Version: YFM-CBE-2505

YIFILASER

NEW ENERGY BATTERY INDUSTRY

PRODUCT BROCHURES

CYLINDRICAL TABLESS BATTERY INTELLIGENT MANUFACTURING PRODUCTS

YIFI LASER CO., LTD.

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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 tabless 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

MISSION

Laser Innovation&Equipment Intelligentization

VISION

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

VALUE

Pragmatism, Progress, Innovation, Collaboration

PHILOSOPHY

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

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

01

Our Products

Cylindrical Tabless Battery Intelligent Manufacturing Products

Based on our deep understanding of battery manufacturing processes and extensive engineering experience, we provide a comprehensive analysis of intelligent manufacturing for batteries, focusing on core needs in fields like power and energy storage. This analysis covers various dimensions, including battery types, sizes, structures, processes, equipment, production guidelines, information management, quality assurance, and clean environment control within the equipment. Our goal is to find the optimal solution under integrated conditions. We offer customers a complete solution that spans the entire intelligent manufacturing process, from product development, process validation, small-batch trials to large-scale manufacturing (3ppm-360ppm), and up to 20GWh per workshop.

The cylindrical tabless battery cell automated assembly lines are designed for high-volume, intelligent manufacturing of cylindrical tabless cells in sizes such as Φ 18/21/26/32/34/40/46/60/80, and more. Our solution systematically addresses key challenges in the production of cylindrical tabless cells, including tab forming, current collector laser welding, and stable high-speed mass production. It covers the entire assembly process, from tab formation and coating to casing insertion, current collector welding, cap pre-welding, cell sealing, sealing pin welding, helium leak testing, cleaning, film wrapping, and module assembly. With a production efficiency of up to 360 ppm, this solution ensures large-scale, high-efficiency, high-quality, and cost-effective manufacturing of cylindrical tabless batteries.

FLYSHUTTLE SERIES· CL-CF-A50S

Cylindrical Tabless Battery Assembly Line

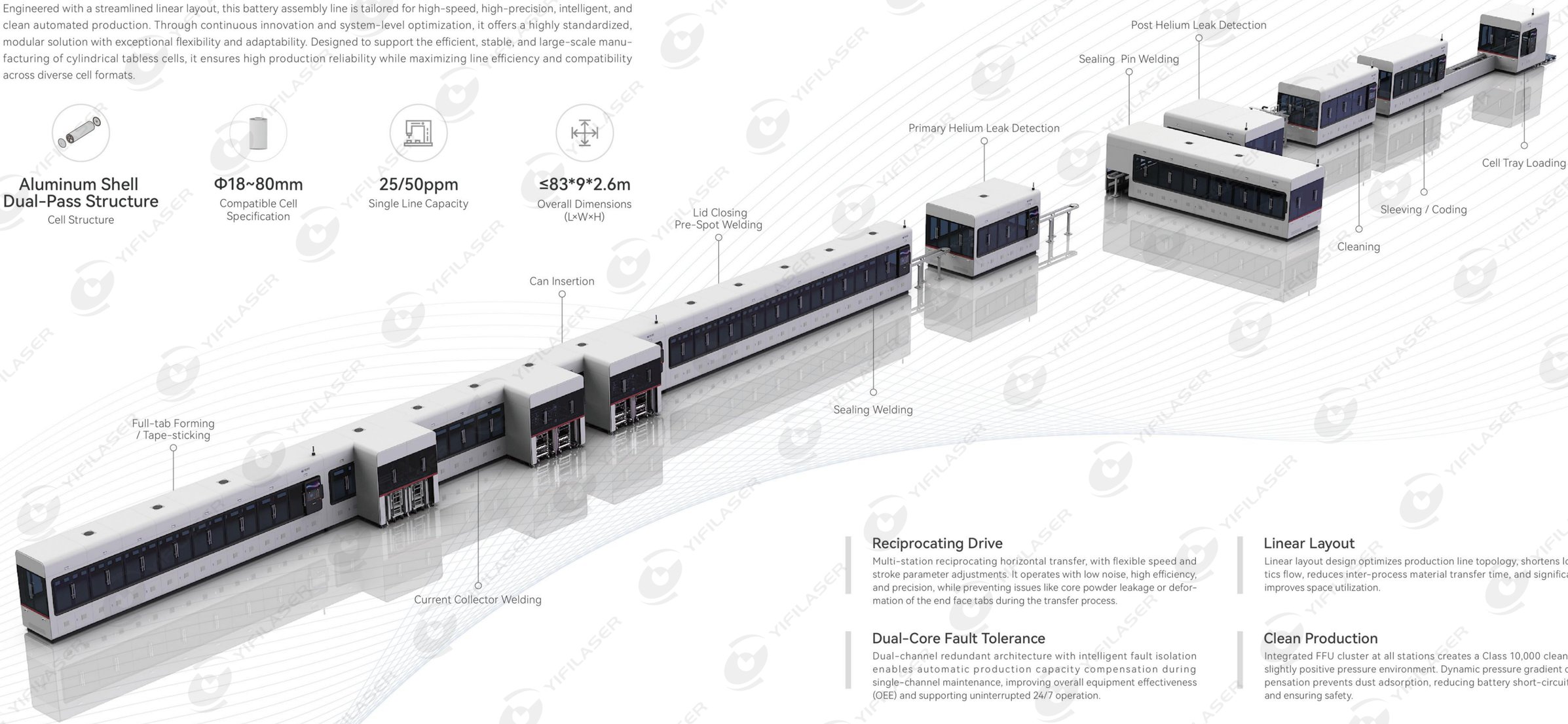
Engineered with a streamlined linear layout, this battery assembly line is tailored for high-speed, high-precision, intelligent, and clean automated production. Through continuous innovation and system-level optimization, it offers a highly standardized, modular solution with exceptional flexibility and adaptability. Designed to support the efficient, stable, and large-scale manufacturing of cylindrical tabless cells, it ensures high production reliability while maximizing line efficiency and compatibility across diverse cell formats.

