold

[Can be customized and modified as required]

- **Assembly height :**80mm
- **Product size :**80x60mm
- **Product materials:** stainless steel, red copper, PVC, PP
- **Working pressure :**≤500 MPa

YL04 CG - In-situ observation mold for heated liquid flow

[Can be customized and modified as required]

- **Sleeve width :**120mm
- **Assembly height :**100mm (excluding wiring)
- **Inner diameter range :**≤80℃
- **Product material:** Stainless steel, PEEK

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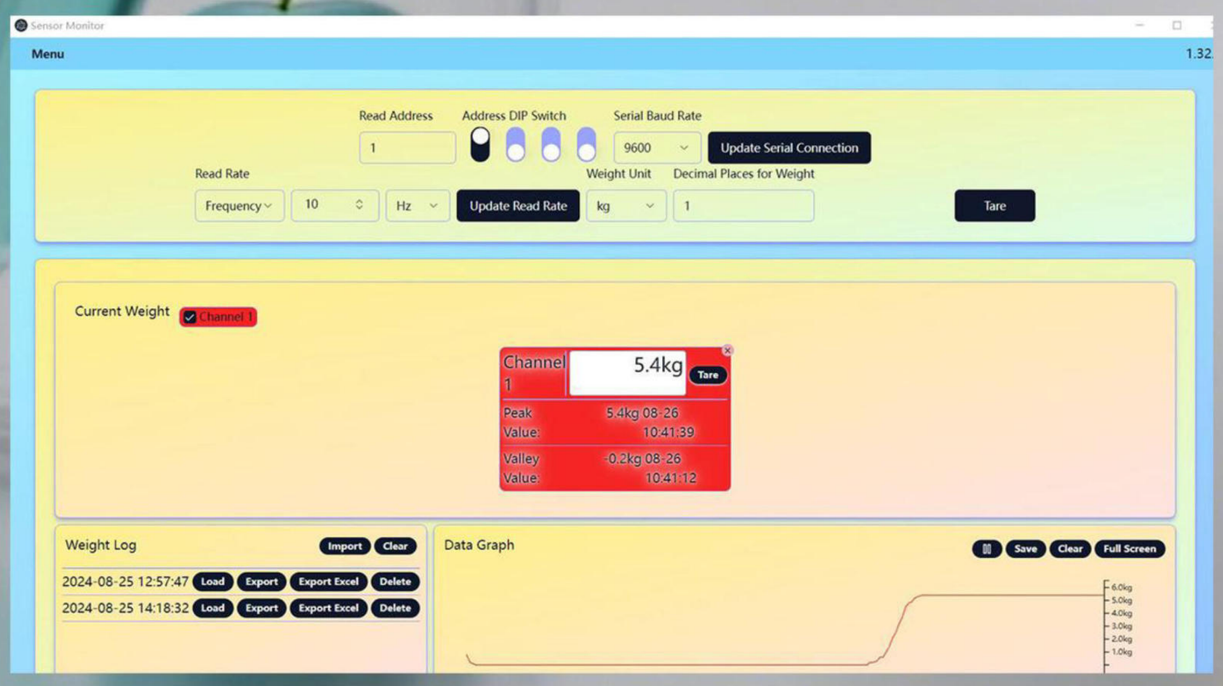
YLCS - Pressure sensing system

06

Experimental instruments



Software version - Software interface

English
Español
Deutsch
Français
Italiano
日本語
한국어
简体中文
繁體中文

- The pressure testing system has been fully upgraded, with a more refined appearance.
- More stable kernel;
- The software version is equipped with Excel recording function
- It can operate continuously on power for a week.
- Real-time and stable data recording without loss, and independent control of each channel.

Product Information

Product	Model	Display	Record	Sensor	Computer connection cable
	YLCS01-SX	Instrument	/	1	/
	YLCS01-RX	Software	Execl	1	1 set
	YLCS04-SX	Instrument	/	4	/
	YLCS04-RX	Software	Execl	4	1 set
	YLCS08-RX	Software	Execl	8	1 set

Specification

The measurement range is fixed

The rated load of the sensor can be customized. For example: sensor with a diameter of 25 and a range of 500kg; sensor with a diameter of 25 and a range of 1 ton

High-precision sensor

This sensor adopts an elastic body structure and features a low profile, upper and lower flanges, high precision, good strength, easy installation, and excellent output symmetry.

