



ZHENGXI

CREATE AN INDUSTRY LEADING BRAND

COMPOSITE MATERIAL
MOLDING SOLUTIONS



ZHENGXI OFFICIAL WECHAT

FULL RANGE OF
PRODUCT BROCHURES

ZHENGXI TIKTOK

▼ Intelligent molding equipment

▼ Intelligent factory

▼ Digital workshop

▼ Automated production line

— SAFER

— MORE STABLE

— MORE EFFICIENT

— SMARTER

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ZHENGXI
INTELLIGENT MANUFACTURING EQUIPMENT

▶ 2026 03ED

Company Profile



Chengdu Headquarters	Chengdu Phase II	Malaysian base	Eastern Europe branch
◆ Land 45600m ²	◆ Land 106500m ²	◆ Land 15000m ²	◆ Land 11000m ²
◆ Patent 410+	◆ Factory Target Intelligent equipment	◆ Factory Target Intelligent equipment	◆ Factory Target Auto parts

Zhengxi Intelligent integrates the resources of its eight subsidiaries, leveraging its advantages across the entire industry chain to provide users with high-end customized overall solutions in the molding field.

Chengdu Zhengxi Intelligent Equipment Group Co., Ltd. Chengdu Zhengxi Savan Intelligent Equipment Co., Ltd. Chengdu Zhengxi Cloud Information Technology Co., Ltd. Chengdu Zhengxi Robotics Co., Ltd. Chengdu Zhengxi Smart Technology Co., Ltd. Shanghai Zhengxi Nachuan New Technology Co., Ltd. ZHENGXI TECHNOLOGY SDN.BHD. (Malaysia) Chengdu Zhengxi Investment Co., Ltd.	—Intelligent Equipment R&D and Manufacturing —Sheet Metal Equipment R&D and Manufacturing —Industrial Software and Digital Workshop Development —Intelligent Molding Production Line R&D and Manufacturing —Import & Export Trade —Import & Export Trade —Intelligent Equipment R&D and Manufacturing —Investment & Strateaic Consultino
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Product Series

The company's hydraulic press product series includes: SMC, LFT-D, HP-RTM, PCM, GMT, BMC/DMC and other automatic molding production lines, WCM wet molding, SQRTM equal quality resin transfer molding, LFI long fiber reinforced injection molding, carbon fiber molding, PEEK polyether ether ketone molding, YZ96 automotive interior parts and flat vulcanizing machines, etc.



History of ZhengXi

2008	Developing the first 1200T hydraulic press	2017	The developed servo system has a pressure accuracy of ±0.05 MPa.
2009	Register the "Zhengxi" trademark and brand to produce hydraulic equipment	2020	A 48,000m ² production base has been put into operation.
2011	ISO certified	2021	Composite material hydraulic press receives association certification
2012	Products exported globally	2024	Malaysian production base launched Zhengxi's shareholding reform successful
2014	The factory area has increased to 18,000m ²	2025	New production base project launched
2015	3500T forging machine delivered and used	Future	Become an industry-leading brand
2016	Zhengxi Robotics Company Established		

Vision	Mission	Core Values
Become an industry-leading brand	Provide safer, more stable, more efficient, and smarter products	Build a win-win platform to give back to employees, customers shareholders, suppliers and society

Founded in January 2009, Zhengxi Intelligent Group is an intelligent molding equipment manufacturing enterprise integrating R&D, production, sales and service. With seventeen years of independent R&D and production experience, it has cultivated a high-quality technical management team and a complete set of molding equipment manufacturing processes, providing customers with safe, stable, efficient and intelligent high-quality products.

Qualifications and Honors

- International CE Certification
- National High-tech Enterprise
- Sichuan Provincial Enterprise Technology Center
- Weapon Equipment Quality Management System Certification
- Intellectual Property Management Certification
- ISO 9001 Quality Management System Certification
- ISO 14001 Environmental Management System Certification
- Specialized, Refined, and Innovative Small Giant Enterprise



SMC · Composite Material Molding Hydraulic Press



Performance features

- Standard servo system: precise, efficient, and environmentally friendly;
- Frame-type design offers strong stability. The slider uses a wedge-type adjustable guide rail system, providing strong resistance to off-center loads and high precision. Adjustment minimizes accuracy deviation; high speed and low vibration;
- Four-column design utilizes four guide columns, resulting in a simple structure and high cost-effectiveness;
- Equipped with a data acquisition system, enabling full process data traceability.



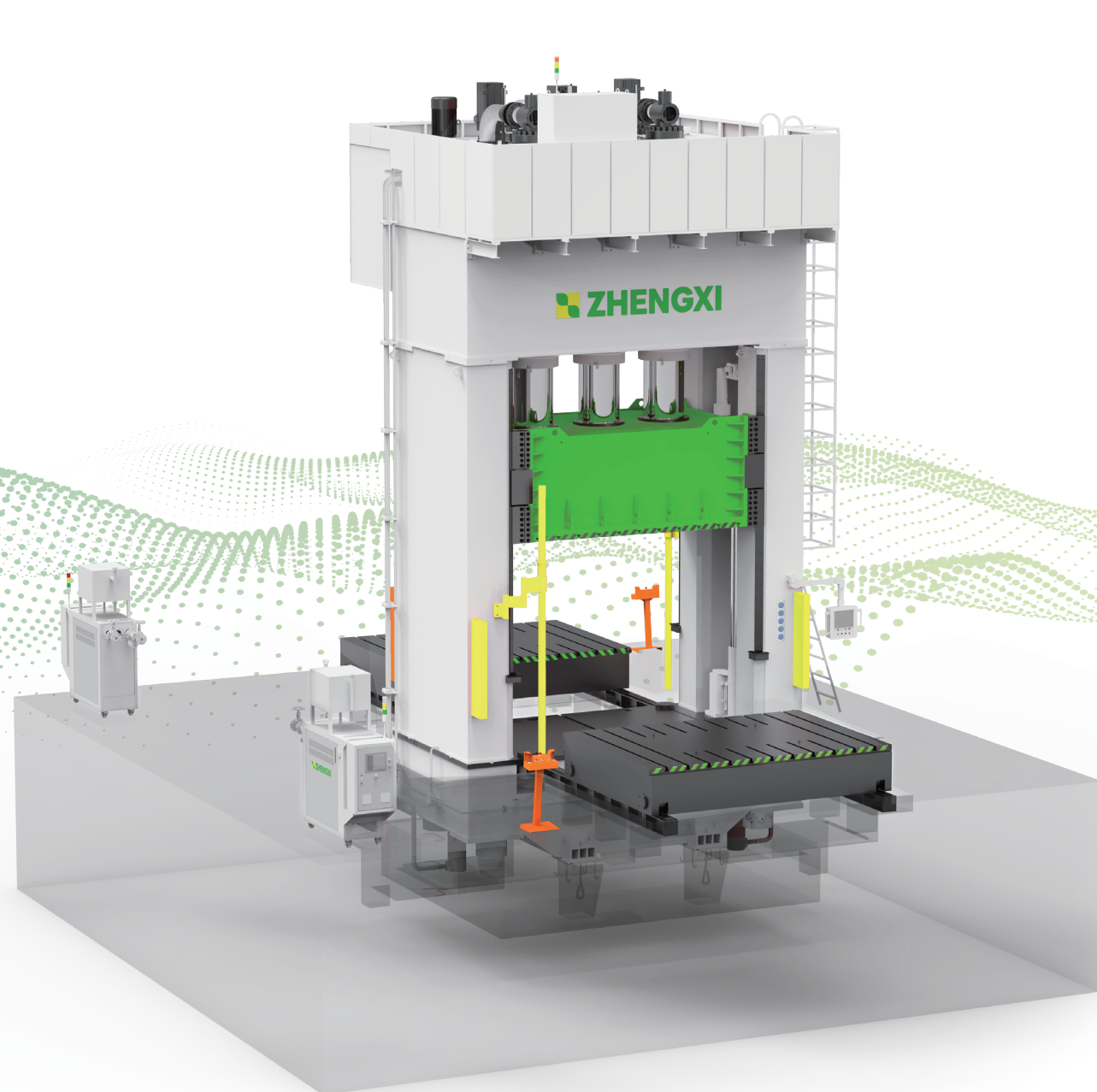
Optional extras

- Manual mold change trolley
- Robotic automation
- Blowing and vacuuming system
- Electric mold changing trolley
- Mold temperature controller mold temperature control system
- Film cutting and tearing machine /sheet cutting machine + weighing unit

Application Areas

- SMC composite material molding hydraulic press is mainly suitable for SMC material compression molding. Frame structure is recommended for high precision products.
- The machine is used in automobiles (bumpers, underbody guards, etc.), aerospace, rail transit (railway vehicle and high-speed train interior decoration), home furnishing, electricity, bathroom, environmental protection facilities, medical equipment and other industries.

PCM Composite Material Molding Hydraulic Press



Performance features

- Standard servo system, precise, efficient, and environmentally friendly;
- Strong frame stability; slider uses a guide rail system, strong resistance to off-center loads, high adjustment accuracy, fast speed, and low vibration;
- Can be equipped with a dual worktable, saving auxiliary material waiting time;
- Equipped with a data acquisition system, enabling full process data traceability.



Optional extras

- Manual mold change trolley
- Robotic Automation
- Cutting Machine
- Electric mold changing trolley
- Mould heating/cooling system
- Blowing and vacuuming system

Application Areas

- PCM molding hydraulic press is mainly suitable for compression molding of prepreg.
- The machines are widely used in the automotive (bumpers, underbody guards, battery housings), aerospace, power, energy and other industries.

WCM· Wet Molding Hydraulic Press



Performance features

• High Precision and High Performance

Manufacturing products with small dimensional errors and low shape complexity (2D/2.5D) meets high precision requirements;

Have high density and excellent mechanical properties (such as high strength and corrosion resistance), suitable for harsh environments such as automotive and aerospace.

• High-Efficiency Production and Energy Saving & Environmental Protection

Automated conveying mechanisms (such as guide rails and robotic arms) shorten production cycles, resulting in fast turnaround times suitable for mass production;

Servo hydraulic systems save energy and reduce noise, combined with precise flow regulation, reducing material waste and meeting sustainable development requirements.