Aluminum Shell Dual-Pass Structure
Cell Structure

Φ18~80mm
Compatible Cell Specification

25/50ppm
Single Line Capacity

≤83*9*2.6m
Overall Dimensions (L×W×H)



Reciprocating Drive

Multi-station reciprocating horizontal transfer, with flexible speed and stroke parameter adjustments. It operates with low noise, high efficiency, and precision, while preventing issues like core powder leakage or deformation of the end face tabs during the transfer process.

Linear Layout

Linear layout design optimizes production line topology, shortens logistics flow, reduces inter-process material transfer time, and significantly improves space utilization.

Dual-Core Fault Tolerance

Dual-channel redundant architecture with intelligent fault isolation enables automatic production capacity compensation during single-channel maintenance, improving overall equipment effectiveness (OEE) and supporting uninterrupted 24/7 operation.

Clean Production

Integrated FFU cluster at all stations creates a Class 10,000 clean and slightly positive pressure environment. Dynamic pressure gradient compensation prevents dust adsorption, reducing battery short-circuit risk and ensuring safety.

End-to-End Intelligent Inspection

Full-lifecycle QR code traceability system collects process parameters in real time, establishing a zero-blind-spot quality control network from raw materials to finished products.

Data Visualization

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

FLYSHUTTLE SERIES· CL-CF-C50S

Cylindrical Tabless Battery Assembly Line

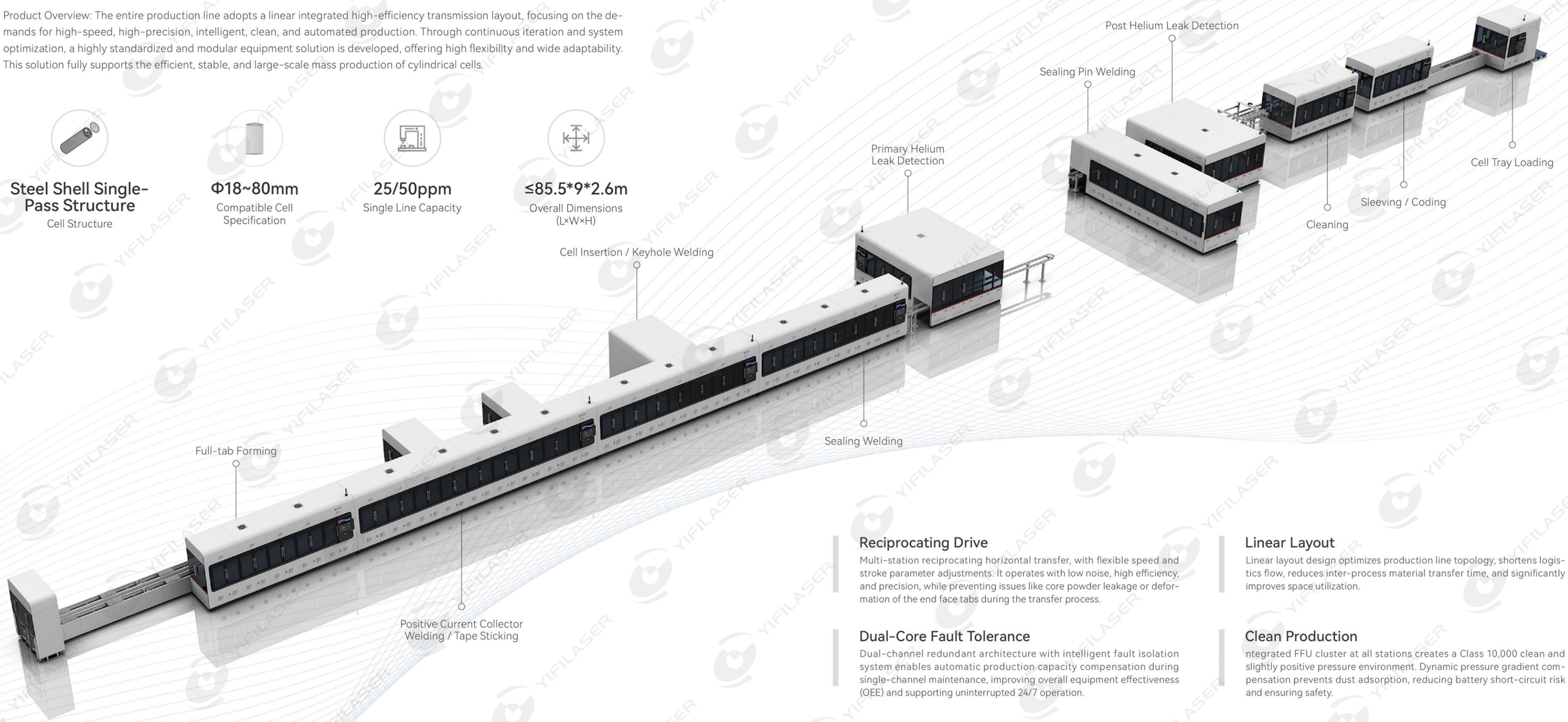
Product Overview: The entire production line adopts a linear integrated high-efficiency transmission layout, focusing on the demands for high-speed, high-precision, intelligent, clean, and automated production. Through continuous iteration and system optimization, a highly standardized and modular equipment solution is developed, offering high flexibility and wide adaptability. This solution fully supports the efficient, stable, and large-scale mass production of cylindrical cells.

