



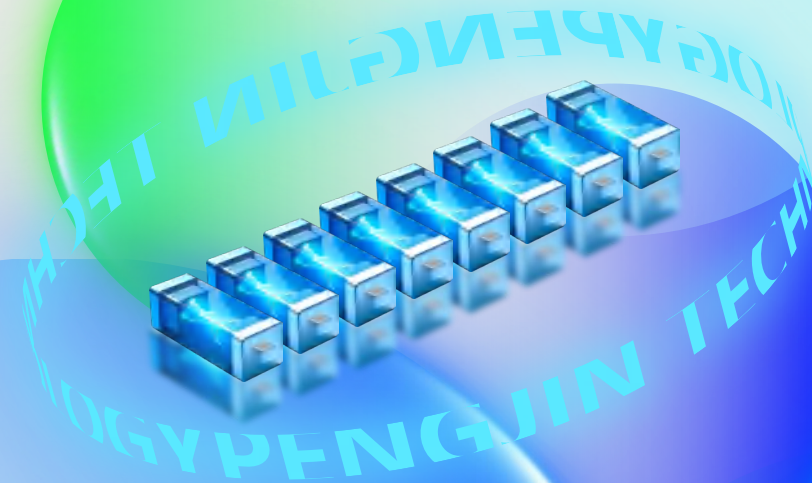
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Dongguan Pengjin Machinery Technology Co., Ltd

No.16, Huifengdong 2nd Road, Zhongkai High-tech Zone,
Huicheng, Huizhou, Guangdong, China