• Process Flexibility and Mold Optimization

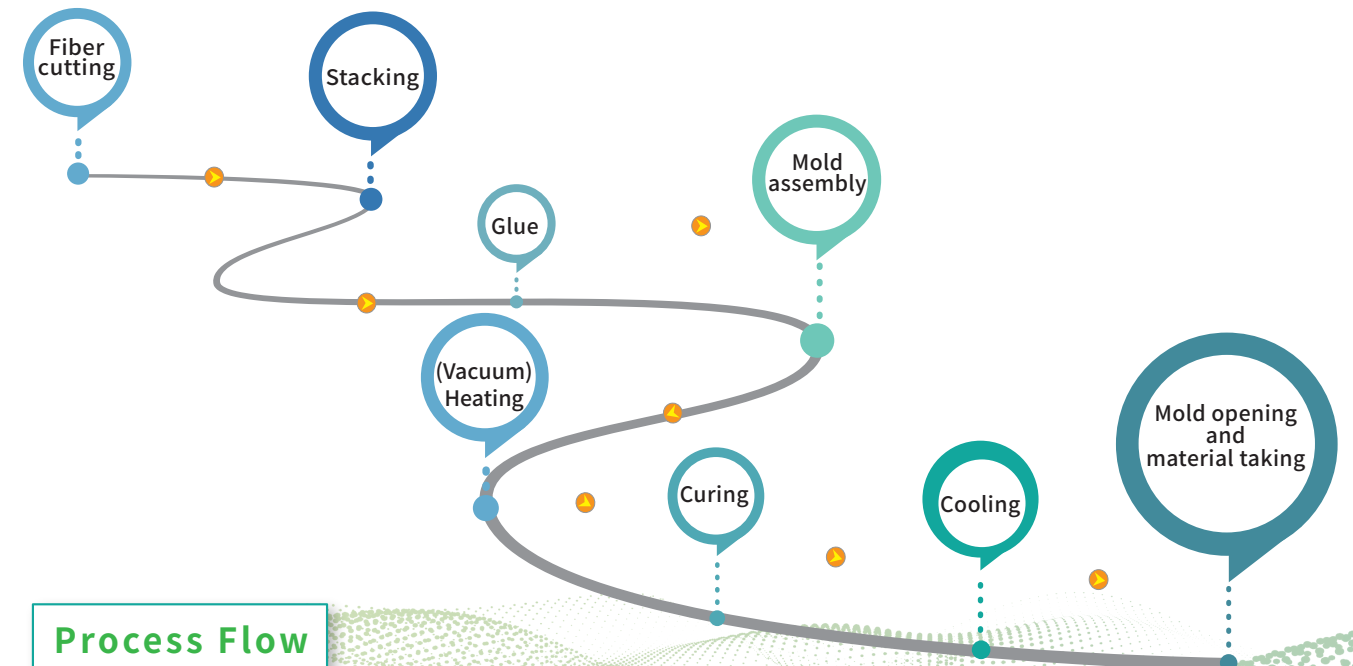
Supports multi-segment pressure/speed control and programmable tilt angle adjustment (such as $\pm 7^\circ$ rotary injection) to adapt to complex process requirements;

Mold design is resistant to high pressure (20-80MPa) and high temperature (175-200°C), with a smooth surface and resistance to chemical corrosion, improving product yield.

• Intelligent and Compatible

Integrates PLC or computer control systems, supports data storage and MES/ERP integration, enabling intelligent production management;

Optional features such as quick mold change systems and side core-pulling devices can be added to expand application scenarios.



Supporting equipment

- Oil temperature controller
- Chiller
- Cutting machine
- Glue applicator

Optional extras

- Space management system
- Exhaust gas collection system
- Mold changing trolley
- Four-corner leveling system
- Composite material complete process system

Application Areas

• Automotive Industry

Lightweight components such as body structural parts (e.g., carbon fiber components for the BMW i8), battery trays, and interior trim.

• Aerospace

High-performance composite material components such as aircraft doors and fairings.

• Electronics and Electrical Equipment

Insulating components (e.g., insulating discs, through-wall bushings), electronic component packaging, etc.

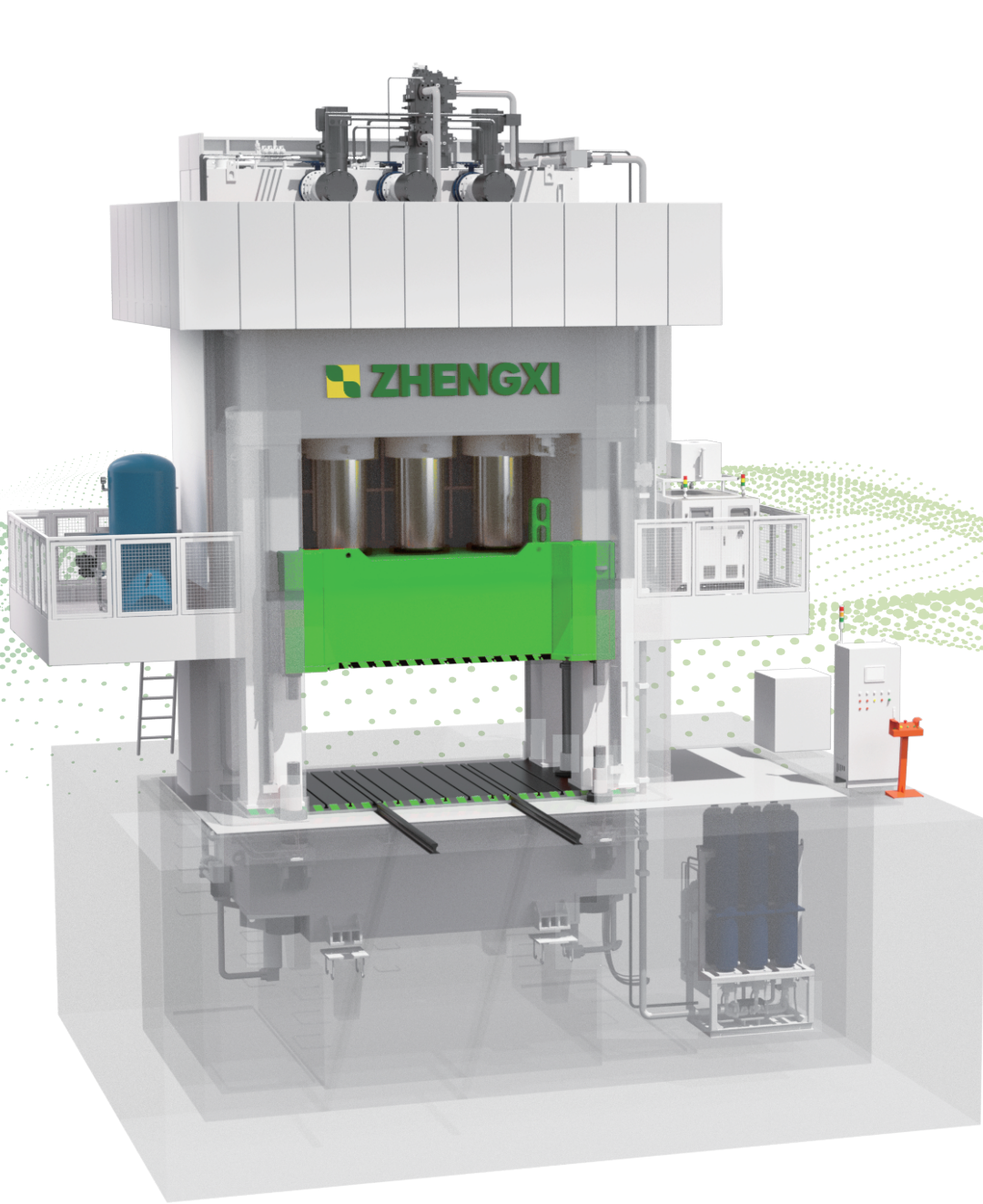
• Construction and Rail Transportation

Large-size composite material products such as building exterior wall panels and high-speed rail interior trim.

• New Energy and Medical

Partial reinforcement components for wind turbine blades, medical equipment housings, etc.

HP-RTM·Composite Material Molding Hydraulic Press



| Performance features

- HP-RTM is high pressure resin transfer molding. It refers to the use of high pressure resin hedge mixed and injected into a vacuum closed mold with fiber reinforced materials and prefabricated carbon parts, through the resin flow filling, impregnation, curing and stripping, to obtain the composite product molding process.

| Optional extras

- Full servo system
- Heating system
- Vacuum system
- Four corner leveling system
- Injection system linkage control

| Application Areas

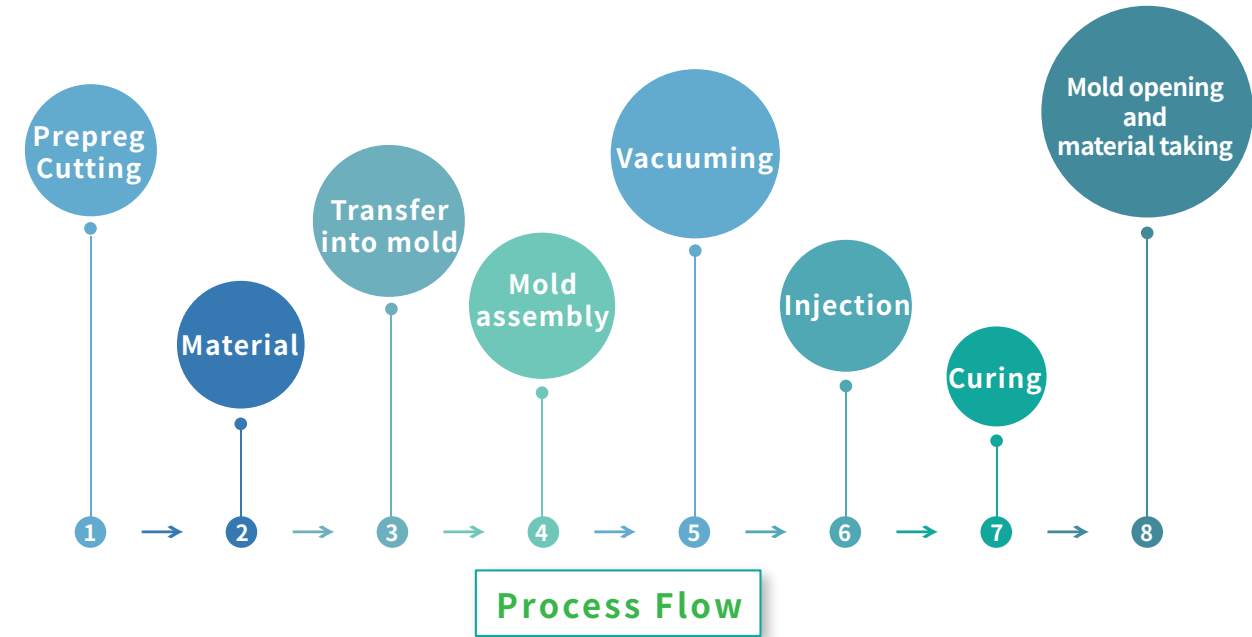
- HP-RTM molding process is one of the composite material molding processes that is now widely used in many industries. Compared with the traditional RTM process, its advantages are low cost, short cycle, large batch, high-quality production (good part surface). It is used in many industries such as automobile manufacturing, shipbuilding, aircraft manufacturing, agricultural machinery, railway transportation, wind power generation, and sporting goods.

SQRTM·Equal quality resin transfer molding hydraulic press



Performance features

- High Precision and Efficient Filling**
The servo hydraulic system supports multi-segment pressure/speed control, combined with high-precision molds (tolerance $\pm 0.1\text{mm}$), resulting in accurate product dimensions, high stability, and excellent surface finish.
- Energy Saving, Environmental Protection, and Automated Production**
Closed mold operation reduces resin volatilization and VOC emissions, meeting environmental requirements; the screw pump, combined with servo drive technology, reduces energy consumption by 20%-30%.
Integrated robotic arm automatically lays out fiber preforms, supporting rapid mold change systems (such as Lite RTM vacuum assistance), increasing production cycle time by 30%.
- Process Flexibility and Temperature Control**
The mold temperature controller provides precise temperature control ($\pm 1^\circ\text{C}$), supporting rapid heating/cooling response to ensure uniform resin curing and extended mold life, suitable for materials with high thermal conductivity such as carbon fiber;
programmable parameter adjustment (such as injection pressure and curing time) adapts to different resin systems (epoxy, polyurethane, etc.) and complex structural requirements.
- Modular Design and Intelligent Management**
Modular mold components (mandrel, end cover plate) support quick disassembly and maintenance, reducing downtime;
Integrated PLC/SCADA system monitors process data (pressure, temperature, flow) in real time, supports MES/ERP integration, and realizes digital production management.