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WD01 - Temperature testing system

High-temperature resistance

It can withstand 300°C

Corrosion resistance

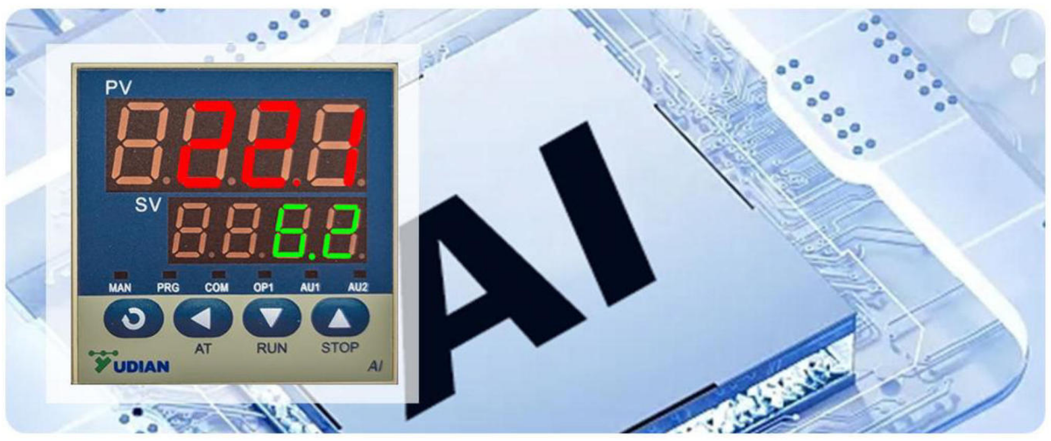
It has very high chemical stability

Peel resistance

It can be used under harsh conditions

AI intelligent algorithm

The precision operation reaches 0.1℃. The intelligent temperature measuring instrument adopts an AI artificial intelligence regulation algorithm with self-tuning (AT) function, with an internal operation accuracy of 0.1℃, ensuring accurate control and no overshoot