COMPANY INTRODUCTION





Smart Machines&Solutions for Smarter Batteries

Company Profile

COMPANY NAME

Dongguan Pengjin Machinery Technology Co.,Ltd

ESTABLISHING TIME

2011.09.01

ASSET

55000+M² AREA COVERED

1000+ PROJECT CASE

STRENGTH

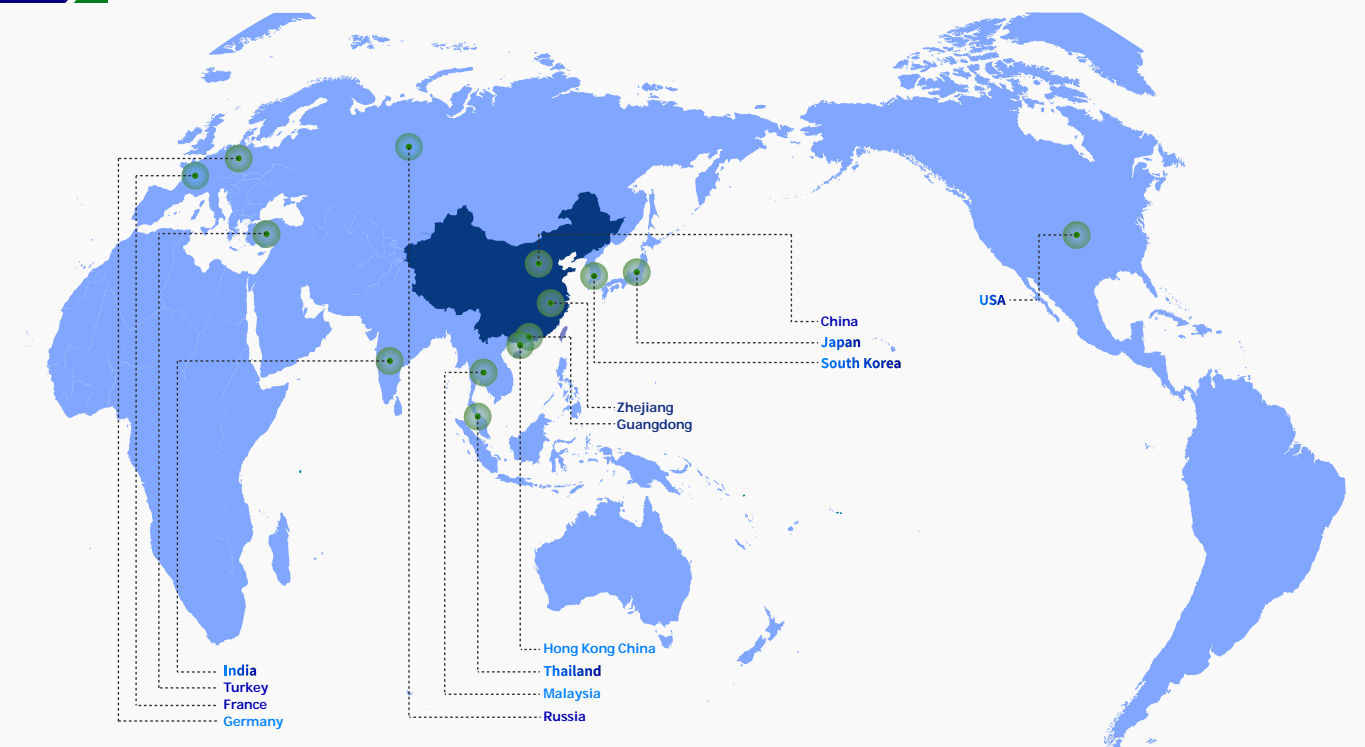
110+ PATENTS

1.2+ BILLION ANNUAL REVENUES



New Energy Circular
Economy Specialized Equipment Solution Provider

Global business



2

Production Base



8

Global Service Network

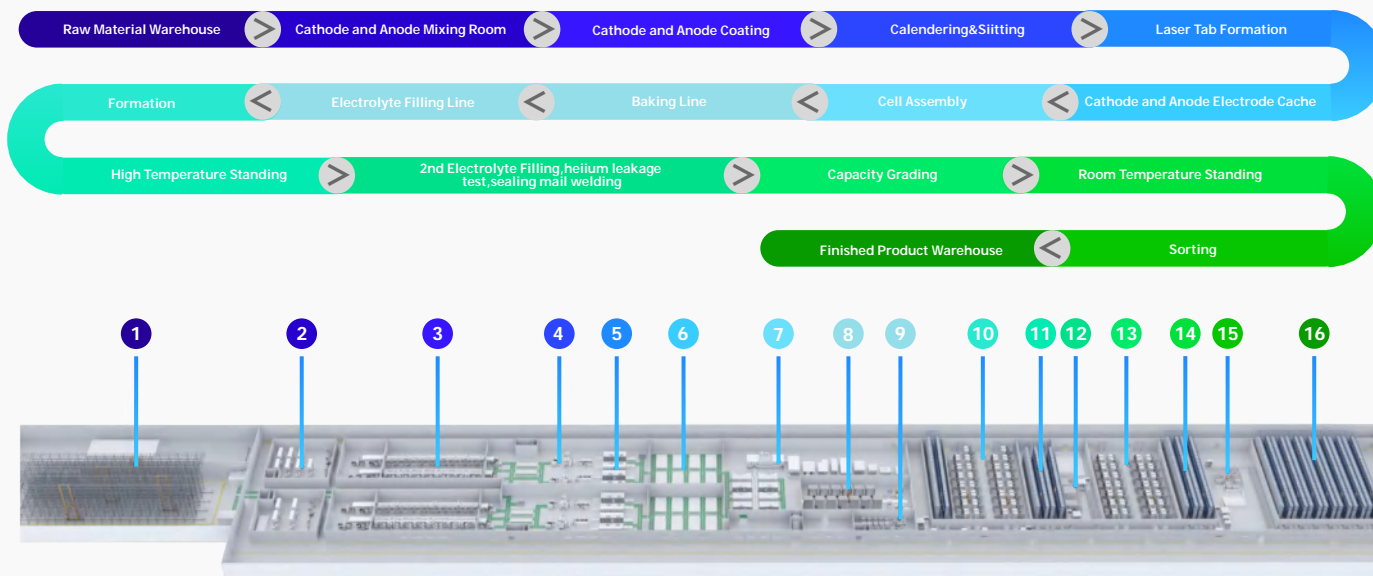


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Markets Served

SOLUTIONS FOR LI-ION BATTERY INTELLIGENT PRODUCTION

Battery Production Process



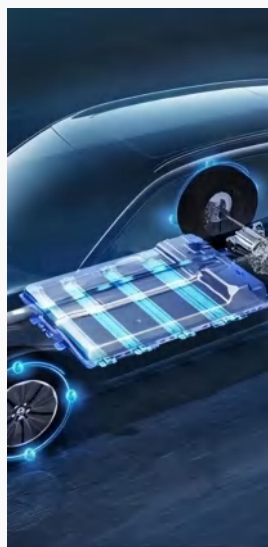
Business Scope: R&D/Pilot Line, Mass Production Line of Prismatic cell, Cylindrical cell, Pouch cell, Mini cell, Solid-state cell.

Service Mode: Technical Support Service (TSS), Technology Transfer and Licensing, Collaborative Research and Development Initiatives.

