



NEW ENERGY BATTERY INDUSTRY PRODUCT BROCHURES

—
PRISMATIC BATTERY INTELLIGENT
MANUFACTURING PRODUCTS

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Visit Our Global Website

INTELLIGENT MANUFACTURING IS HERE



COMPANY OVERVIEW

YIFI LASER, established in Wuhan' s China Optics Valley, is a government-certified high-tech enterprise specializing in the R&D, production, and sales of precision laser processing intelligent equipment.. It is recognized as a national "Little Giant" enterprise and is publicly listed on the STAR Market (SH 688646).

Focused on laser processing intelligent equipment solutions, YIFI LASER has pioneered the integration of laser technology with intelligent manufacturing, building a comprehensive technology and product system. Its core offerings include precision laser systems, cylindrical tableless battery assembly lines, prismatic battery assembly lines, flexible module/PACK lines, and smart logistics solutions. These technologies have been recognized among the "National Manufacturing Single Champion Products" and the "Leading Technology" list by Science and Technology China, and are widely applied in sectors such as new energy batteries, semiconductors, home appliances, prefabricated buildings, and automotive components.

YIFI LASER has built an integrated innovation system that combines "R&D Innovation - Engineering Transformation - Analytical Testing." This system accelerates technological breakthroughs and the industrial application of emerging technologies, driving innovation and intelligent upgrades in advanced industries like new energy batteries, and steadily moving toward its vision of becoming a world-class provider of intelligent manufacturing equipment.



National Manufacturing Industry Single Champion Product

National Key Supported Little-Giant Enterprise of Professionalization, Refinement, Specialization and Innovation

Listed in the Pioneer Technology List of "Sci-Tech Innovation China" by the China Association for Science and Technology

National Industrial Design Center

National Intellectual Property Advantage Enterprise



Headquarters Base
Optics valley·Wuhan



YIFI Intelligence
Ezhou·Hubei



Jiangsu YIFI
Zhenjiang·Jiangsu



Dongguan YIFI
Dongguan·Guangdong



New Cohesion
Wuxi·Jiangsu



Ecotion
Zhuhai·Guangdong

**Laser Innovation&Equipment
Intelligentization**

MISSION

**Aspire to Become a World-Class Provider of Intelligent
Laser Equipment and Innovative Process Solutions**

VISION

Pragmatism, Progress, Innovation, Collaboration

VALUE

**Customer-centric,Quality-assured
Innovation-driven, Service-packed**

PHILOSOPHY

AWARDS & QUALIFICATIONS



Major Honors

- National Key Supported Little-Giant Enterprise of Professionalization, Refinement, Specialization and Innovation
- National High-Tech Enterprise
- National Manufacturing Industry Single Champion Product
- National Intellectual Property Advantage Enterprise
- Listed in the Pioneer Technology List of "Sci-Tech Innovation China" by the China Association for Science and Technology
- Gold Prize of Hubei Province High-Value Patent Competition
- Hubei Province Science and Technology Progress Award
- Hubei Province Technological Innovation Demonstration Enterprise
- Hubei Province Service-Oriented Manufacturing Demonstration Enterprise
- Hubei Province Intellectual Property Application Demonstration Unit
- Hubei Province Demonstration Enterprise for Hidden Champion in the Pillar Industry Segments
- Top 100 High-Tech Enterprises in Hubei Province

Major Industry Awards

- Top 50 in China's Lithium Battery Industry
- Golden Globe Award (Innovation Technology) by GGII (Gaogong Industry Institute)
- Golden Globe Award (Product) by GGII (Gaogong Industry Institute)
- Golden Globe Award (Brand) by GGII (Gaogong Industry Institute)
- Lithium Vision Award · Technological Innovation Enterprise
- Lithium Vision Award · Influential Enterprise
- Lithium Vision Award · Product Reliability Award
- China Laser Golden Glitter Award
- China Laser Star Award
- Influential Enterprise in China's Laser Industry
- Qidian Sodium-Ion Battery Golden Tripod Award
- Sodium-Ion Battery Industry Chain Quality Enterprise Award by GGII (Gaogong Industry Institute)