Supporting equipment

- Vacuum tank
- Glue dispensing machine
- Cutting machine
- Oil temperature controller

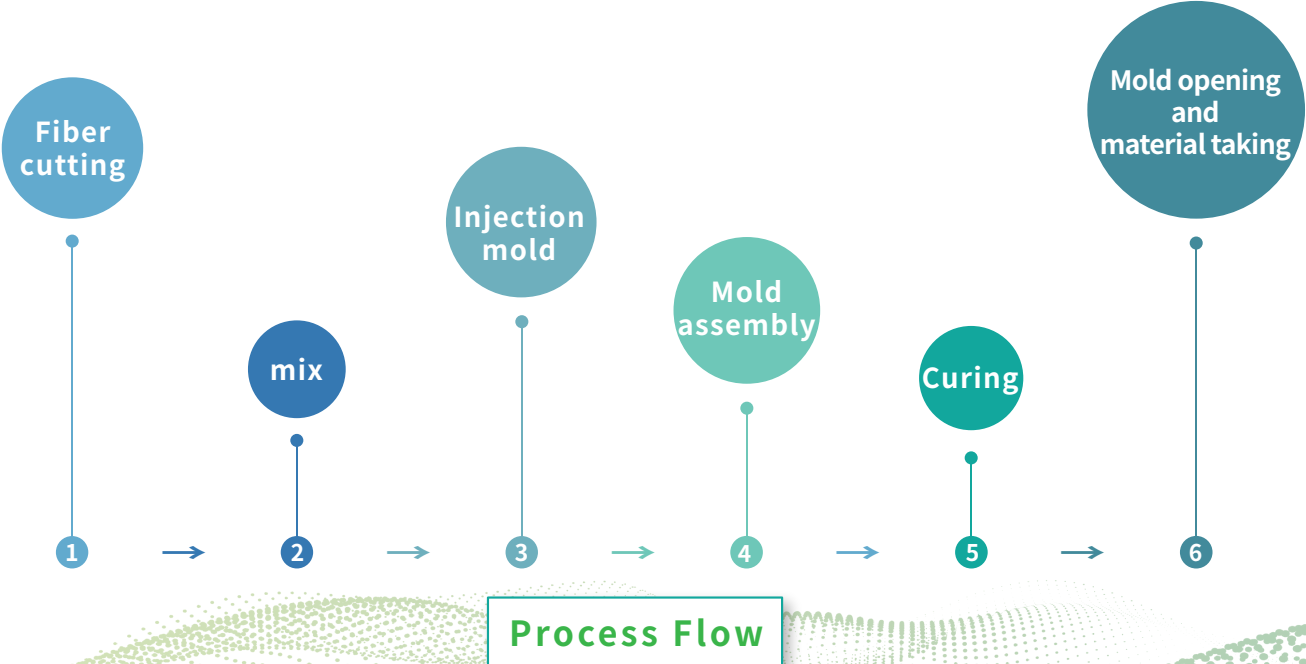
Optional extras

- Mold changing trolley
- Exhaust gas collection system
- Four-corner leveling system
- Space management system
- Composite material complete process system

Application Areas

- Automotive Industry**
Lightweight structural components: battery trays, roofs, engine hoods (e.g., BMW i series carbon fiber components).
- Aerospace**
High-strength composite material components: wings, fairings, doors (requiring high temperature and pressure resistance).
- New Energy and Power Equipment**
Localized reinforcement of wind turbine blades, insulating sleeves, high-voltage electrical encapsulation.
- Construction and Rail Transportation**
High-speed rail interior panels, composite material panels for building exteriors (large size, high weather resistance requirements).
- Medical and Consumer Electronics**
Medical equipment housings, structural components for high-end electronic products (high surface precision, impact resistance).

LFI·Long fiber reinforced injection molding hydraulic press



Performance features

• High Strength and Lightweight Advantages

Long fibers (5-25mm) are uniformly dispersed in the substrate (polyurethane/epoxy resin), improving the impact resistance and bending strength of the finished product by 30%-50%, suitable for dynamic load scenarios;

Adjustable fiber content (20%-60%) and low density (1.2-1.8g/cm³) achieve lightweight structure (over 40% weight reduction compared to metal).

• High-Efficiency Molding and Process Compatibility

Integrated mixing-injection process, fast production cycle (single-piece molding time 3-10 min utes), supports complex three-dimensional structures (such as automotive interior parts with rein forcing ribs); Compatible with multiple resin systems (polyurethane, nylon, etc.) and fiber types (glass fiber, carbon fiber, natural fibers), adapting to diverse needs.

• Energy Saving, Environmental Protection, and Low Waste Rate

Closed-mold molding reduces raw material volatilization (VOC emissions reduced by over 50%), waste rate <5% (1/3 of open-mold processes);

Dynamic mixing head precisely controls the ratio (A/B component error <1%), avoiding material waste.

• Automation and Intelligent Control

Integrated robotic arm automatically lays out fiber felt/preforms, supporting continuous production; PLC system monitors injection pressure, temperature, and fiber distribution in real time to ensure process stability.

Supporting equipment

- Fiber cutting machine
- Mixing machine
- Injection/jetting

Optional extras

- Four-corner leveling system
- Exhaust gas collection system
- Mold changing trolley
- Space management system
- Composite material complete process system

Application Areas

• Automotive Industry

Lightweight components such as dashboard frames, door panels, seat supports (e.g., BMW MINI interior parts), and truck roofs.

• Construction and Engineering Machinery

Construction formwork, forklift skid plates, and container flooring (high impact resistance and corrosion resistance requirements).

• Home Appliances and Consumer Electronics

Washing machine drum supports, air conditioner housings, and luggage compartment frames (smooth surface, no need for secondary coating).

• New Energy and Environmental Protection Equipment

Wind turbine protective covers and wastewater treatment tanks (chemical corrosion resistance and long service life).

Carbon fiber forming hydraulic press



Performance features

- The carbon fiber forming hydraulic press combines the structure of a four-column hydraulic press or a frame hydraulic press, and is equipped with a hot plate and heating device to achieve pressurization at high temperatures;
- Its main features are high temperature uniformity and strong controllability of heating and cooling rates;
- It is mainly used in rapid molding of carbon fiber preregs, flat pressing of composite materials, and other molding processes.



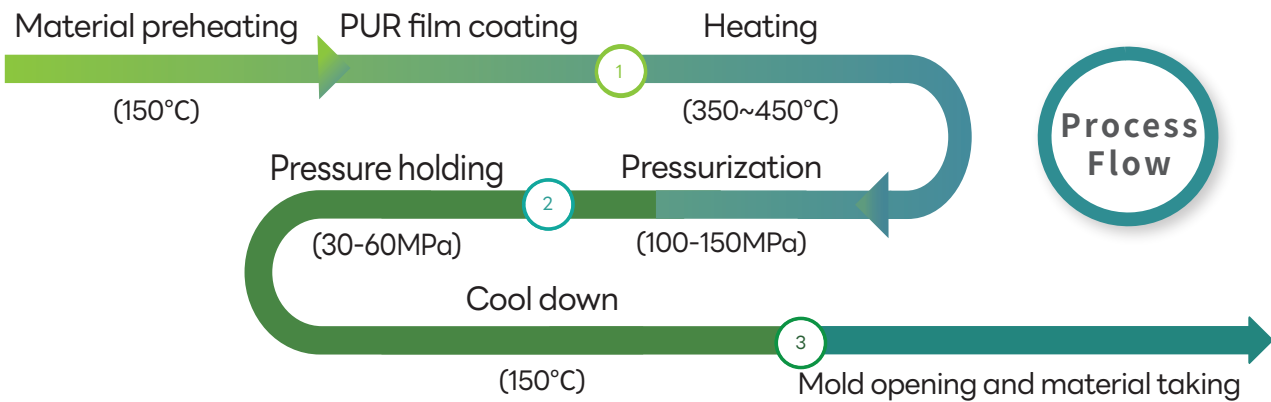
Customization range

- Temperature control customization range: ambient temperature ~ 400°C;
- Equipment Structure: Frame type, four-column type, gantry type, box type, laminate type;
- Heating Method: Hot plate, hot box (1. Electric heating and water cooling; 2. Heat transfer oil heating and cooling);
- Molding Method: Constant pressure molding, constant stroke molding, pressure and temperature ramp control molding, pressure and temperature curve control molding;
- Other Optional Functions: Data recording (exportable and printable), auxiliary worktable, high-pressure injection system, automatic mold opening mechanism.

Application Areas

- Carbon fiber molding hydraulic presses are mainly suitable for compression molding of carbon fiber materials. For high-precision products, a frame structure is recommended;
- The machine is used in industries such as automotive (bumpers, underbody protection plates, etc.), aerospace, rail transportation (railway vehicles, high-speed train interiors), as well as home furnishings, power, sanitary ware, and environmental protection.

PEEK·Polyetheretherketone Molding Hydraulic Press



Performance features

- Precise High-Temperature and High-Pressure Control**
Compression molding temperature must reach 343-353°C (PEEK melting point), supporting long-term high-temperature stability and ensuring full melting and crystallization of the material;
The hydraulic system has a wide pressure range (20-100MPa) and multi-stage pressure adjustment to adapt to the molding needs of products with different thicknesses and complexities.
- Material Compatibility and Stability**
Suitable for pure PEEK, carbon fiber/PEEK composites, glass fiber reinforced PEEK, etc., with adjustable fiber content (20-60%) to meet high strength and lightweight requirements;
The addition of antioxidants (such as antioxidants 330 and 9228) supports the material's resistance to oxidative degradation during high-temperature processing, improving the stability of product performance.
- High Efficiency, Energy Saving, and Automation**
The servo hydraulic system is energy-saving and noise-reducing, combined with rapid mold opening and closing technology, resulting in a fast production cycle (5-30 minutes per piece);
Integrated automated feeding and picking robotic arms reduce manual intervention and are suitable for mass production.
- Mold and Temperature Control Optimization**
The mold is designed for high temperature resistance (long-term operating temperature $\geq 250^{\circ}\text{C}$), and the surface coating treatment improves corrosion resistance and demolding efficiency;
The mold temperature controller has a temperature control accuracy of $\pm 1^{\circ}\text{C}$ and supports rapid heating and cooling to avoid internal stress and deformation in the product.

Supporting equipment

- Drying oven
- Oil temperature controller
- Chiller

Optional extras

- Space management system
- Exhaust gas collection system
- Mold changing trolley
- Four-corner leveling system
- Composite material complete process system

Application Areas

- Aerospace**
High-temperature resistant engine components, wing structural parts (replacing metals with weightreduction of over 40%).
- Medical Equipment**
Orthopedic implants, surgical instruments (biocompatible, X-ray permeable).
- Electronics & Electrical Appliances**
High-temperature insulating components, chip packaging substrates (resistant to short-term high temperatures up to 300°C).
- Industrial Manufacturing**
Chemical pumps and valves, wear-resistant bearings (corrosion resistant, high mechanical strength).
- Automotive Industry**
Lightweight structural components, battery trays, roofs, engine hoods, battery seals, transmission gears (e.g., BMW i series carbon fiber components).