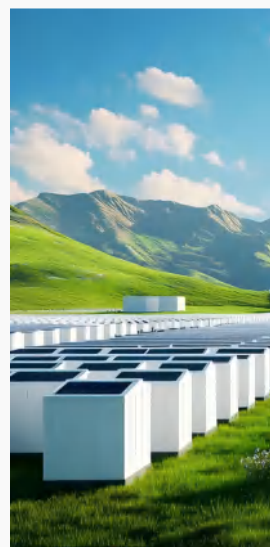
Application Scenarios



Lithium-ion battery cell & pack production



Energy vehicle (EV) battery manufacturing



Energy storage system (ESS) production

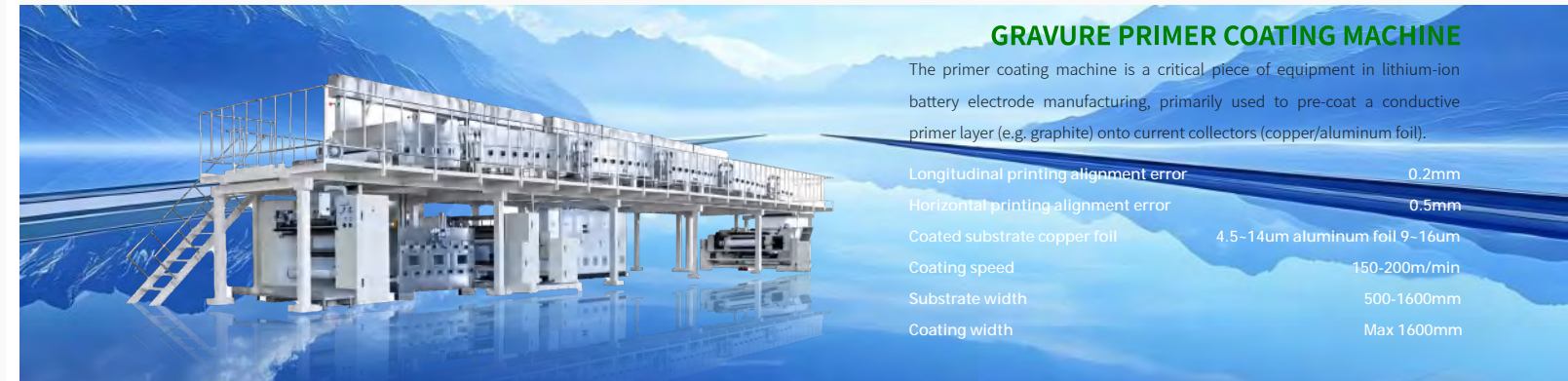


Consumer electronics battery assembly

We are a leading provider of turnkey solutions for lithium battery production, offering comprehensive, end-to-end equipment and process integration. With years of expertise and a dedicated team of engineers, we ensure that our clients receive seamless, efficient, and cost-effective manufacturing solutions. Capable of standard process formulation and promotion, providing a complete pull-line equipment list, layout, tour route, facility management, and capacity planning; Able to develop new products based on customer requirements, including formulation R&D and process standardization, customize planning based on the customer's site.