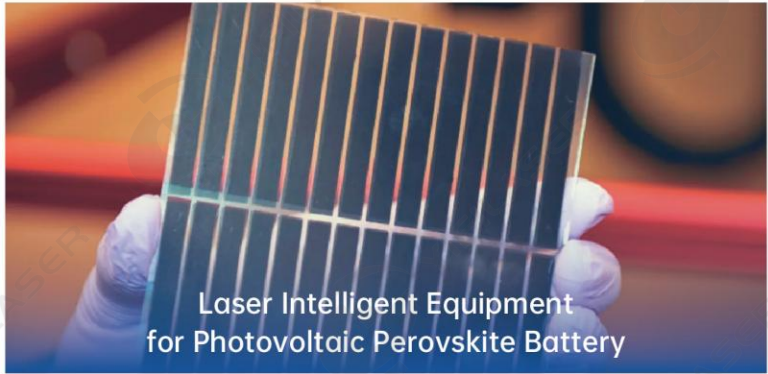
APPLICATION INDUSTRIES



Intelligent Equipment for New Energy Battery Cell Assembly



Intelligent Equipment for Battery System Assembly



Laser Intelligent Equipment for Photovoltaic Perovskite Battery



Intelligent Logistics and Warehousing System for Semiconductor Wafer Plants



Intelligent Welding Assembly Line for Smart Home Appliances



Intelligent Welding Assembly Line for Green Building Materials



Laser Intelligent Equipment for Automotive Parts Manufacturing



Intelligent Logistics and Warehousing System for Food and Pharmaceuticals

02

Our Products

Prismatic Battery Intelligent Manufacturing Products

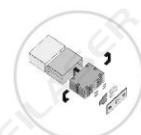
Based on our deep understanding of battery manufacturing processes and extensive engineering experience, we conduct a comprehensive analysis of intelligent manufacturing for batteries, focusing on core needs in areas like power and energy storage. This analysis covers various dimensions, including battery types, sizes, structures, processes, equipment, production guidelines, information management, and quality assurance, to find the optimal solution under integrated conditions. We provide customers with a complete intelligent manufacturing solution for prismatic battery cells, covering everything from product development, process validation, and small batch trial production to large-scale manufacturing (3ppm–30ppm), supporting the upgrade of intelligent manufacturing for prismatic battery cells.

The prismatic cell intelligent assembly lines are designed for the mass, intelligent production of various types of prismatic lithium-ion batteries—including single-pole, dual-pole, multi-pole cells, and blade batteries. They leverage over a decade of YIFI LASER's engineering expertise in laser welding for connectors, top covers, and sealing pins, and integrate advanced automation and intelligent manufacturing technologies. The lines cover a comprehensive range of assembly processes, including cold/hot pressing, X-ray inspection, tab welding, connector welding, core assembly taping, Mylar film wrapping, core insertion welding, top cover welding, sealing pin welding, helium leak detection, as well as tray loading and stacking. The system ensures high product yield and stable production quality.

ORBITSCAN SERIES · CL-PO-F8S

Prismatic Battery Assembly Line

The entire line adopts cam-driven segmentation and dynamic compensation transfer technology to achieve precise synchronization across multiple workstations. It features high flexibility and broad adaptability, fully supporting the efficient, stable, and large-scale mass production of prismatic battery cells.



2JR/4JR Butterfly Weld Structure
Cell Structure



80*350*250mm
Compatible Cell Specification (MAX)



8ppm
Single Line Capacity



≤59.5*12.5*2.6m
Overall Dimensions (L×W×H)

Tab Ultrasonic Welding

MYLAR Film Wrapping

Top Cover Welding

Primary Helium Leak Test

Post Helium Leak Test

Sealing Pin Welding

Can Insertion

Connector Laser Welding

Matching Inspection

Hot Pressing

Preheating

X-Ray Inspection

Cam Indexing Drive

High-precision Cam Indexing Drive integrated with dynamic compensation tooling system ensures synchronized processing/detection precision consistency across 8/16 stations.

Maximum Scalability

Three-level modular architecture design (line, machine, component) supports dual-dimensional upgrades in efficiency and functionality, quick-release and interchangeability features, and leaves ample room for future expansion to meet iterative requirements.