Steel Shell Single-Pass Structure
Cell Structure

Φ18~80mm
Compatible Cell Specification

25/50ppm
Single Line Capacity

≤85.5*9*2.6m
Overall Dimensions (L×W×H)



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FLYSHUTTLE SERIES · CL-CF-S50S

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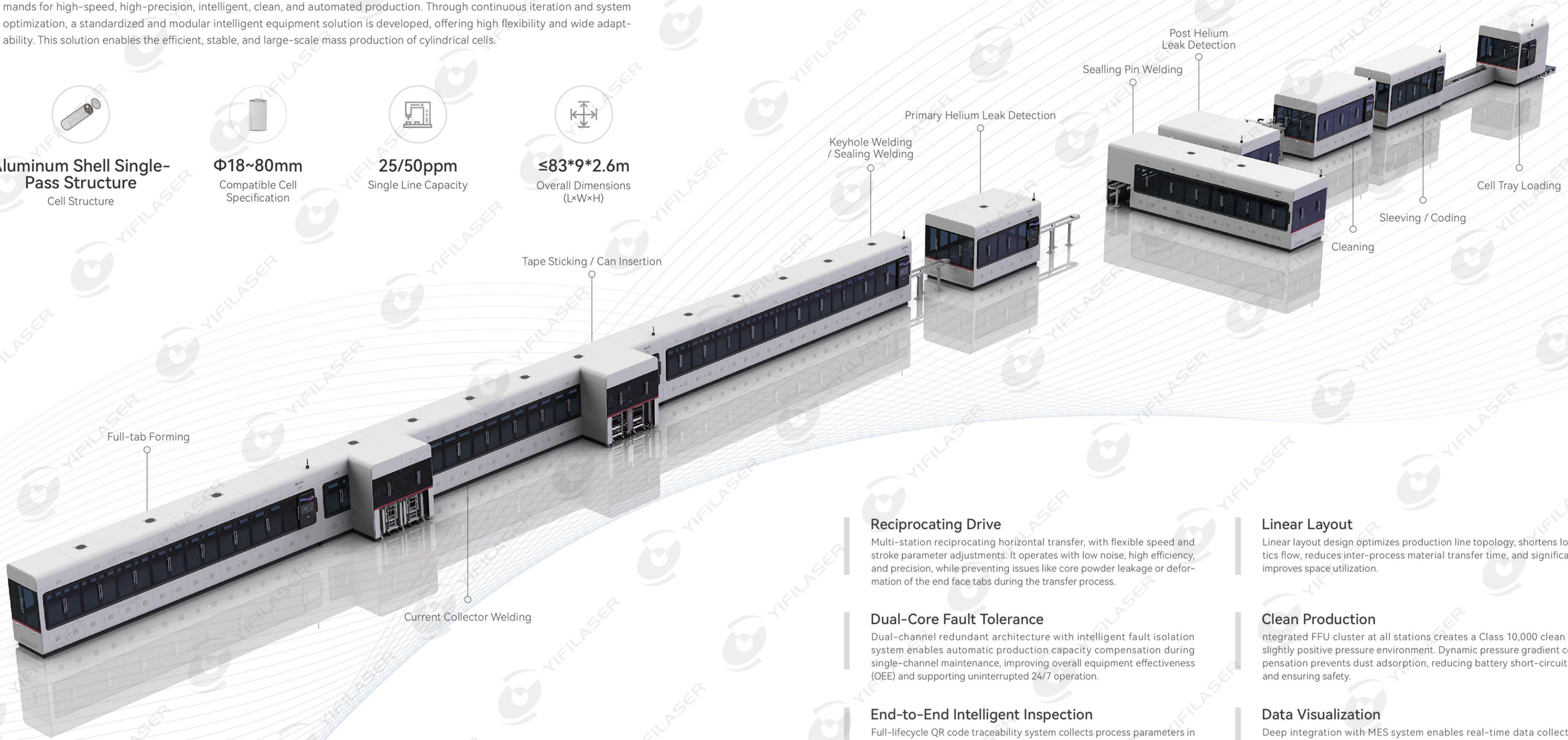
Aluminum Shell Single-Pass Structure
Cell Structure

Φ18~80mm
Compatible Cell Specification

25/50ppm
Single Line Capacity

≤83*9*2.6m
Overall Dimensions (L×W×H)