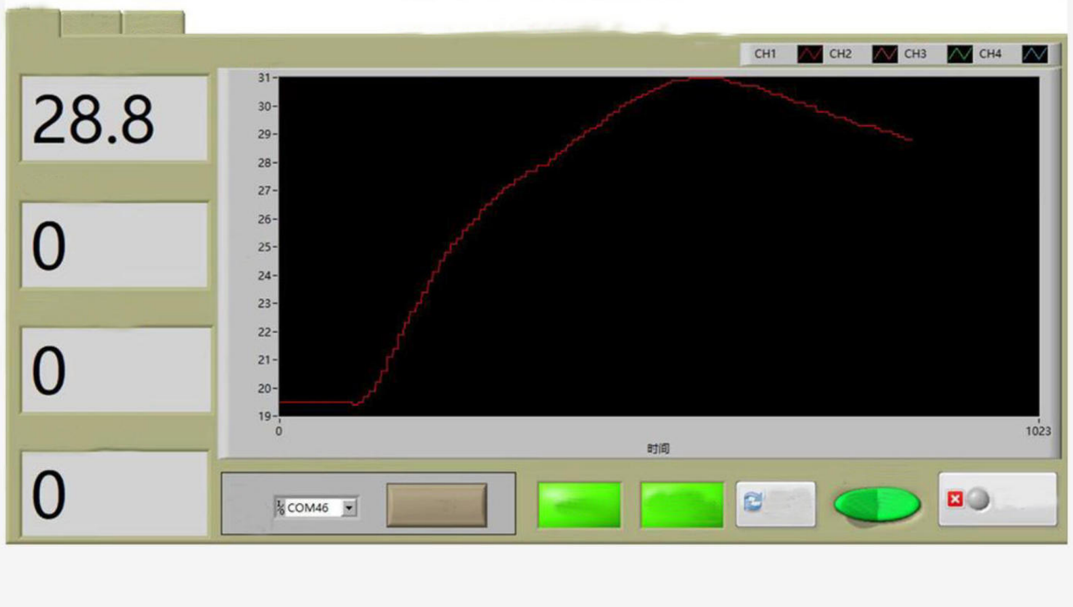
Product Information

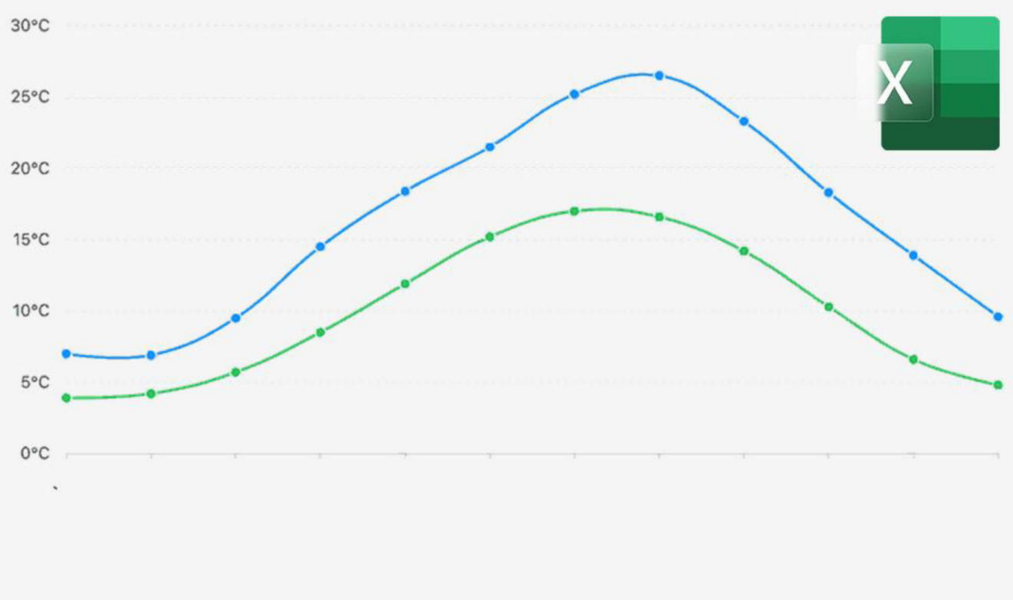
With high-quality materials, we construct large-scale projects. Every detail is strictly controlled to ensure your comfort every time you use them

- **Mold material:** Titanium alloy, peek
- **Product set:** 1 temperature measurement instrument, 1 temperature measurement battery mold
- **Product accessories:** 3 connection cables, 1 software installation package
- **Setting range:** The instrument setting range is 0.001-1000 seconds
- **Maximum temperature measurement :**300℃

Networked record

The data recording range is from 0.001 to 1000. The instrument detection data can be recorded by software, and the data file can be directly opened by double-clicking in an EXCEL table





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CL01 - Four-channel magnetic stirrer

- **Control mode:** Instrument
- **Mixers :**4 sets
- **Product rotational speed :**20-400rpm
- **Number of programming segments :**3
- **Cycle count :**999

Simple operation

Operate independently

Convenient operation

The one-click start operation is simple. Four stepper motors are controlled by PLC+ touch screen, with the rotational speed precisely adjusted between 20 and 400 revolutions per minute

Operate independently

The agitator can operate independently on a single channel. The standard size of the agitator is 100MM in diameter and can be modified as required. The four-channel agitator can be set to have only one channel in operation

Introduction to Programming

It can achieve up to three programming Settings for the speed of the stirrer within each period of time and operate independently

Three-segment programming

before10min	10-20min	20-40min
Rotational speed20	Rotational speed40	Rotational speed100