Full-Chain Intelligent Inspection

Full-Lifecycle QR Code Traceability System, Real-time collection of process parameters builds a zero-blind-zone quality control network spanning from raw materials to finished products.

2JR/4JR Compatibility

The 4JR system natively supports the production of 2JR-structured prismatic cells. The 2JR system can also be upgraded for reverse compatibility without replacing core modules.

Clean Production

Full-station Integrated FFU Cluster, constructs a Class 10,000 cleanroom micro-positive pressure environment with dynamic positive pressure gradient compensation, eliminating dust adhesion risks for battery short-circuit prevention and ensuring battery safety.

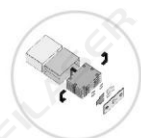
Data Visualization

Deep integration with the MES system enables real-time production data analysis and visualization, accelerating decision-making and driving continuous lean manufacturing improvement.

FLYSHUTTLE SERIES · CL-P-FF30S

Prismatic Battery Assembly Line

This line features a parallel high-efficiency transfer layout, designed to meet the demands for high-speed, high-precision, intelligent, clean, and automated production. Through continuous iteration and system optimization, it delivers standardized and modularized intelligent equipment solutions with exceptional flexibility and broad adaptability, enabling efficient, stable, and large-scale mass production of prismatic cells.



2JR/4JR Butterfly Weld Structure
Cell Structure



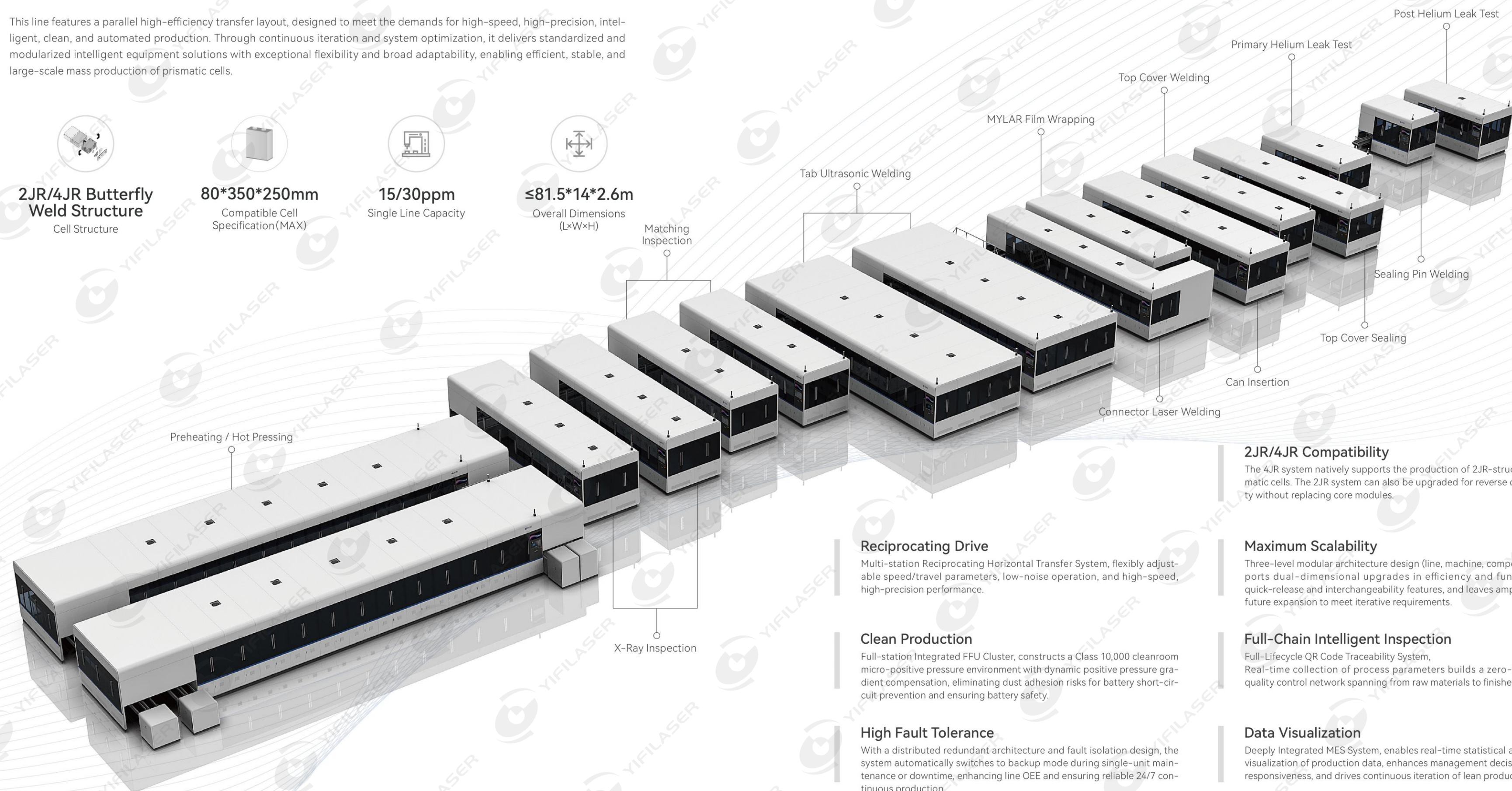
80*350*250mm
Compatible Cell Specification (MAX)