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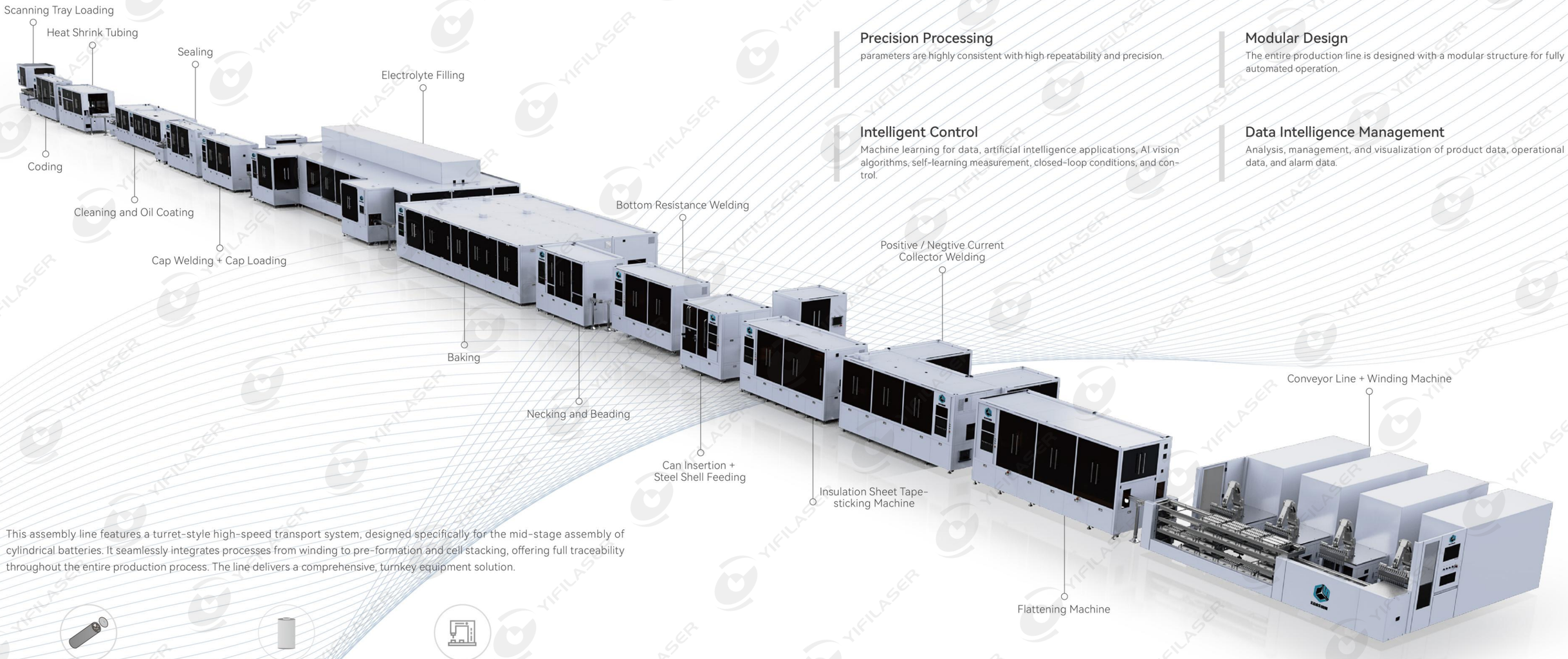
STARTURRET SERIES · CL-CT-S200S

Cylindrical Tabless Battery Assembly Line



High-Speed Drive

Adopts cam drive and FA control technology, featuring high speed, stability, and a well-established track record from extensive applications.

End-to-End Intelligent Inspection

Integrates a QR code full-process traceability system for real-time monitoring of process parameters and quality data.

Precision Processing

parameters are highly consistent with high repeatability and precision.

Modular Design

The entire production line is designed with a modular structure for fully automated operation.

Intelligent Control

Machine learning for data, artificial intelligence applications, AI vision algorithms, self-learning measurement, closed-loop conditions, and control.

Data Intelligence Management

Analysis, management, and visualization of product data, operational data, and alarm data.

This assembly line features a turret-style high-speed transport system, designed specifically for the mid-stage assembly of cylindrical batteries. It seamlessly integrates processes from winding to pre-formation and cell stacking, offering full traceability throughout the entire production process. The line delivers a comprehensive, turnkey equipment solution.