PRODUCT INTRODUCTION

Coating Machine



GRAVURE PRIMER COATING MACHINE

The primer coating machine is a critical piece of equipment in lithium-ion battery electrode manufacturing, primarily used to pre-coat a conductive primer layer (e.g. graphite) onto current collectors (copper/aluminum foil).

Longitudinal printing alignment error	0.2mm
Horizontal printing alignment error	0.5mm
Coated substrate copper foil	4.5-14um aluminum foil 9-16um
Coating speed	150-200m/min
Substrate width	500-1600mm
Coating width	Max 1600mm

DOUBLE-SIDED HIGH SPEED EXTRUSION COATING AND NMP RECOVERY INTEGRATED MACHINE

Roll surface parameters	Max.1000-1600
Coating speed running speed	100-120m/min
Density accuracy on one side	±1.2%
Density accuracy on both sides	±1.0%
Unwind diameter	Max.1000mm
Winding diameter	Max.1200mm
Cpk	>1.67



VERTICAL HIGH-SPEED SEPARATOR COATING MACHINE



- Suitable for coating water-based slurry of membranes: materials such as alumina, boehmite, PVDF, etc
- Intelligent temperature control, fully automatic air-cap type oven drying system, closed-loop mode and constant temperature control
- Dual station non-stop automatic winding and unwinding
- Coating method: Micro gravure reverse coating method
 - Vertical and horizontal automatic alignment
 - Closed type material box blade structure
 - Can be coated on both sides A+B

Product Photo

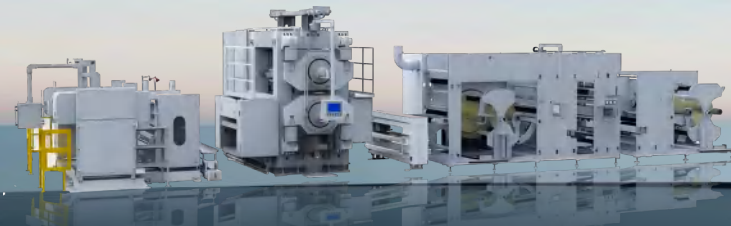


PRODUCT INTRODUCTION

Calendering And Slitting Intergrated Machine



- Roll specifications (mm): 950-1200-1300-1500
- Roller operation speed: 120m/min
- Roll material: 9Cr3Mo
- Roller surface hardness: \geq HRC66
- Round fluctuation \leq 1.0 μ m, Straightness \leq 2.0 μ m
- Synchronization accuracy \leq 0.3%
- Roll bending device 8 roll bending cylinders, roll bending force 100 t, control accuracy \pm 0.5 T
- Tensile tension 1300 N, closed loop control, accuracy \pm 5 N



Special-Shaped Extrusion Coating Machine



- New coating technology with high precision, reliability and stability, achieving continous coating, intermittent coating, L-shaped coating, multi-tab coating, etc.
- Customizable special material gasket.
- Double-chamber and double-valve control mode.
- Imported servomotor.
- Saving 20% raw materials - L-shaped coating.
- Saving manufacturing cost - Multi-tab coating with no laser cleaning and taping.