15/30ppm
Single Line Capacity



≤81.5*14*2.6m
Overall Dimensions (L×W×H)



2JR/4JR Compatibility

The 4JR system natively supports the production of 2JR-structured prismatic cells. The 2JR system can also be upgraded for reverse compatibility without replacing core modules.

Maximum Scalability

Three-level modular architecture design (line, machine, component) supports dual-dimensional upgrades in efficiency and functionality, quick-release and interchangeability features, and leaves ample room for future expansion to meet iterative requirements.

Full-Chain Intelligent Inspection

Full-Lifecycle QR Code Traceability System, Real-time collection of process parameters builds a zero-blind-zone quality control network spanning from raw materials to finished products.

Data Visualization

Deeply Integrated MES System, enables real-time statistical analysis and visualization of production data, enhances management decision-making responsiveness, and drives continuous iteration of lean production.

Reciprocating Drive

Multi-station Reciprocating Horizontal Transfer System, flexibly adjustable speed/travel parameters, low-noise operation, and high-speed, high-precision performance.

Clean Production

Full-station Integrated FFU Cluster, constructs a Class 10,000 cleanroom micro-positive pressure environment with dynamic positive pressure gradient compensation, eliminating dust adhesion risks for battery short-circuit prevention and ensuring battery safety.

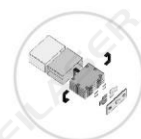
High Fault Tolerance

With a distributed redundant architecture and fault isolation design, the system automatically switches to backup mode during single-unit maintenance or downtime, enhancing line OEE and ensuring reliable 24/7 continuous production.

FLYSHUTTLE SERIES · CL-PF-P30S

Prismatic Battery Assembly Line

This line features a parallel high-efficiency transfer layout, designed to meet the demands for high-speed, high-precision, intelligent, clean, and automated production. Through continuous iteration and system optimization, it delivers standardized and modularized intelligent equipment solutions with exceptional flexibility and broad adaptability, enabling efficient, stable, and large-scale mass production of prismatic cells.



2JR Pin Laser Weld Structure
Cell Structure



80*350*250mm
Compatible Cell Specification (MAX)



30ppm
Single Line Capacity



≤66.5*15*2.6m
Overall Dimensions (L×W×H)

Tape-sticking

Cell Insertion

Pre-spot Sealing Welding

Pre-spot Sealing Welding

Primary Helium Leak Test

Post Helium Leak Test

Sealing Pin Welding

Ultrasonic Welding

Tab Laser Welding

Reciprocating Transmission

Multi-station Reciprocating Horizontal Transfer System, flexibly adjustable speed/travel parameters, low-noise operation, and high-speed, high-precision performance.

Clean Production

Full-station Integrated FFU Cluster, constructs a Class 10,000 cleanroom micro-positive pressure environment with dynamic positive pressure gradient compensation, eliminating dust adhesion risks for battery short-circuit prevention and ensuring battery safety.

High Fault Tolerance

With a distributed redundant architecture and fault isolation design, the system automatically switches to backup mode during single-unit maintenance or downtime, enhancing line OEE and ensuring reliable 24/7 continuous production.