Steel/Aluminum Shell Single-Pass Structure
Cell Structure

Φ18~46mm
Compatible Cell Specification

60/120/200ppm
Single Line Capacity

SKYGLIDE SERIES · CL-CS-A360S

Cylindrical Tabless Battery Assembly Line

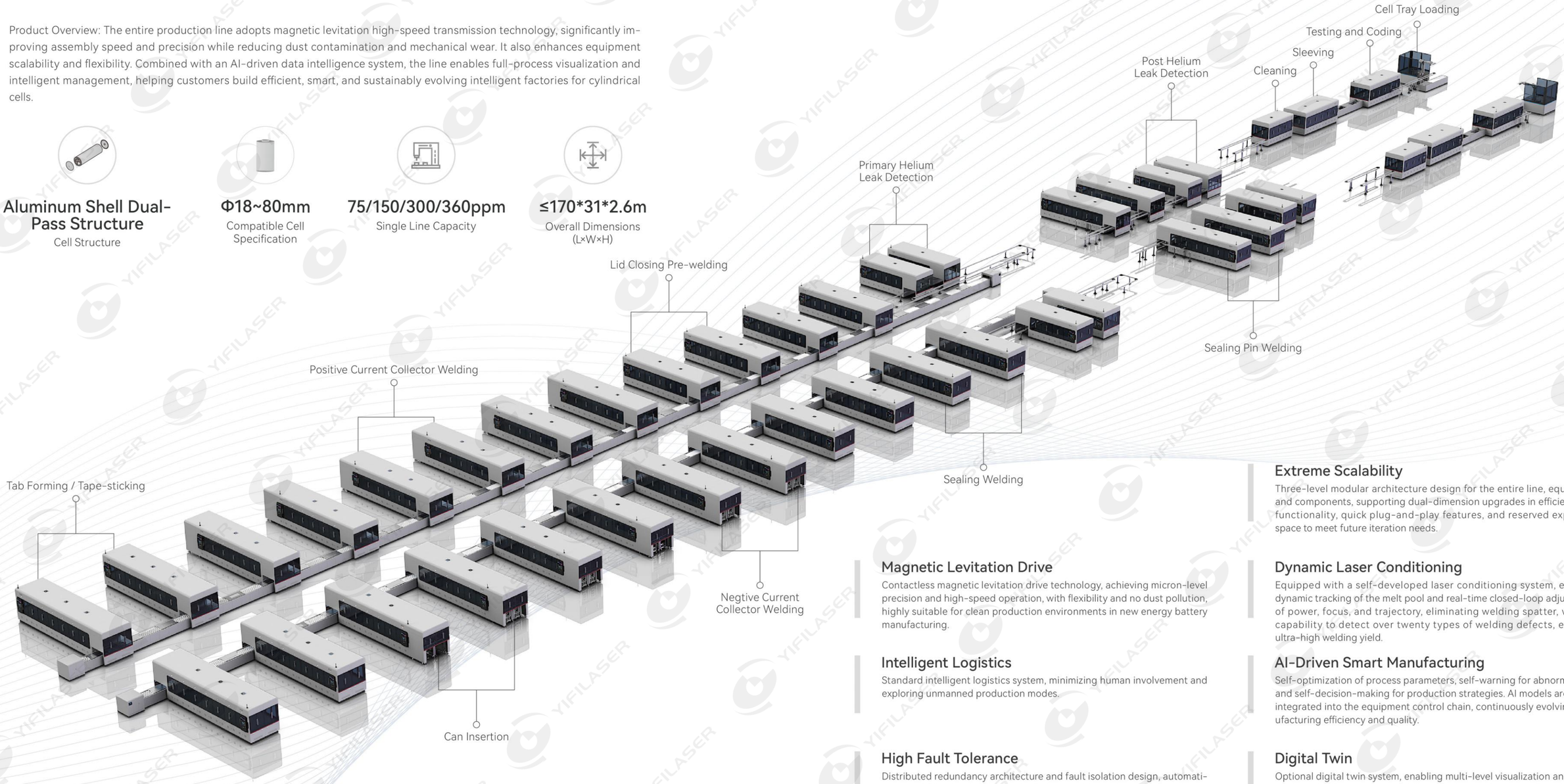
Product Overview: The entire production line adopts magnetic levitation high-speed transmission technology, significantly improving assembly speed and precision while reducing dust contamination and mechanical wear. It also enhances equipment scalability and flexibility. Combined with an AI-driven data intelligence system, the line enables full-process visualization and intelligent management, helping customers build efficient, smart, and sustainably evolving intelligent factories for cylindrical cells.

Aluminum Shell Dual-Pass Structure
Cell Structure

Φ18~80mm
Compatible Cell Specification

75/150/300/360ppm
Single Line Capacity

≤170*31*2.6m
Overall Dimensions (L×W×H)



Extreme Scalability

Three-level modular architecture design for the entire line, equipment, and components, supporting dual-dimension upgrades in efficiency and functionality, quick plug-and-play features, and reserved expansion space to meet future iteration needs.

Magnetic Levitation Drive

Contactless magnetic levitation drive technology, achieving micron-level precision and high-speed operation, with flexibility and no dust pollution, highly suitable for clean production environments in new energy battery manufacturing.

Dynamic Laser Conditioning

Equipped with a self-developed laser conditioning system, enabling dynamic tracking of the melt pool and real-time closed-loop adjustments of power, focus, and trajectory, eliminating welding spatter, with the capability to detect over twenty types of welding defects, ensuring ultra-high welding yield.

Intelligent Logistics

Standard intelligent logistics system, minimizing human involvement and exploring unmanned production modes.

AI-Driven Smart Manufacturing

Self-optimization of process parameters, self-warning for abnormal risks, and self-decision-making for production strategies. AI models are deeply integrated into the equipment control chain, continuously evolving manufacturing efficiency and quality.

High Fault Tolerance

Distributed redundancy architecture and fault isolation design, automatically switching to standby mode during machine maintenance or downtime, improving line OEE and supporting 24/7 continuous production.

Digital Twin

Optional digital twin system, enabling multi-level visualization and intelligent production management for modules, equipment units, entire production lines, and workshops.