Product Photo



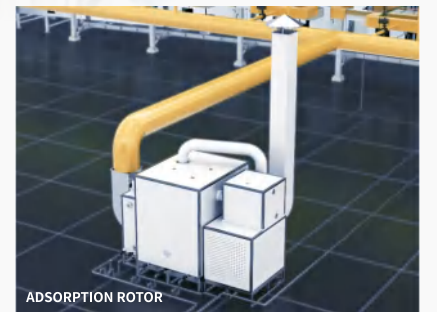
PRODUCT INTRODUCTION

NMP Recycling System

Recovery rate \geq 99%

Heat recovery rate \geq 85%

VOCs emission \leq 1 mg/Nm³



NMP Distillation System

NMP purrity \geq 99.9%

Water content \leq 200 ppm

Free amine \leq 30 ppm

Metal ion \leq 10 ppb

NMP recovery rate \geq 98%

Product Photo

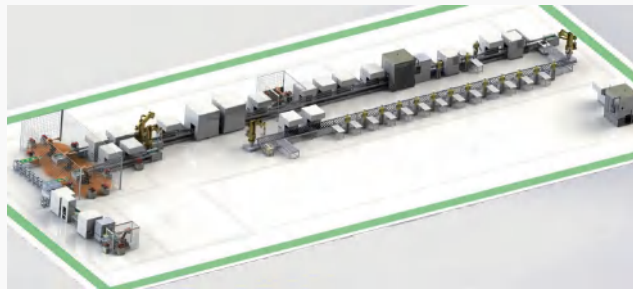


PRODUCT INTRODUCTION



LITHIUM BATTERY MODULE PACK AUTOMATIC LINE

Product Features

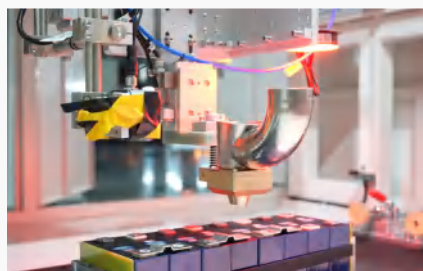


The Battery Pack PACK Automation Line is a state-of-the-art production system designed for efficient and precise assembly of battery modules and packs. It integrates advanced robotics, automated conveyors, and precision welding systems to ensure high-quality output. Key equipment includes automated cell sorting, module assembly, welding, and testing stations, all controlled by a centralized MES system.

This line is widely applicable in the production of battery packs for electric vehicles (EVs), energy storage systems (ESS), and consumer electronics (applicable for different battery models, including prismatic, cylindrical and pouch). It enhances production efficiency, reduces labor costs, and ensures consistent product quality, making it ideal for high-volume manufacturing in the battery industry.

Pengjin Technology's battery module PACK line integrates advanced laser welding technology, informatization and intelligent management systems, and smart sensing detection technology, providing an efficient, precise, and reliable solution for lithium battery manufacturing.

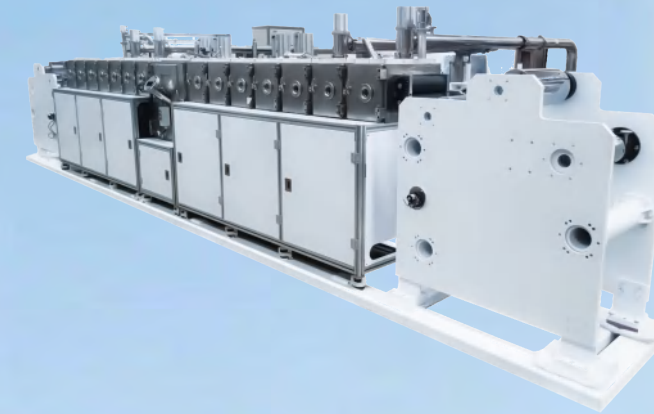
Product Photo



INNOVATIVE TECHNOLOGY

Dry Electrode Film Formation

This solvent-free process dry-mixes active materials, binders (e.g., PTFE), and conductive agents, forming self-supporting films via fibrillation or electrostatic spraying. Key advantages: 20% energy savings, 18% cost reduction, unlimited thickness, and superior electrolyte interface compatibility—ideal for solid-state batteries.



Isostatic Press Machine

Classified by temperature: Cold Isostatic Pressing (CIP) uses liquid media (100–600MPa) for powder forming at room temp; Warm Isostatic Pressing (WIP) operates at 80–450°C (~300MPa) for heat-sensitive materials; Hot Isostatic Pressing (HIP) combines high temp (1000–2200°C) and pressure (100–200MPa) using inert gases to densify powders, bond components, or eliminate defects in a single step.