Pin Welding

Specially designed for cell assembly processes utilizing laser welding of tabs and cover plate pins, adaptable to all process requirements to achieve high efficiency and superior production quality.

Full-Chain Intelligent Inspection

Full-Lifecycle QR Code Traceability System, real-time collection of process parameters builds a zero-blind-zone quality control network spanning from raw materials to finished products.

Data Visualization

Deeply Integrated MES System, enables real-time statistical analysis and visualization of production data, enhances management decision-making responsiveness, and drives continuous iteration of lean production.

FLYSHUTTLE SERIES · CL-PF-B20S

Prismatic Battery Assembly Line

Adopting a parallel high-efficiency transfer layout, this line focuses on high-speed, high-precision, intelligent, clean, and automated production requirements. Through continuous iteration and system optimization, it delivers standardized and modularized intelligent equipment solutions with high flexibility and broad adaptability, enabling efficient, stable, and large-scale mass production of prismatic cells.



Long Blade,
Short Blade
Cell Structure



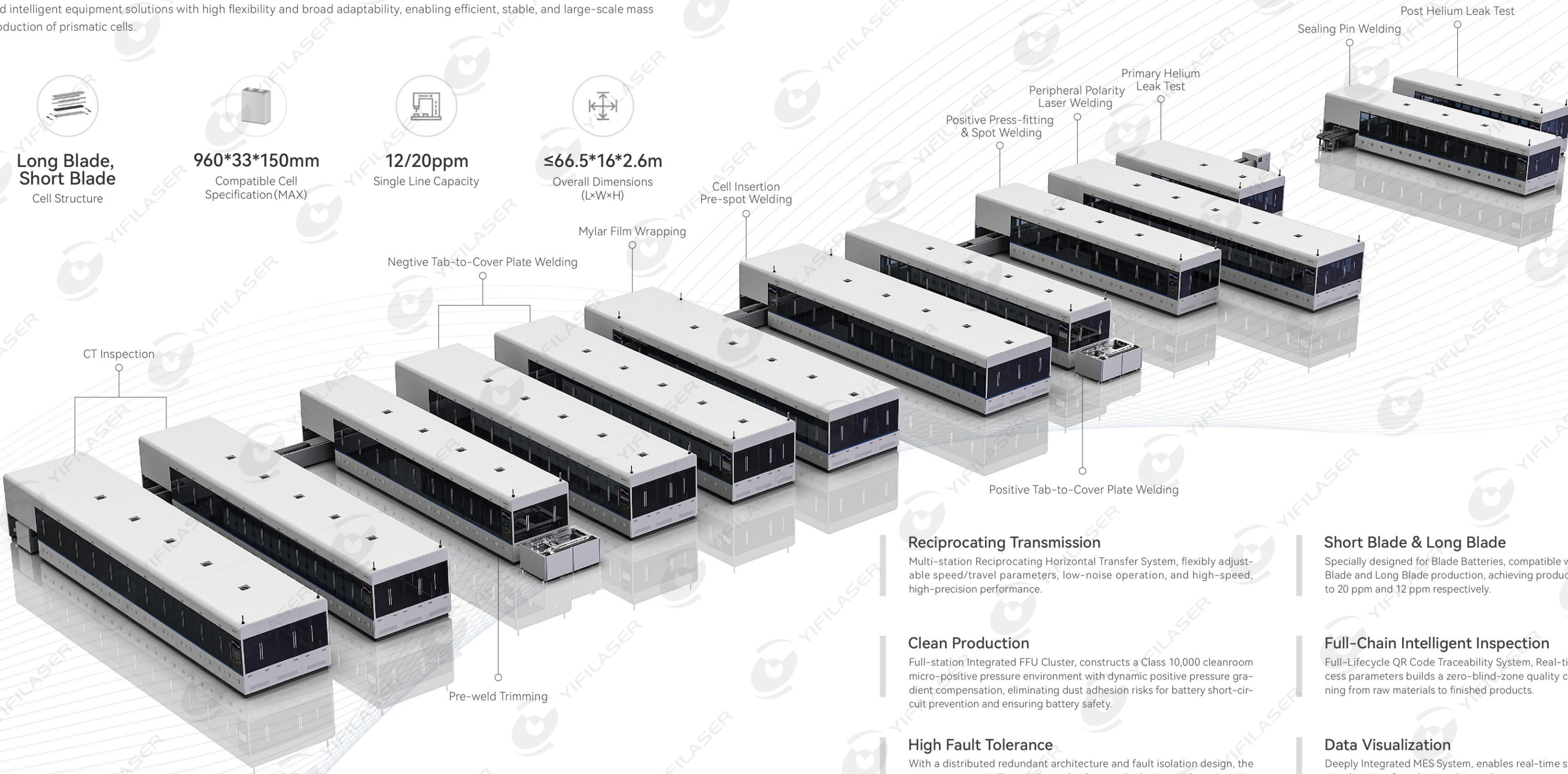
960*33*150mm
Compatible Cell
Specification (MAX)