Yz96 Hydraulic Press for Automotive Interior Parts



Performance features

- Working pressure and stroke are adjustable within a specified range according to process requirements;
- Large worktable, high speed, and uniform product pressure; PLC automatic control ensures convenient operation;
- Safety locking structure on the slider and photoelectric protection device installed in front of the worktable ensure personal safety during operation, mold changing, and maintenance.



Technical parameters

Project	Unit	160T	200T	250T	315T	400T	500T	630T
Nominal Force	KN	1600	2000	2500	3150	4000	5000	6300
Return Force	KN	300	350	400	430	480	540	610
Rated Pressure	MPa	25	25	25	25	25	25	25
Opening Height	mm	1500	1500	1800	1800	1800	1800	1800
Slide Stroke	mm	1200	1200	1400	1400	1400	1400	1400
Table Dimensions (Left/Right)	mm	2400	2600	2600	2800	3000	3200	3500
Table Dimensions (Front/Back)	mm	1600	1600	1800	1800	2000	2000	2200
Slide Rapid Descending Speed	mm/s	300	300	300	300	300	300	300
Slide Working Speed	mm/s	10-30	10-30	10-30	10-30	10-30	10-30	10-30
Slide Rapid Return Speed	mm/s	200	200	200	200	250	250	300
Motor Power (Approx.)	KW	25	31	31	36	48	60	72

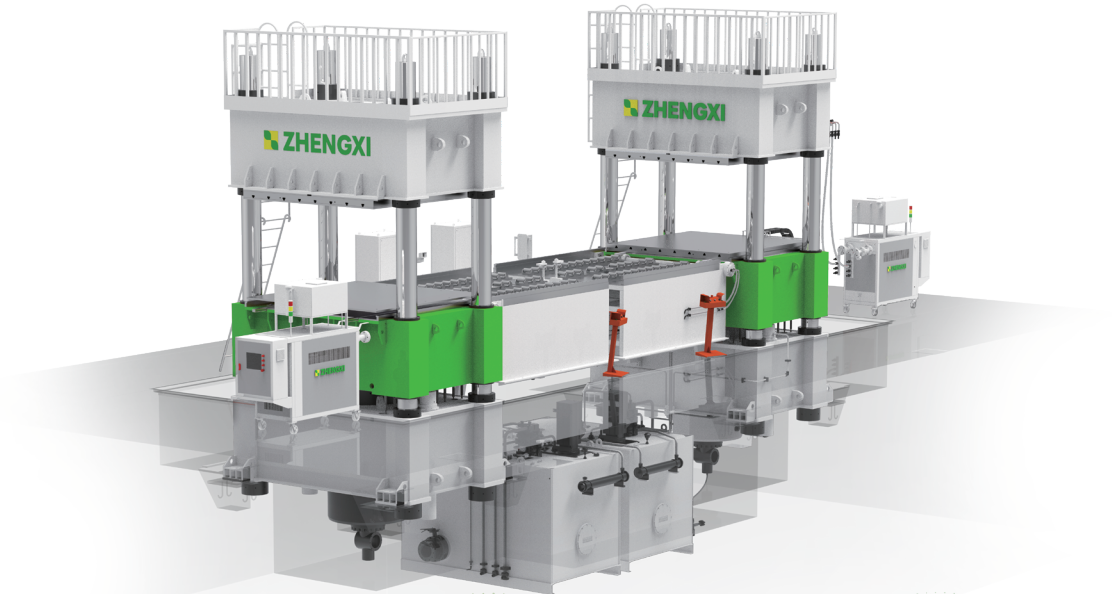
Optional extras

- Exhaust hood
- Electric heating and oil heating functions
- Quick mold change, mold lifter, mold clamp

Application Areas

- This series of hydraulic presses is designed specifically for the automotive interior parts industry and is suitable for processes such as pressing, trimming, blanking, and foaming of automotive interior materials (carpets, headliners, storage boxes, sound insulation cotton).

Flat vulcanizing machine



Technical parameters

Project	Unit	315T	500T	630T	800T	1000T	1200T	1600T	2000T	2500T	3000T	3500T	4000T	5000T
Pressurization capacity	KN	3150	5000	6300	8000	10000	12000	16000	20000	25000	30000	35000	40000	50000
Mold opening force	KN	450	580	650	1200	1600	2000	2500	3150	4000	4000	5000	6000	6000
Working pressure	MPa	25	25	25	25	25	25	25	25	25	25	25	25	25
Opening height	mm	1200	1400	1600	2000	2200	2400	2600	3000	3000	3200	3200	3400	3400
Slide stroke	mm	800	1000	1200	1400	1600	1800	2000	2200	2200	2200	2200	2400	2400
Worktable size (left/right)	mm	1260	1400	1600	2200	2600	2800	3000	3200	3600	3600	3800	4000	4000
Worktable size (front/back)	mm	1200	1400	1600	1600	1800	2000	2000	2000	2400	2400	2600	3000	3000
Slide rapid ascent speed	mm/s	100	100	100	100	100	100	100	100	100	100	100	100	100
Slide pressing speed	mm/s	3-8	3-8	3-8	3-8	3-8	3-8	3-8	3-8	3-8	3-8	3-8	3-8	3-8
Slide rapid return speed	mm/s	80	100	100	100	100	100	100	100	100	100	100	100	100
Main motor power (approx.)	KW	7.9	15	15	19	25	31	36	48	60	72	96	96	120

Performance features

- The moving mold plate features rapid ascent, slow locking, and rapid descent; the fast-to-slow rotation during mold closing and venting can be adjusted separately, improving production efficiency;
- During product vulcanization, the oil pump motor stops working, and it has an automatic pressure compensation function and an oil pump shutdown delay function, resulting in a more rational and reliable oil circuit configuration;
- The number of venting cycles, venting time, heating temperature, and vulcanization time can all be set, making operation convenient. It has both manual and semi-automatic operating modes;
- Temperature and pressure curve output allows for process traceability.

Optional extras

- Removable platform
- Adjustable opening
- Vacuum system
- Mold temperature controller/water mixing machine

Application Areas

- This series of vulcanizing machines is used for vulcanizing and molding various rubber products. It features simple structure, high pressure, wide applicability, and high efficiency. It can also be used for pressing and molding thermosetting plastics, foams, resins, bakelite, thin metals, building materials, and other molded products. It is suitable for the production of thermal insulation components in the aerospace field.

SMC·Automated Molding Production Line



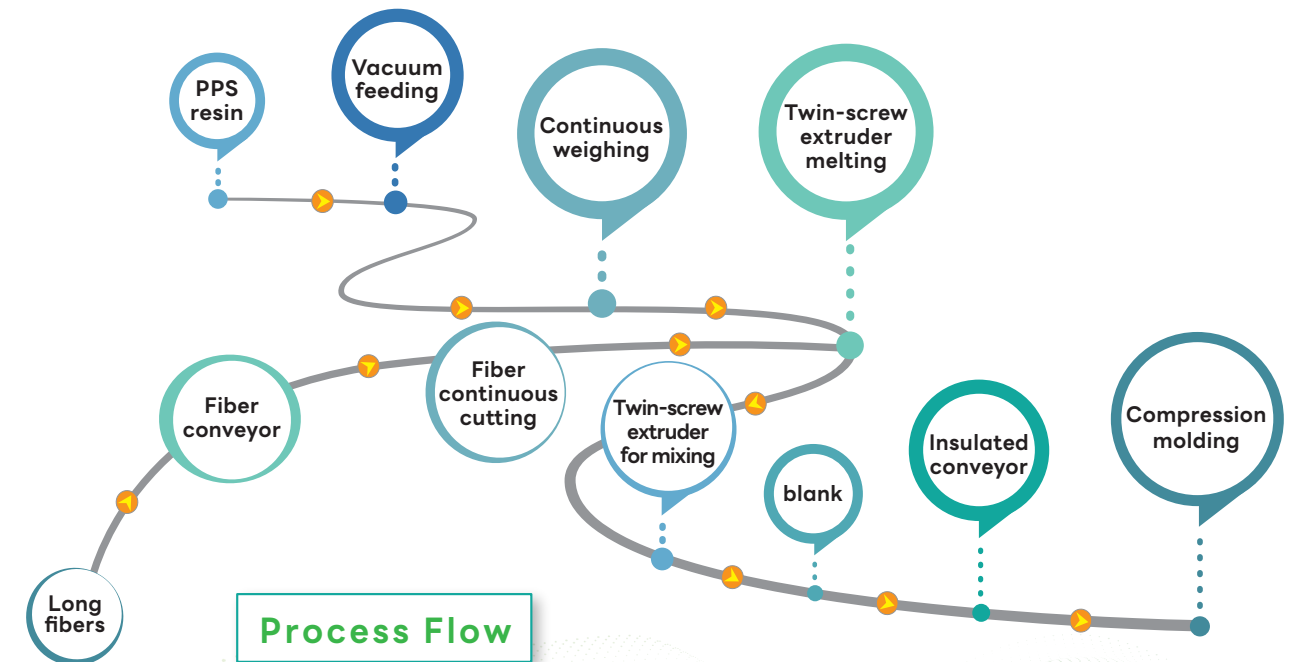
Performance features

- The SMC fully automated molding production line mainly consists of a molding machine, an automatic sheet cutter, and loading/unloading robots, enabling automated production of products using SMC molding processes;
- High product molding consistency, effectively improving product quality;
- The configured automatic sheet cutter can be equipped with a weighing function;
- High degree of automation, reducing labor costs.

Application Areas

- The SMC automated molding production line is mainly used for the mass production of sheet composite material molding processes, and can produce various SMC molding products. It is widely used in industries such as transportation vehicles, construction, electronics/electrical, and real estate.

LFT-D·Automated Molding Production Line



Performance features

- Detachable pre-tensioned frame structure, ensuring high overall machine rigidity and easy installation;
- Adjustable guide rails provide high precision and strong resistance to eccentric loads;
- Hydraulic system mounted on top of the machine with a maintenance platform, environmentally friendly, low-noise, and easy to maintain;
- Rapid up-and-down speed up to 1000mm/second, enabling fast high-pressure molding and a short molding cycle;
- Accumulator for rapid pressure build-up, robot-assisted material feeding and unloading, ensuring safety and stability;
- Rapid waste recycling system;
- Servo high-speed precision control system, with adjustable slow mold opening speed, fast response, and high energy efficiency;
- Dual closed-loop servo system with pressure control accuracy up to $\pm 0.05\text{Mpa}$ and position control accuracy up to $\pm 0.01\text{mm}$.

