



XINGMAO
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Gongyi Xingmao

Machinery Equipment Co., Ltd.

Providing Reliable Environmental Recycling
Solutions for Global Clients



Welcome to
XINGMAO

Company Introduction

Gongyi Xingmao Machinery Equipment Co., Ltd. is a high-tech enterprise focused on manufacturing environmental protection equipment, dedicated to providing efficient recycling solutions to global customers. Our product range includes recycling equipment for lithium batteries, solar panels, and PCB circuit boards, striving for innovation and breakthroughs in the fields of environmental protection and resource reuse.

In the area of lithium battery recycling, we offer equipment for crushing, discharging, module disassembly, and secondary utilization of discarded batteries, ensuring efficient utilization of recovered materials while achieving zero emissions of waste gas and wastewater. Similarly, our solar panel recycling equipment uses advanced physical separation technology and environmentally friendly processes to efficiently recover aluminum, glass, metals, and other materials.



Qualification honor



Xingmao Machinery consistently upholds the philosophy of innovation and high-quality manufacturing, striving to become a global leader in environmental protection equipment and contributing to the development of the environmental protection industry.

Lithium Battery Discharge Equipment

Needle Discharge Technology: This equipment uses a conveyor to precisely feed charged lithium-ion batteries (such as cylindrical batteries and pouch batteries) into the needle discharge device. A needle roller is used to discharge the battery with a depth of 2-3mm, rapidly releasing the internal energy of the battery. This process ensures that no steel needle residues are left, guaranteeing high purity for subsequent treatment. After the needling process, the batteries fall into an energy absorption tank, where a water cooling system effectively absorbs heat, preventing thermal runaway and ensuring a safe process.

Technical Advantages

- High Efficiency:** Continuous operation reduces discharge time to less than 1 hour, improving production efficiency.
- High Purity:** Precise control of the process ensures high purity of the recovered materials, increasing the value of reuse.
- Strict Environmental Protection:** The entire process is environmentally controlled, in compliance with national environmental standards.
- Reduced Manual Operation:** Avoids manual operations such as saltwater immersion, reducing oxidation risks and enhancing safety.

Application Range

Suitable for processing various models of cylindrical and pouch lithium batteries.
Processing Capacity: 1 ton/hour.
Post-discharge Voltage: Less than 1V.



Large Battery Load Discharge System

This system, developed by Xingmao Machinery, is designed specifically for the pre-processing of lithium batteries, utilizing resistive load discharge technology for safe and efficient operation. The fully automated system can reduce the battery voltage from 3-4V to below 1V within two hours, significantly lowering the energy levels to ensure the safe handling and transportation of batteries. The entire process is physical discharge, with no emissions of exhaust gas or wastewater, meeting environmental protection standards.

Crushing and Sorting Equipment

Equipment Overview: Xingmao Machinery's lithium battery recycling equipment uses advanced crushing and sorting processes. Through physical methods such as particle size, material density, and air separation technologies, it can safely and effectively separate battery powder, metals (such as copper, aluminum, iron), and other recyclable materials from the batteries. This ensures maximum resource utilization and meets environmental standards.



Core Functions



Efficient Crushing and Separation: The equipment features a multi-stage crushing system that thoroughly pulverizes individual batteries.

Separator Equipment: Uses specialized equipment like magnetic separation and air separation to pre-recycle separator plastics, reducing the impact of organics on subsequent sorting processes. Ensures a resource recovery rate of over 95%.

Intelligent Control System: Equipped with automated control and monitoring systems that can monitor the equipment's operating status in real time, ensuring operational stability and safety.



PCB Circuit board recycling equipment

The PCB circuit board recycling equipment efficiently separates the metal and non-metal parts of the circuit board, extracting valuable materials such as precious metals and copper, while reducing electronic waste pollution. It is suitable for electronic manufacturing enterprises, recycling companies, and the environmental protection industry, helping to improve resource recovery rates and reduce environmental burdens.

Product Advantages

Eco-friendly and Energy-saving: The physical separation process is pollution-free and environmentally friendly.

High Recovery Rate: Recyclable metals, plastics, and other renewable resources enhance economic benefits.

Easy Operation: High degree of automation and simple maintenance make it suitable for large-scale, continuous production.

Durable Equipment: High-quality materials and advanced technology ensure long-term stable operation of the equipment.

Working Principle: The discarded PCB circuit boards are first preliminarily crushed by the crushing system, and then enter the separation system. The metal and non-metal materials are separated through multi-stage screening and separation technologies. The metal parts are extracted through air separation and electrostatic separation, while the plastic and other non-metal parts can be recycled. The entire process is efficient, environmentally friendly, and pollution-free.

Technical Parameters:

Processing Capacity: 500-2000 kg/hour (depending on the model)

Total Power: 40-150KW

Separation Accuracy: 98%

Dimensions: Customizable based on equipment configuration

Weight: 3-10 tons



Cooperative partner



Customer Cases





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