12/20ppm
Single Line Capacity



≤66.5*16*2.6m
Overall Dimensions
(L×W×H)



Reciprocating Transmission

Multi-station Reciprocating Horizontal Transfer System, flexibly adjustable speed/travel parameters, low-noise operation, and high-speed, high-precision performance.

Clean Production

Full-station Integrated FFU Cluster, constructs a Class 10,000 cleanroom micro-positive pressure environment with dynamic positive pressure gradient compensation, eliminating dust adhesion risks for battery short-circuit prevention and ensuring battery safety.

High Fault Tolerance

With a distributed redundant architecture and fault isolation design, the system automatically switches to backup mode during single-unit maintenance or downtime, enhancing line OEE and ensuring reliable 24/7 continuous production.

Short Blade & Long Blade

Specially designed for Blade Batteries, compatible with mainstream Short Blade and Long Blade production, achieving production efficiencies of up to 20 ppm and 12 ppm respectively.

Full-Chain Intelligent Inspection

Full-Lifecycle QR Code Traceability System, Real-time collection of process parameters builds a zero-blind-zone quality control network spanning from raw materials to finished products.

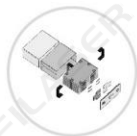
Data Visualization

Deeply Integrated MES System, enables real-time statistical analysis and visualization of production data, enhances management decision-making responsiveness, and drives continuous iteration of lean production.

SKYGLIDE SERIES · CL-PS-F30S

Prismatic Battery Assembly Line

The entire line utilizes magnetic levitation high-speed transfer technology to greatly improve assembly speed and precision while minimizing mechanical wear and dust contamination. It also enhances the scalability and flexibility of the equipment. By integrating AI-driven intelligent systems, the line enables full-process visualization and smart control, empowering customers build efficient, intelligent, and sustainably evolving smart factories for prismatic cells.