SKYGLIDE SERIES · CL-CS-C360S

Cylindrical Tabless Battery Assembly Line

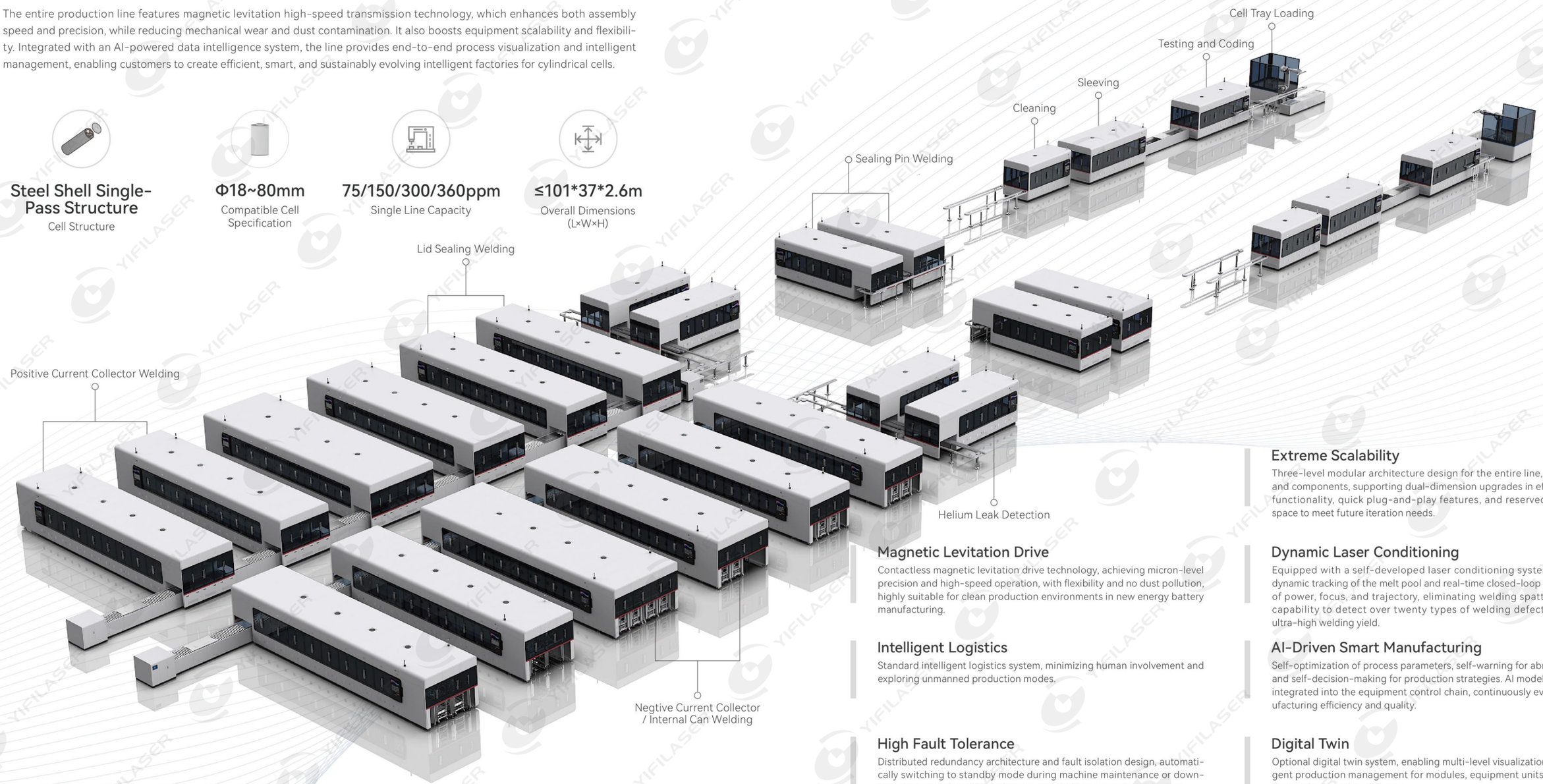
The entire production line features magnetic levitation high-speed transmission technology, which enhances both assembly speed and precision, while reducing mechanical wear and dust contamination. It also boosts equipment scalability and flexibility. Integrated with an AI-powered data intelligence system, the line provides end-to-end process visualization and intelligent management, enabling customers to create efficient, smart, and sustainably evolving intelligent factories for cylindrical cells.

Steel Shell Single-Pass Structure
Cell Structure

Φ18~80mm
Compatible Cell Specification

75/150/300/360ppm
Single Line Capacity

≤101*37*2.6m
Overall Dimensions (L×W×H)