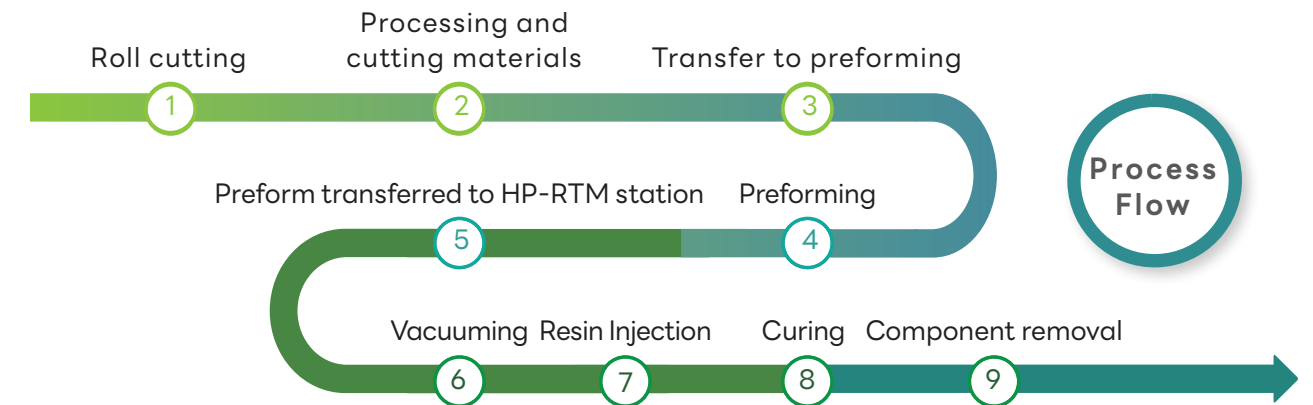
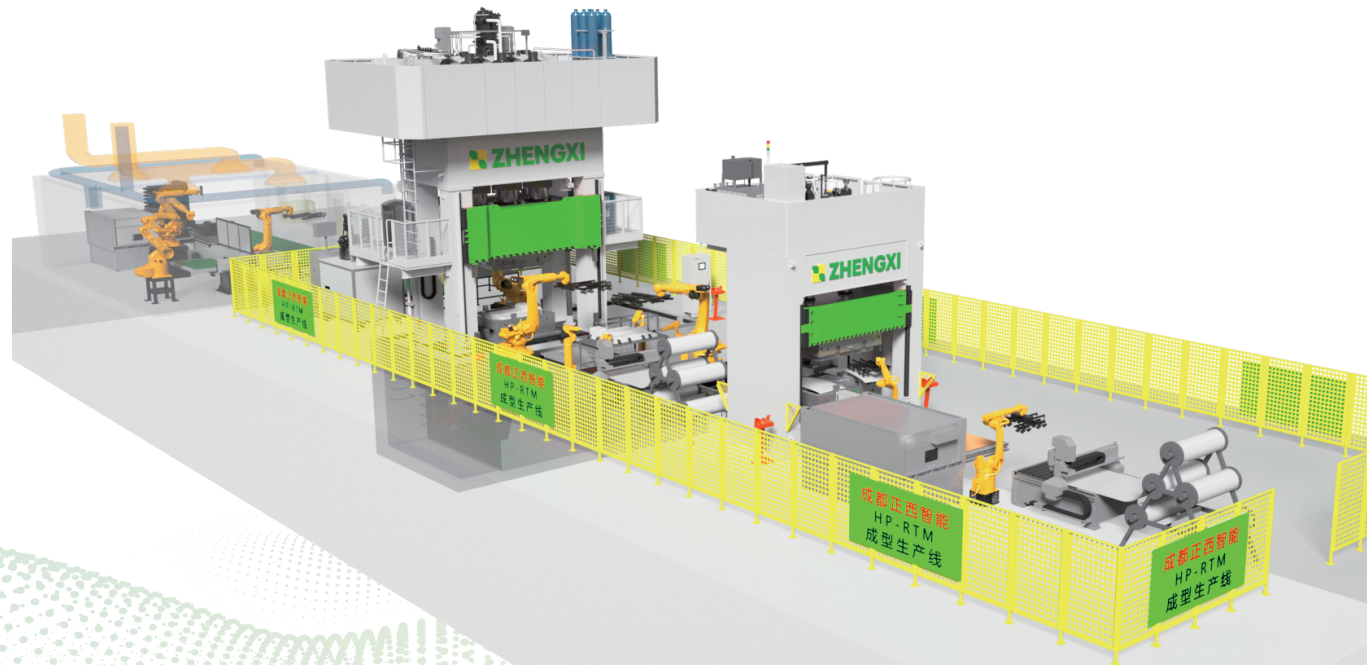
Optional extras

- Four-corner leveling system
- Exhaust gas collection system
- Mold changing trolley
- Space management system
- Composite material complete process system

Application Areas

- LFT-D molding technology features high efficiency, high configuration, high reliability, and low energy consumption. It is widely used in various industrial and civilian fields such as automotive, machinery, construction, sports and entertainment, electrical and electronic, logistics, and horticulture.

HP-RTM·Automated Molding Production Line



Performance features

• High Precision and Efficient Filling

Servo-driven electric injection units achieve multi-segment precise pressure/flow control, coupled with high-rigidity molds (tolerance $\pm 0.1\text{mm}$), ensuring dimensional stability and a defect-free surface; Ultra-high pressure (up to 150bar) injection technology enables second-level rapid mold filling, significantly improving the impregnation efficiency and production speed of dense fiber preforms.

• Energy Saving, Environmental Protection, and Automation Integration

Closed-mold injection molding effectively seals volatile organic compounds (VOCs) such as styrene, reducing VOC emissions by 90% compared to open-mold processes, meeting stringent environmental standards; Integrated robots automatically complete preform placement, mold closing, and resin injection, achieving fully unmanned operation and increasing production efficiency by over 40%.

• Process Adaptability and Temperature Control Technology

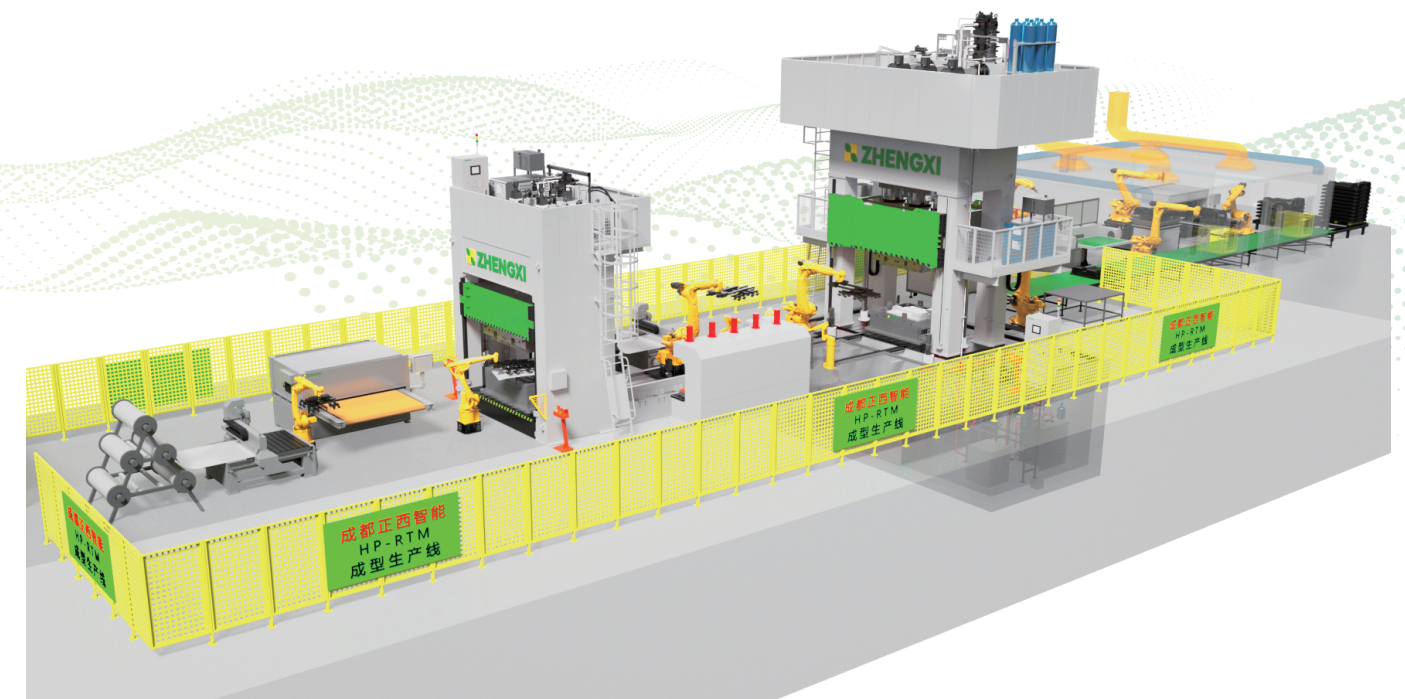
Multi-zone mold temperature controllers achieve a control accuracy of $\pm 0.5^\circ\text{C}$, supporting a wide temperature range of 30°C - 180°C , adapting to the curing requirements of different resins such as epoxy and polyurethane;

Programmable multi-segment pressure-flow curves allow for flexible adjustment of injection strategies, compatible with various reinforcing material structures from short fibers to continuous fibers.

• Modular and Intelligent Interconnection

Modular mold design supports rapid replacement of cavity and runner systems, reducing product model switching time by 60% and lowering maintenance costs;

The central PLC system collects pressure/temperature/flow data in real time, enabling process parameter traceability and remote operation and maintenance management through a cloud platform.