2JR/4JR Butterfly Weld Structure
Cell Structure



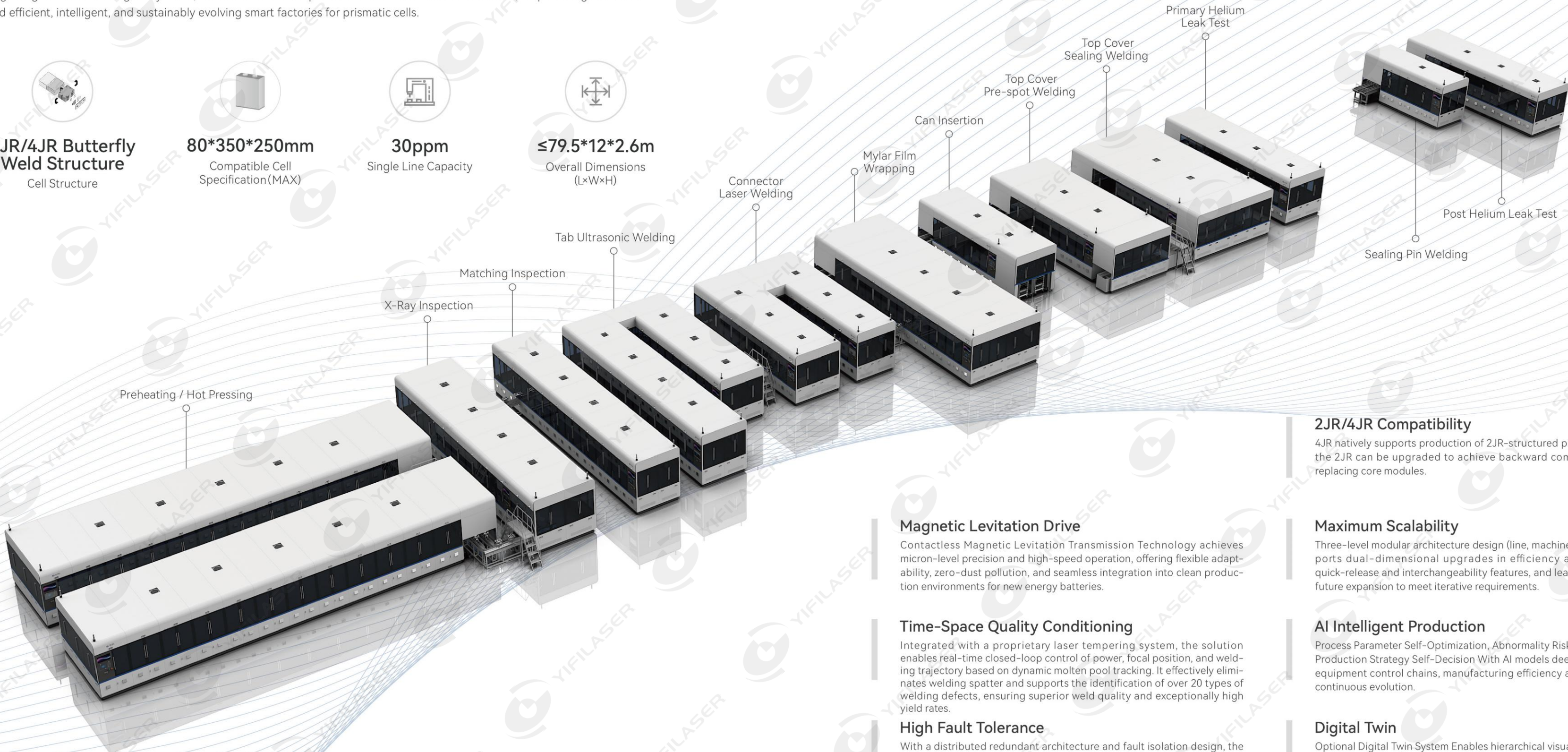
80*350*250mm
Compatible Cell Specification (MAX)



30ppm
Single Line Capacity



≤79.5*12*2.6m
Overall Dimensions (L×W×H)



Magnetic Levitation Drive

Contactless Magnetic Levitation Transmission Technology achieves micron-level precision and high-speed operation, offering flexible adaptability, zero-dust pollution, and seamless integration into clean production environments for new energy batteries.

Time-Space Quality Conditioning

Integrated with a proprietary laser tempering system, the solution enables real-time closed-loop control of power, focal position, and welding trajectory based on dynamic molten pool tracking. It effectively eliminates welding spatter and supports the identification of over 20 types of welding defects, ensuring superior weld quality and exceptionally high yield rates.

High Fault Tolerance

With a distributed redundant architecture and fault isolation design, the system automatically switches to backup mode during single-unit maintenance or downtime, enhancing line OEE and ensuring reliable 24/7 continuous production.

2JR/4JR Compatibility

4JR natively supports production of 2JR-structured prismatic cells, while the 2JR can be upgraded to achieve backward compatibility without replacing core modules.

Maximum Scalability

Three-level modular architecture design (line, machine, component) supports dual-dimensional upgrades in efficiency and functionality, quick-release and interchangeability features, and leaves ample room for future expansion to meet iterative requirements.