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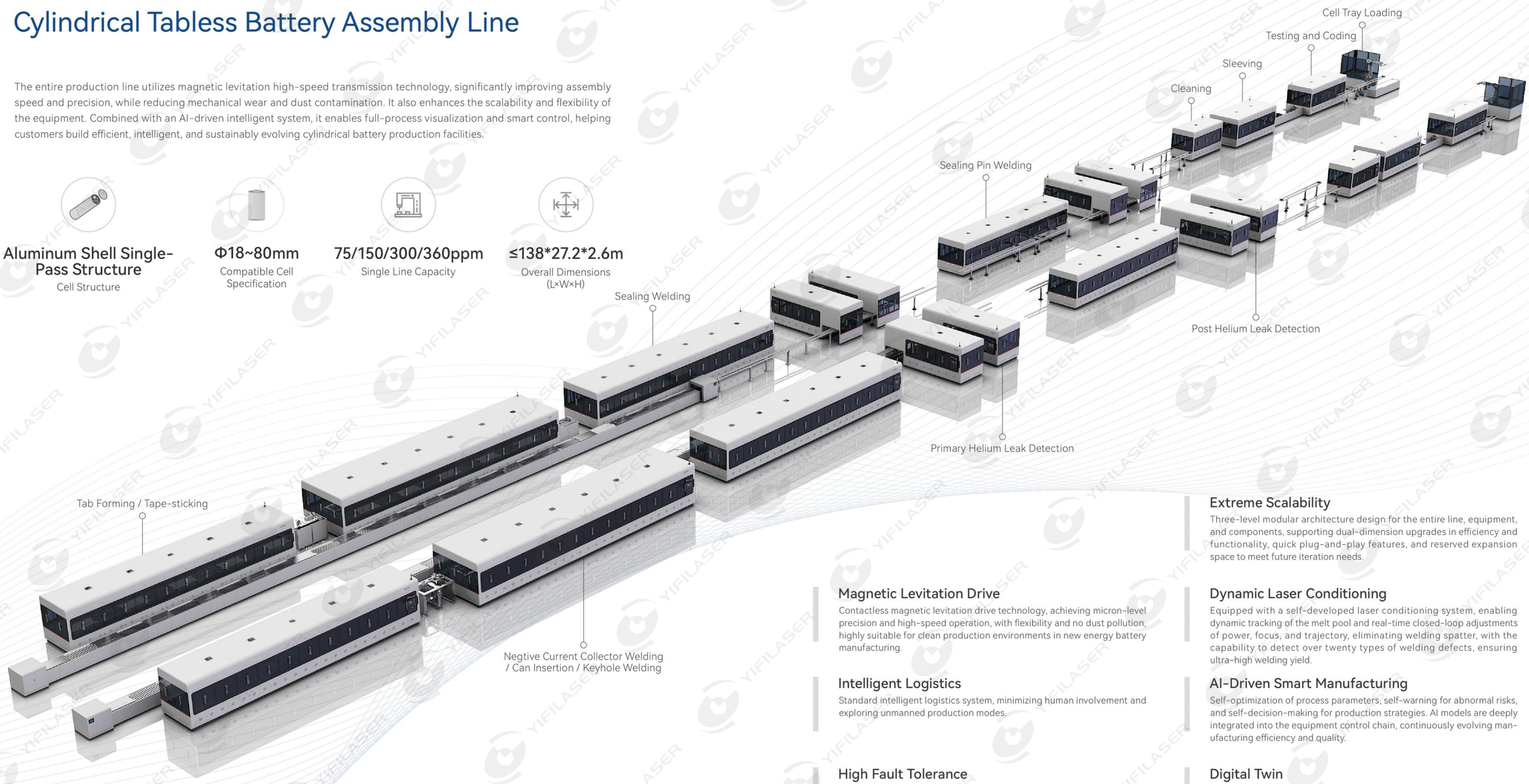
Aluminum Shell Single-Pass Structure
Cell Structure

Φ18~80mm
Compatible Cell Specification

75/150/300/360ppm
Single Line Capacity

≤138*27.2*2.6m
Overall Dimensions (L×W×H)



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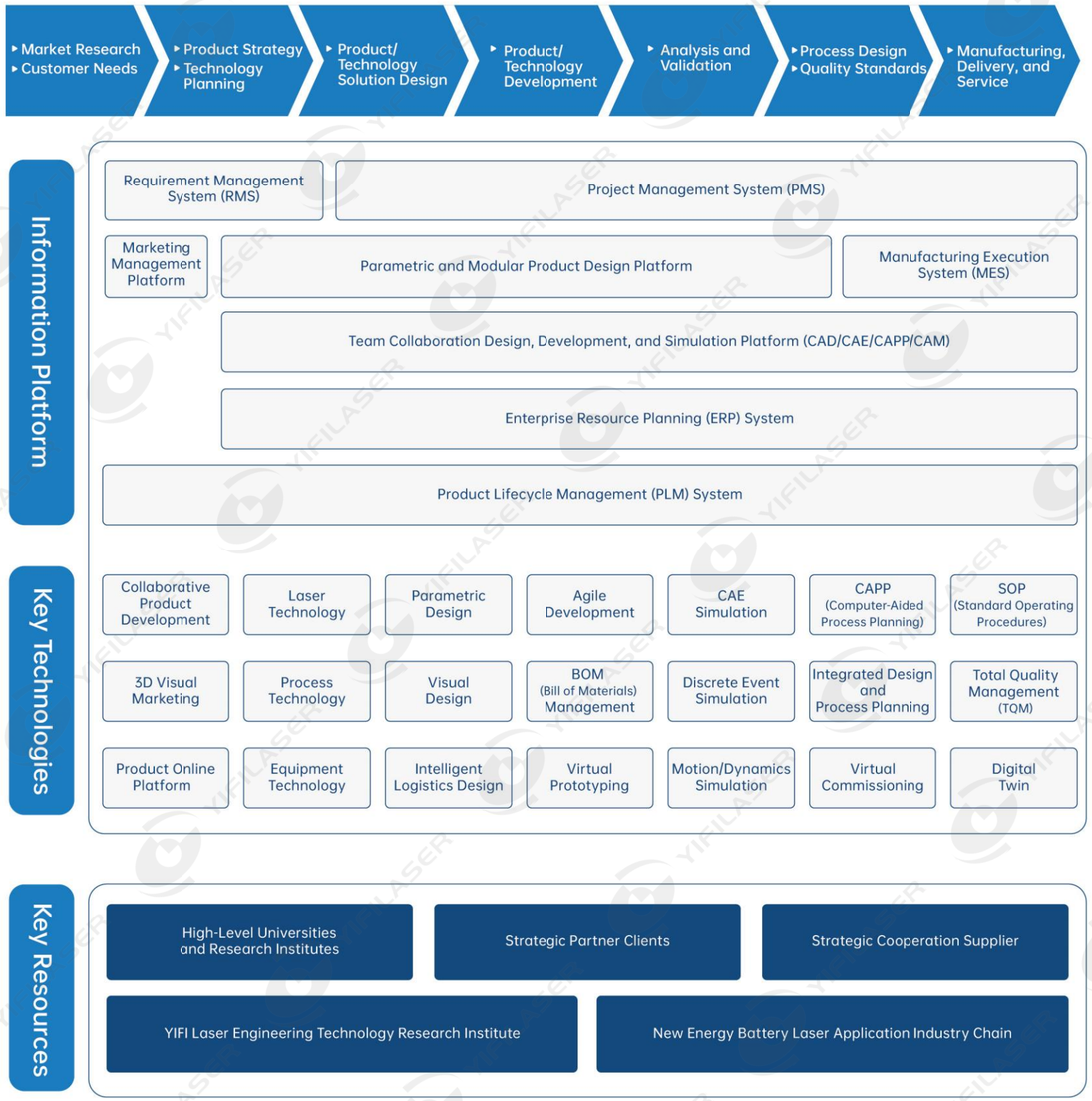
COMPREHENSIVE
DIGITAL MANAGEMENT SYSTEMS