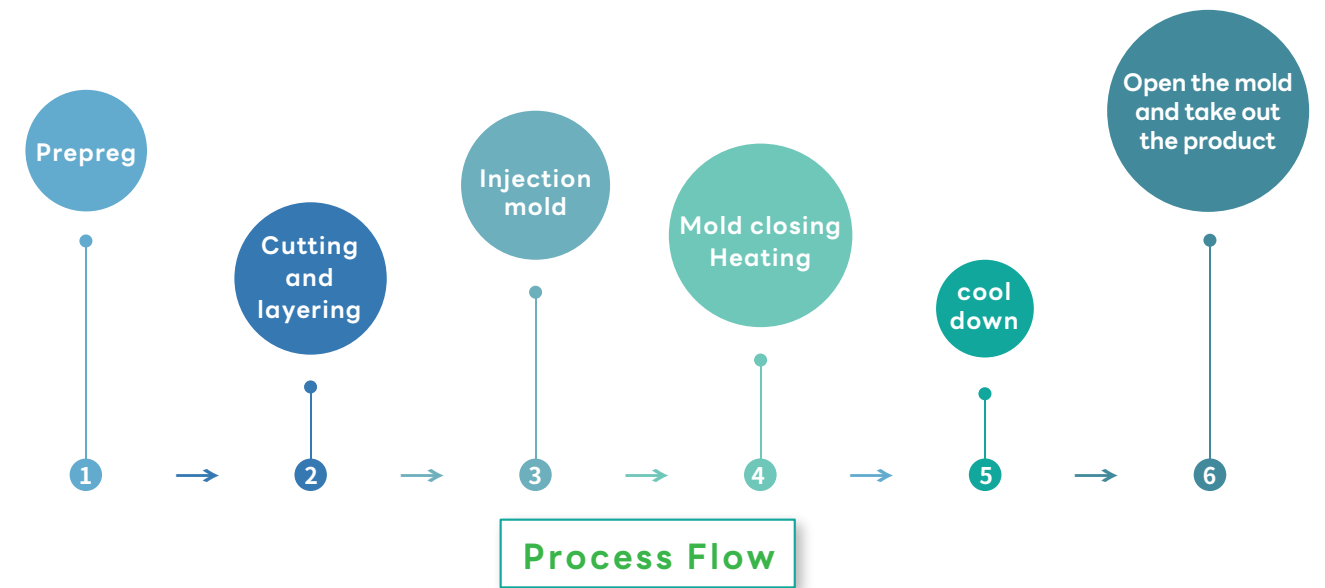
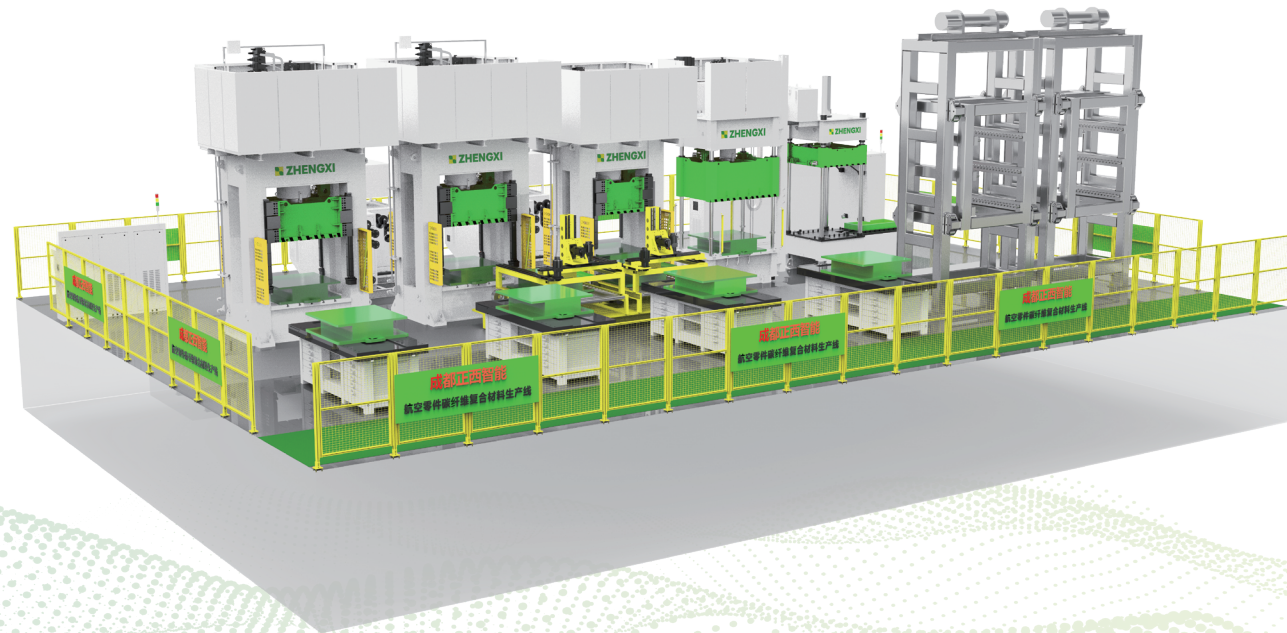
Optional extras

- Four-corner leveling system
- Exhaust gas collection system
- Mold changing trolley
- Space management system
- Composite material complete process system

Application Areas

- HP-RTM production lines are mainly used for the mass production of high-performance thermosetting composite material parts. Due to the characteristics of HP-RTM such as high-pressure injection and rapid curing, it can achieve low-cost, high-quality mass production and has applications in many industries such as automobile manufacturing, shipbuilding, aircraft manufacturing, agricultural machinery, railway transportation, wind power generation, and sporting goods.

PCM·Automated Molding Production Line



Performance features

• High-Precision Pre-molding

Utilizing servo electric cylinder drive and multi-segment pressure curve control, coupled with precision molds (tolerance $\pm 0.1\text{mm}$), it achieves a product thickness deviation $\leq 0.05\text{mm}$ and a surface roughness $Ra \leq 0.2\mu\text{m}$.

An intelligent pressure compensation system monitors mold cavity pressure changes in real time and automatically adjusts the press parallelism to ensure uniform molding density across large components.

• Energy Saving, Environmental Protection, and Fully Automated Production

Closed-mold molding reduces volatile organic compound (VOC) emissions by more than 85%, and the accompanying waste gas treatment system meets EU environmental standards.

Integrated robots automatically complete prepreg layup, billet transfer, and in-mold positioning, enabling 72-hour continuous unmanned production.

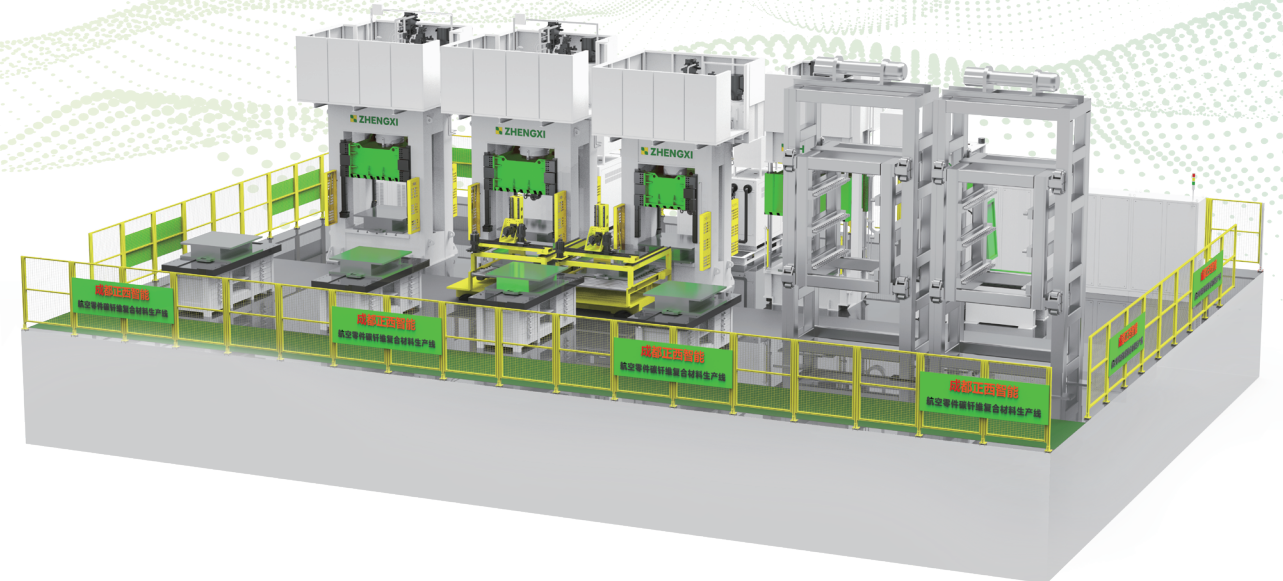
• Process Adaptability and Temperature Control Technology

A multi-zone mold temperature control system (accuracy $\pm 0.8^\circ\text{C}$) supports a wide temperature range of $30\text{--}300^\circ\text{C}$, meeting the curing requirements of different resin systems such as epoxy and phenolic resins. Programmable multi-segment temperature-pressure curves adapt to the molding process requirements of various materials such as carbon fiber prepregs and GMT.

• Intelligent Production Management

Modular mold design supports rapid changeover ($\leq 15\text{min}$), and an RFID mold identification system automatically calls up corresponding process parameters;

The industrial internet platform collects equipment status and process data in real time, and achieves process optimization and predictive maintenance through big data analysis.



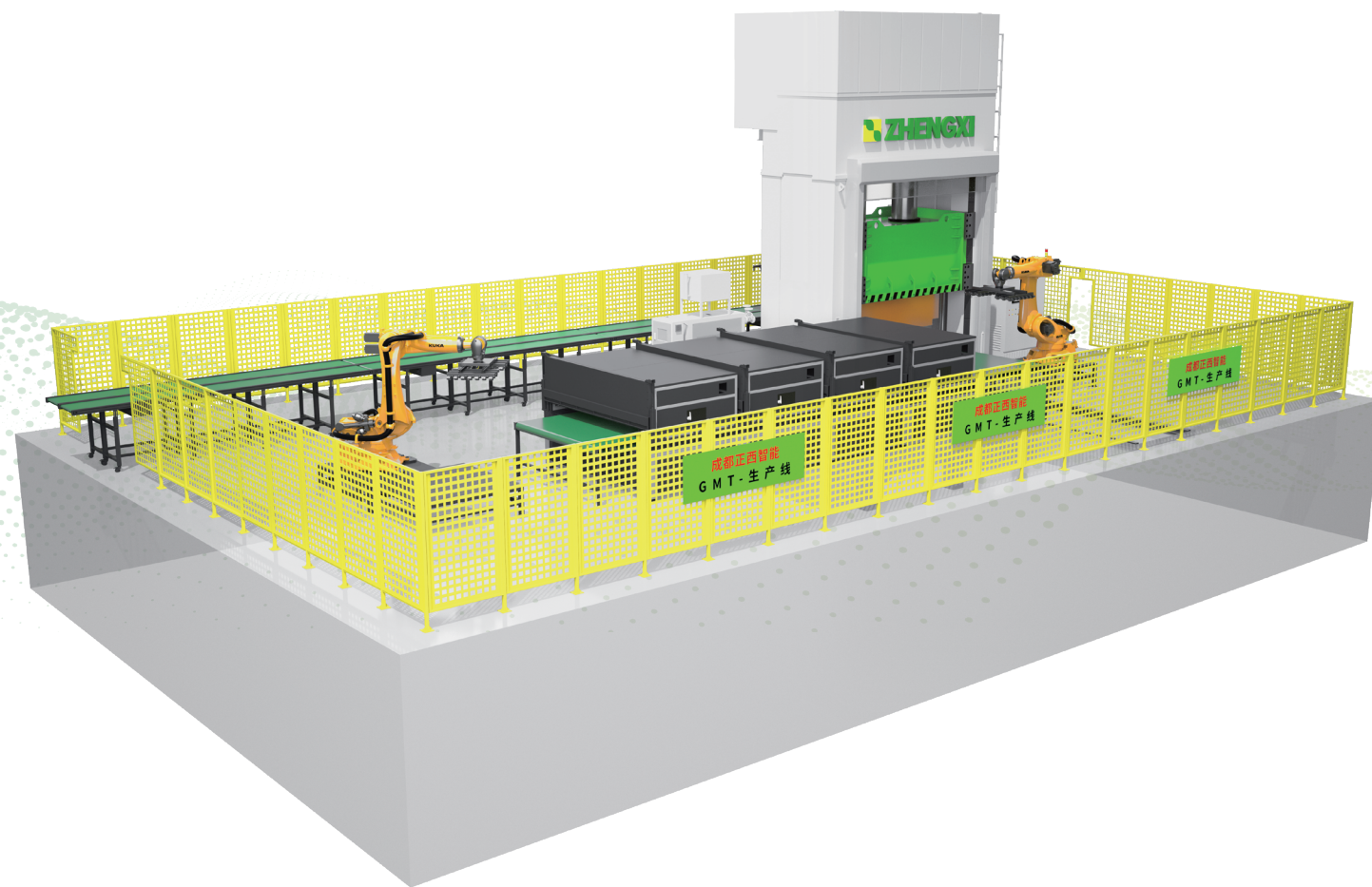
Optional extras

- Four-corner leveling system
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- Mold changing trolley
- Space management system
- Composite material complete process system