AI Intelligent Production

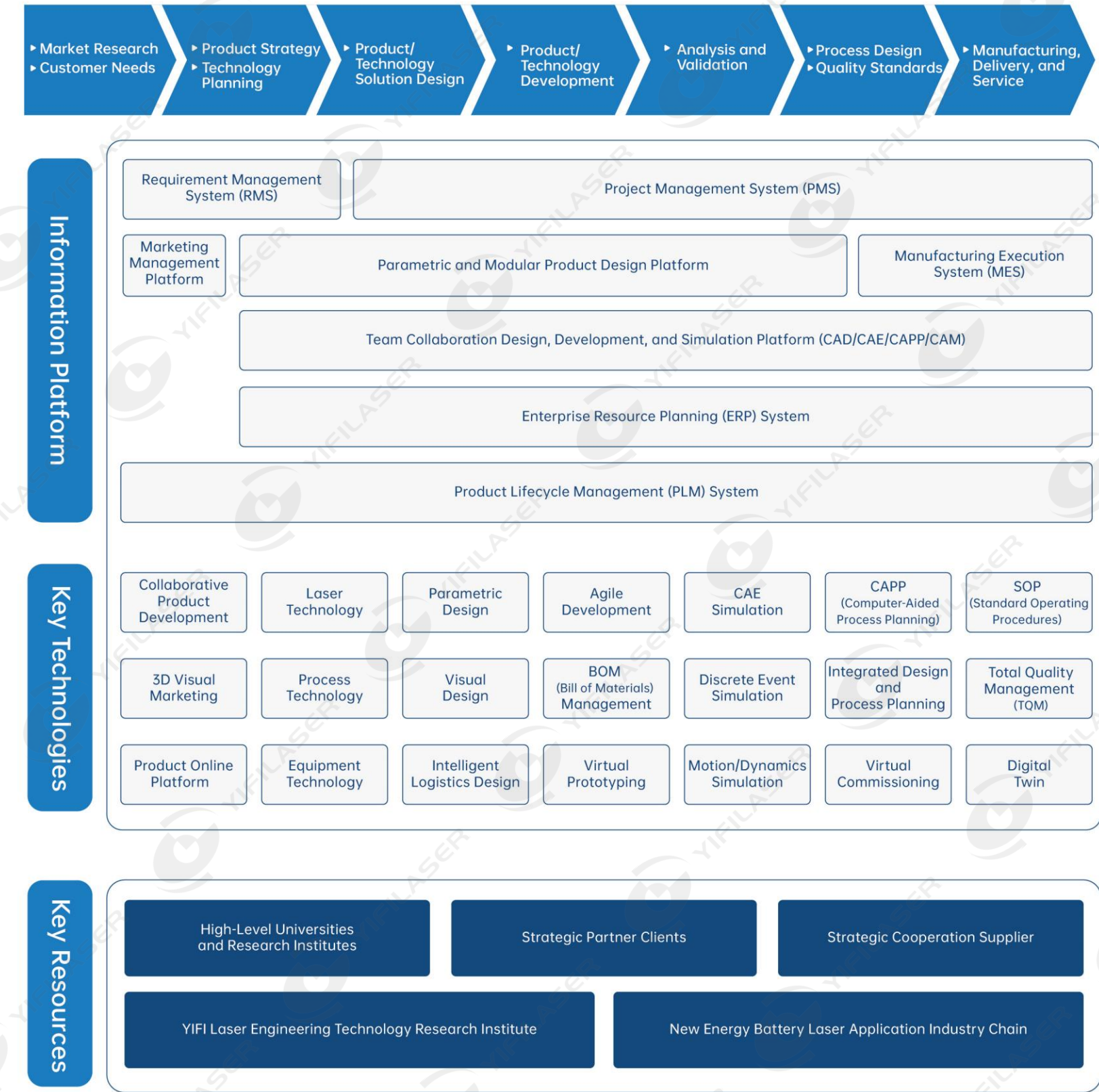
Process Parameter Self-Optimization, Abnormality Risk Self-Warning, and Production Strategy Self-Decision With AI models deeply embedded into equipment control chains, manufacturing efficiency and quality achieve continuous evolution.

Digital Twin

Optional Digital Twin System Enables hierarchical visualization and intelligent production management across modules, equipment units, entire lines, workshops, and other levels.

COMPREHENSIVE

DIGITAL MANAGEMENT SYSTEMS



FULL LIFECYCLE

SERVICES AND QUALITY CONTROL

Project Management

International Certification PMP - Full Lifecycle Digital Management of Projects



Quality Management



CLIENTS

WE ARE SERVING

With a sound quality management model, we continuously create high-quality products and services, offering full-cycle services to downstream customers. We have established stable partnerships with a series of industry-leading partners, working together to build a harmonious and sustainable industrial ecosystem.