Laser Cleaning Of Roller Surface

This technology utilizes a high-power-density, narrow-pulse laser beam to irradiate the target surface. Through combined mechanisms of rapid photo-vibration, thermal expansion, decomposition, vaporization, and plasma ablation, contaminants are effectively removed from the substrate, achieving precision surface cleaning.

Double-Sided Simultaneous Coating Equipment

This advanced extrusion coating system simultaneously applies electrode slurry to both sides of current collectors via vertically staggered A/B coating units on a single frame, followed by horizontal air-float drying - boosting lithium-ion battery production efficiency by 60% while ensuring $\pm 0.5\mu\text{m}$ coating uniformity.

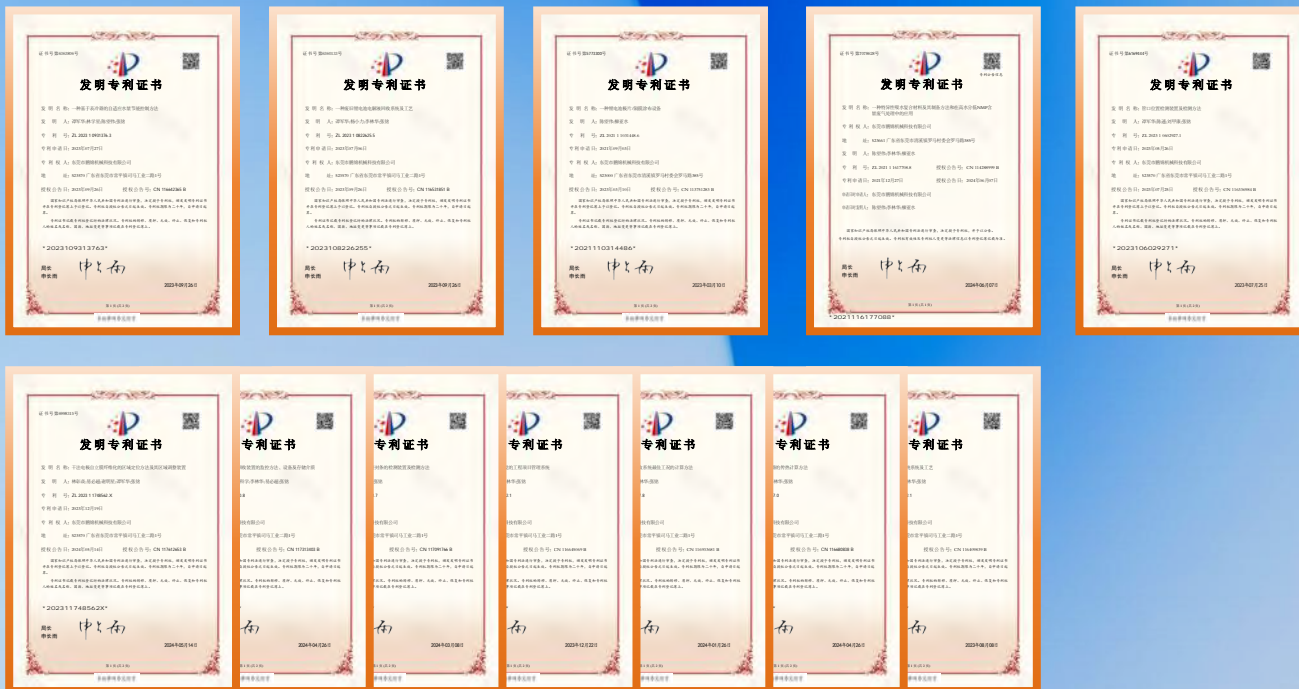


HONOR AND QUALIFICATION

Certificate of honor



Letters patent



PARTNER