Application Areas

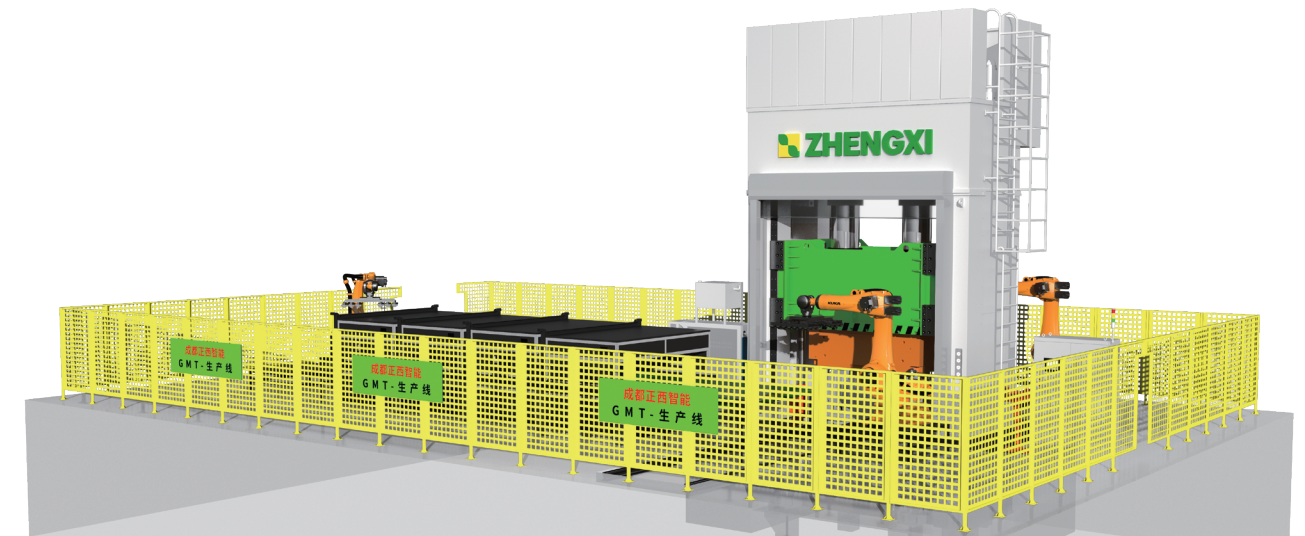
- PCM automated molding production line is an advanced composite material manufacturing technology that uses prepreg for molding, offering advantages such as lightweight, high strength, corrosion resistance, and high stability. This material is widely used in aerospace, new energy vehicles, energy storage systems, sporting goods, and industrial equipment.

GMT· Automated Molding Production Line



| Performance features

- The GMT automated molding production line mainly consists of a molding machine, a continuous heating chamber, and robotic arms, which can automate the production of most GMT molding processes;
- It offers strong product molding consistency, effectively improving product quality;
- It boasts a high degree of automation, reducing labor costs;
- It offers high molding efficiency and high product strength.



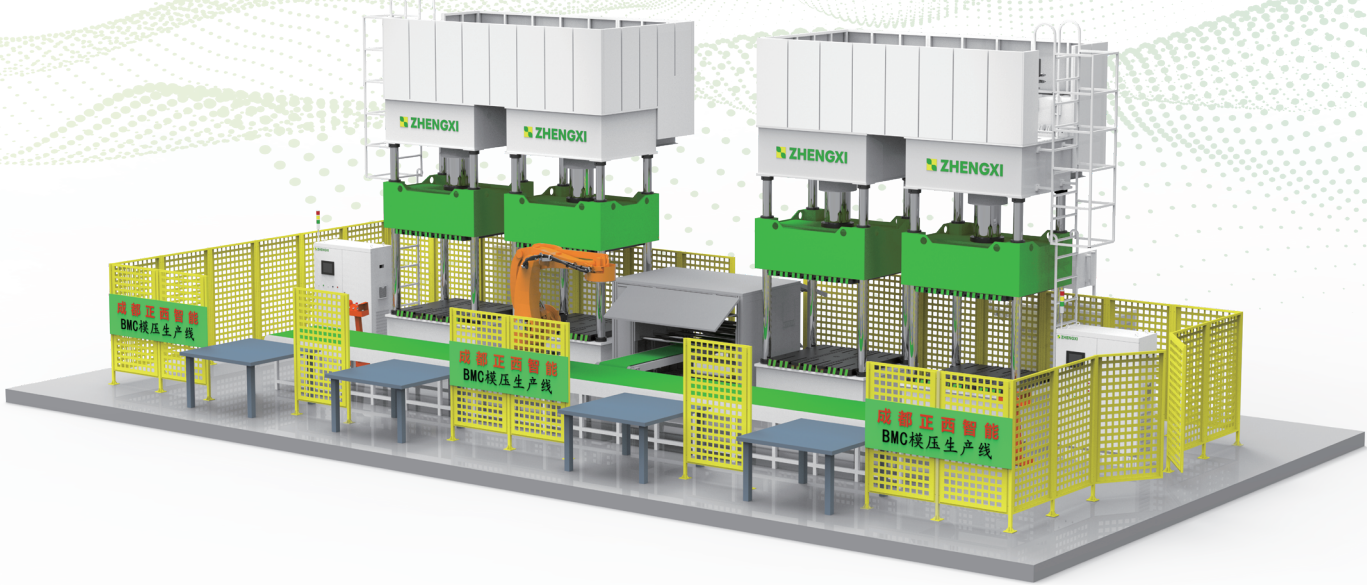
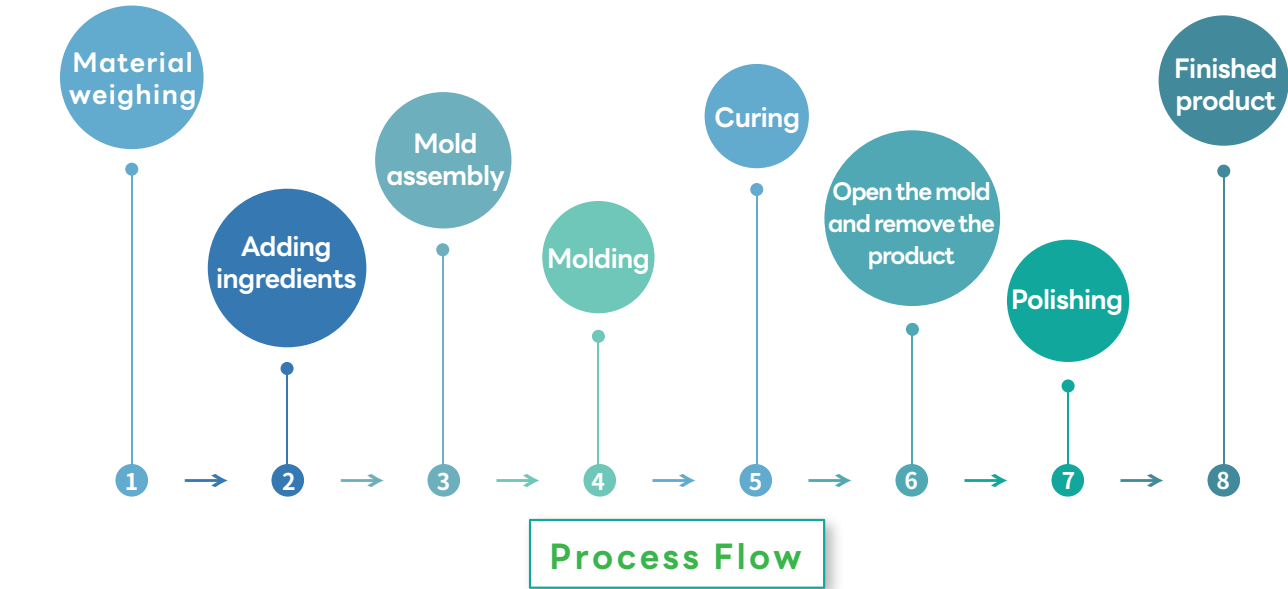
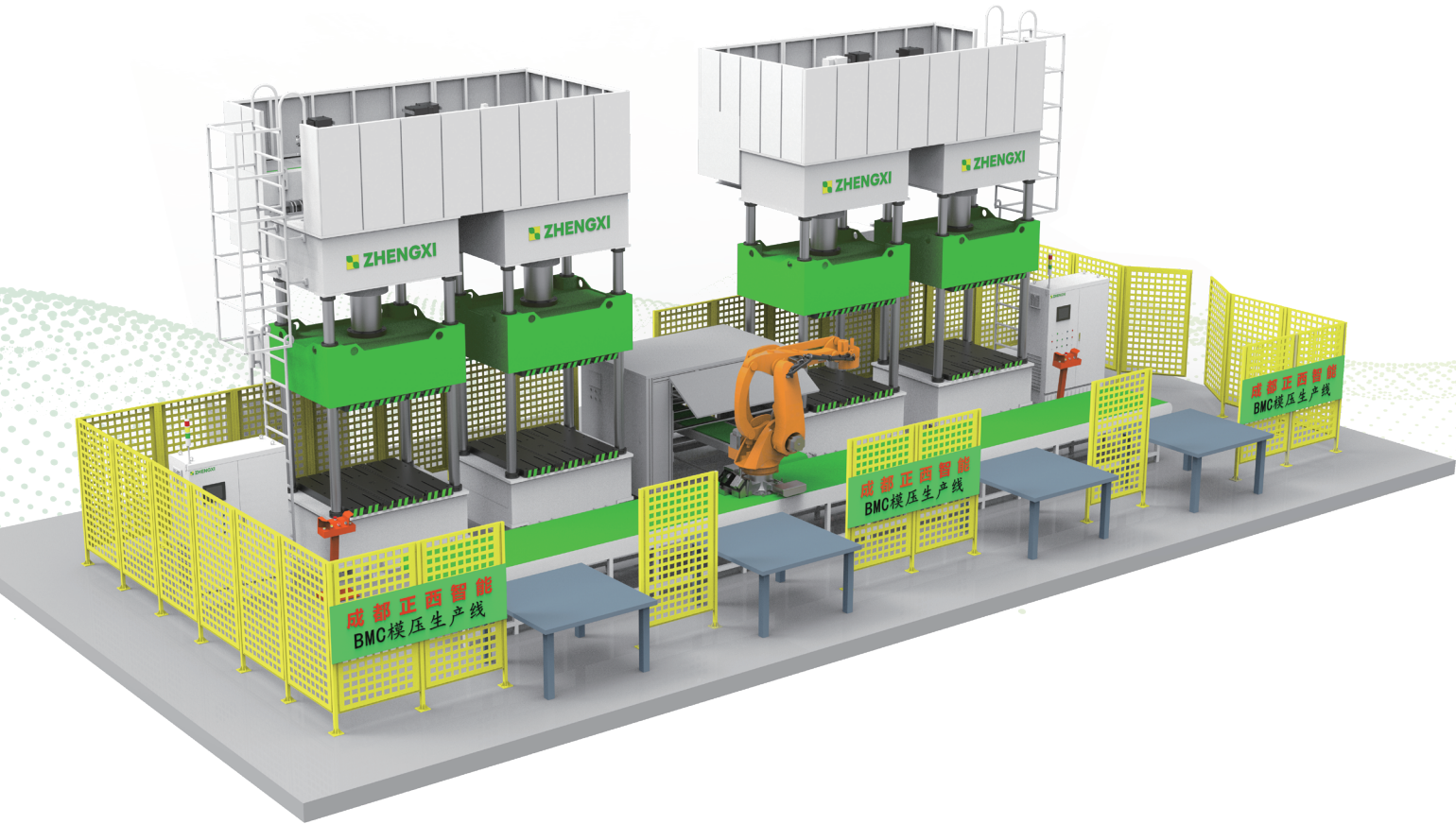
| Advantages and characteristics

- **Higher Strength**
Compared to sheet metal, GMT products have higher specific strength and a density approximately 1/6 that of steel.
- **Stronger Material Stability**
GMT's corrosion resistance, aging resistance, heat insulation, sound insulation, and electrical insulation properties all surpass those of most metal parts.
- **Lower Production Costs and Higher Efficiency**
One-step molding makes it more suitable for products with complex shapes.
- **Advantages over SMC**
Compared to SMC and BMC/DMC: GMT has a longer shelf life; the curing cycle is shorter, 1/3 to 1/4 that of SMC; and it is more recyclable.
- **Market Applications**
Due to its low density and recyclability, driven by lightweighting and energy conservation in the automotive industry, it is mainly used in the production of instrument panel frames, seat cushion frames, bumper liners, engine underbody protection plates, battery brackets, etc.
- **Long Fiber Structure**
Long-fiber GMT has higher strength and rigidity than short-fiber SMC.

| Application Areas

- The GMT automated molding production line is mainly used for the mass production of composite material GMT molding processes, and can produce various GMT-molded products. GMT has the characteristics of fast molding speed, high consistency, low scrap rate, high strength, and high recyclability, and is currently widely used in the automotive and aerospace industries.