FULL LIFECYCLE
SERVICES AND QUALITY CONTROL

Project Management

International Certification PMP - Full Lifecycle Digital Management of Projects

Digital Full-Process Management Platform

Relying on four intelligent systems—ERP, PDM, MES, and PLM—this platform enables the digital management of the entire process from product research and development to delivery and acceptance, quickly meeting customer needs, efficiently achieving project goals, and ensuring quality completion of delivery and acceptance.

One Center, Building an Efficient Execution Network

Aligned with international PMP project management certification, this approach centers around the project, driving the efficient execution of the entire product lifecycle, including research and development, manufacturing, delivery, and after-sales service. By consolidating efforts, we build a highly cohesive professional team to provide comprehensive project management services to customers.

Integrated Production & Delivery, Innovative Mega-Manufacturing System

Integrating production and engineering delivery, innovation runs through the entire manufacturing and delivery system. This integration ensures seamless communication from manufacturing to delivery, enhancing manufacturing and delivery efficiency, and shortening project lead times.

Domestic and International After-Sales Teams, Professional Services

With separate domestic and international after-sales teams supporting global business, and based on decades of after-sales database analysis, we build a comprehensive after-sales system for repairs, returns, and fast response. This ensures professional after-sales services for our customers.

Quality Management

- Quality Policy
- Quality Objectives
- Quality Improvement

- Quality Pre-Planning
- Quality Process Planning
- Quality Control Plan

- Preventive Measures
- Corrective Actions
- Customer Feedback

Organizational Support → **Conceptual Support** → **Systematic Support** → **Technical Support** → **Methodological Support** → **Information Support**

- Quality Management Leadership Team
- QC Team
- Quality Audit Special Team

- Quality Documentation
- Procedure Documents
- Work Instructions

- Incoming Material Inspection
- Process Self-Inspection
- Process Inspection

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 har monious and sustainable industrial ecosystem.

CATL
LG
国轩高科 GOTION HIGH-TECH
CALB 中创新航
SVOLT 蜂巢能源
WANHUA
CHANGHONG 长虹
EVE 亿纬锂能
远信储能 RelyEZ Energy
ZENIO
鹏辉能源 GREAT POWER
LISHEN
Envision 远景
多氟多 DFD
COSMX 冠宇
派能科技 PYLONTECH
ATL
NIO
LEAPMOTOR 零跑汽车
HTHIUM 海辰新能源
TTI
阳光电源 SUNGROW
长安汽车 CHANGAN
东风汽车 DONGFENG MOTOR
广汽集团 GAC GROUP
华友能源 HUA YOU NENG YUAN
GEM 格林美
吉利汽车 GEELY AUTO
中国中车 CRRC
TATA
巨湾技研
赣锋锂业 GanfengLithium
超威集团 CHILWEE
天能集团 TIANNENG GROUP
南都电源 Narada
azure 蔚蓝锂芯
TMB 电芯制造专家
ZTT 中天科技
星恒电源
固德威 GOODWE
cornex 楚能
融和元储 ROBESTEC
万向集团 WANXIANG GROUP
VEKEN 维科技术
Trinabess 天合储能
BAK
CAMEL 骆驼股份
BOOSTESS
卫蓝新能源
中科海钠 HiNa BATTERY
FARASIS 孚能科技
Greenway 博力威
Ampace
昆宇电源 COSPOWERS
运达风电 WINDEY