Maximum number of cycles

999

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07

Customized experimental instruments

Specialization

Tailor-made experimental equipment

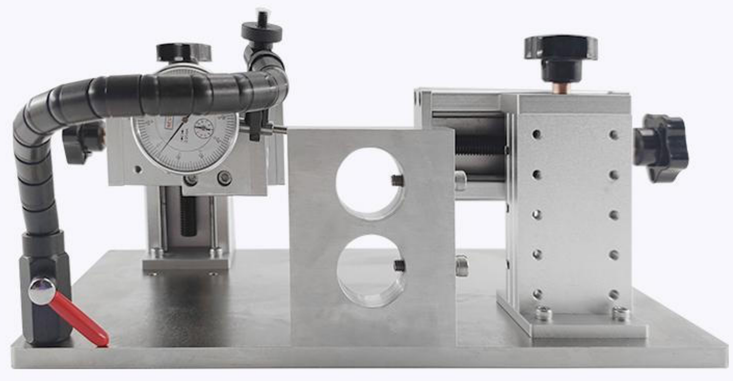
In-depth requirement analysis: Our team of engineers will stand by your side, thoroughly understanding your experimental procedures and technical challenges.Ensure that the design plan is in line with the requirements from the source.

FB01

In-situ pressure testing device

FB02

Coal block pressure testing device



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FB03

Customized electrolyte cell

FB04

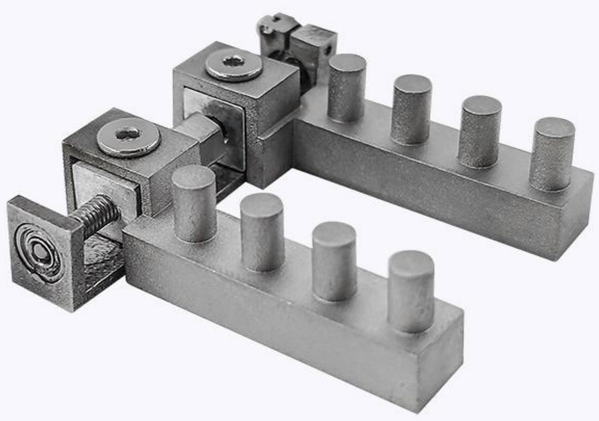
Customized liquid connection pool

FB05

Coal block pressure testing device

FB06

Micro single-axis biaxial stretching fixture

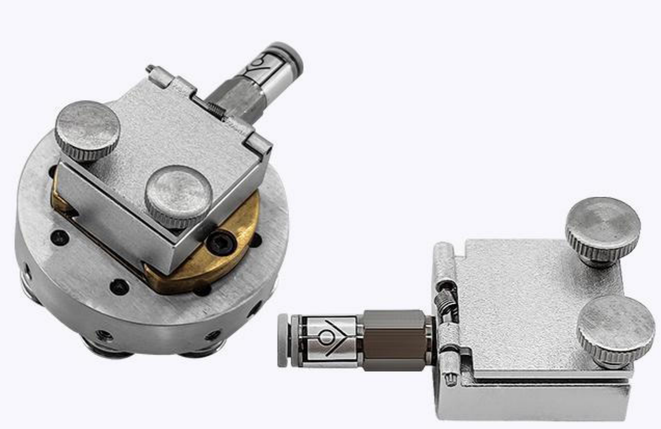


FB07

Small single-axis biaxial stretching fixture

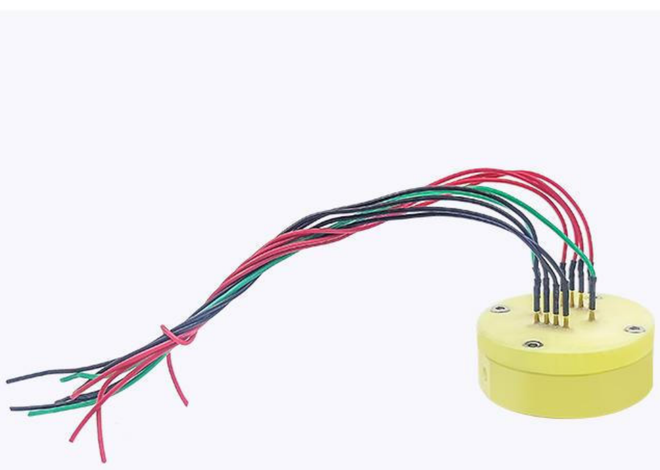
FB08

Flip-top SEM transfer chamber



FB09

Mask plate light test mold



FB10

In-situ gas reaction observation device

FB11

Temperature-controlled ventilation pressure tank