BMC/DMC·Automated Molding Production Line



Performance features

- The BMC/DMC automated molding production line mainly consists of a molding machine, a material metering and sizing machine, and a robotic arm, which can automate the production process of most BMC/DMC products.
- High degree of automation, reducing labor costs;
- High molding efficiency and high product strength;
- The configured BMC/DMC material metering and sizing machine can effectively improve product quality.

Optional extras

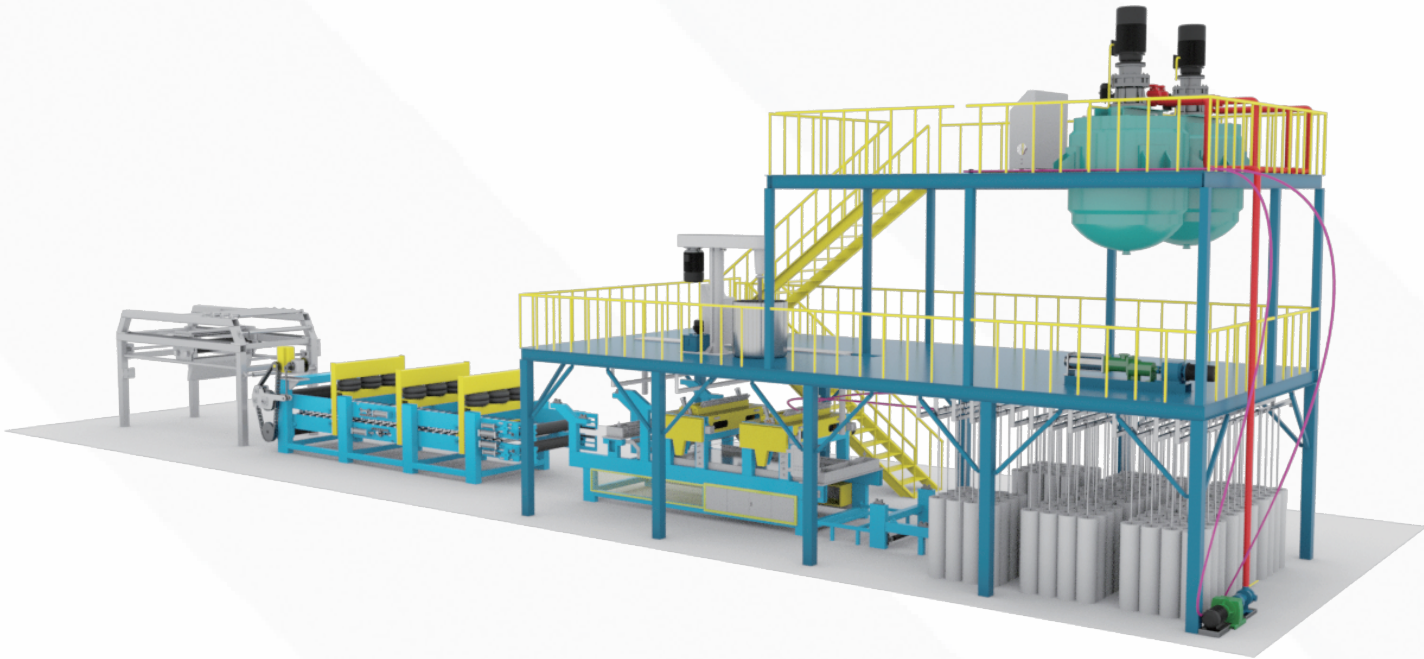
- Robotics & Automation
- Air blowing/vacuuming system
- Film cutting/tearing machine + weighing unit
- Manual mold changing trolley
- Electric mold changing trolley
- Mold temperature controller/mold temperature control system

Application Areas

- BMC/DMC automated molding production lines are mainly used for the mass production of bulk composite materials, and can produce various BMC/DMC molded products. Due to its insulation, rust prevention, corrosion resistance, high hardness, ease of processing, and low cost, BMC is commonly used in electrical components, building structural parts, and various housings.

Supporting equipment

Sheet machine



Product Introduction

- Automated equipment for continuous SMC sheet production, consisting of four sections: cutting, coating, impregnation, and winding, supporting a 1200mm width (customizable). Requires a resin supply system and temperature and humidity control environment, and works in tandem with a hydraulic press.

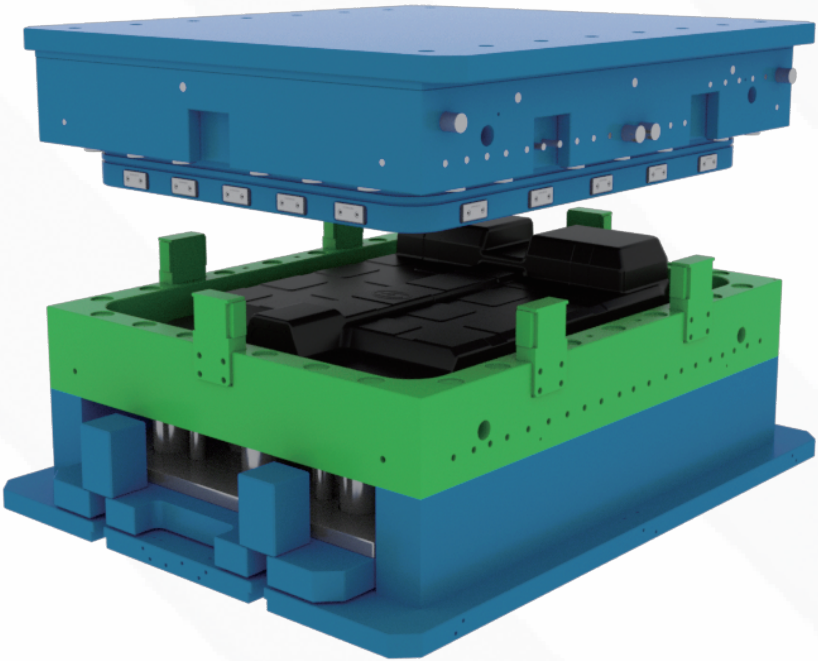
Performance Characteristics

- Automated control reduces manual operation and improves production efficiency;
- Uniform impregnation and controllable tension ensure consistent sheet quality.

Application Areas

- Primarily used in SMC sheet production in the automotive, building materials, and electrical industries. Electrical protection devices ensure personal safety during operation, mold changing, and maintenance.

mold



Product Introduction

- Custom-made molds are available, including male and female molds. The material cavity is mostly located in the female mold, and guide pillars ensure precise closure. A medium mold is optional to handle complex needs, including cavities, feeding chambers, guides, and temperature control mechanisms. It must be compatible with the pressure, stroke, and temperature systems of a hydraulic press.

Performance Characteristics

- Three structural types are available: overflow, semi-overflow, and non-overflow, adaptable to different process requirements.
- High-precision guiding and temperature control systems ensure stable molding quality.

Application Areas

- Suitable for compression molding of composite materials such as SMC, BMC, and GMT.

Supporting equipment

Cutting machine



| Product Introduction

- Used for precise cutting of prepreg or fiber fabric, enabling efficient cutting of set dimensions and complex shapes. Supports CNC operation and various graphic templates, improving cutting accuracy and automation. When used with prepreg racks or fiber placement equipment, it is recommended to configure a dust extraction system to maintain a clean and efficient working environment.

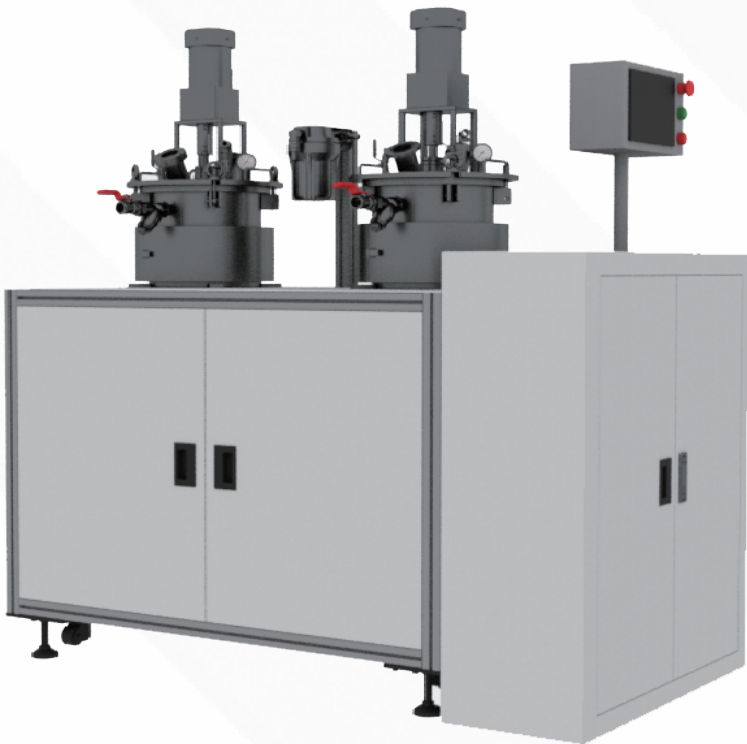
| Performance Characteristics

- High-precision cutting, suitable for a variety of materials;
- CNC system compatible with common design formats, easy to operate.

| Application Areas

- Used for cutting prepregs in the PCM process and preforming fibers in the HP-RTM process.

Glue injection machine



| Product Introduction

- Used for high-pressure injection of a mixture of resin, curing agent, and release agent into the mold cavity. The injection pressure can reach up to 20 MPa (usually within 10 MPa). The tanks for components A, B, and C all have stirring, heating, and vacuum degassing functions. Requires a high-pressure mold and hydraulic press, and the environment must meet the resin storage temperature requirements.

| Performance Characteristics

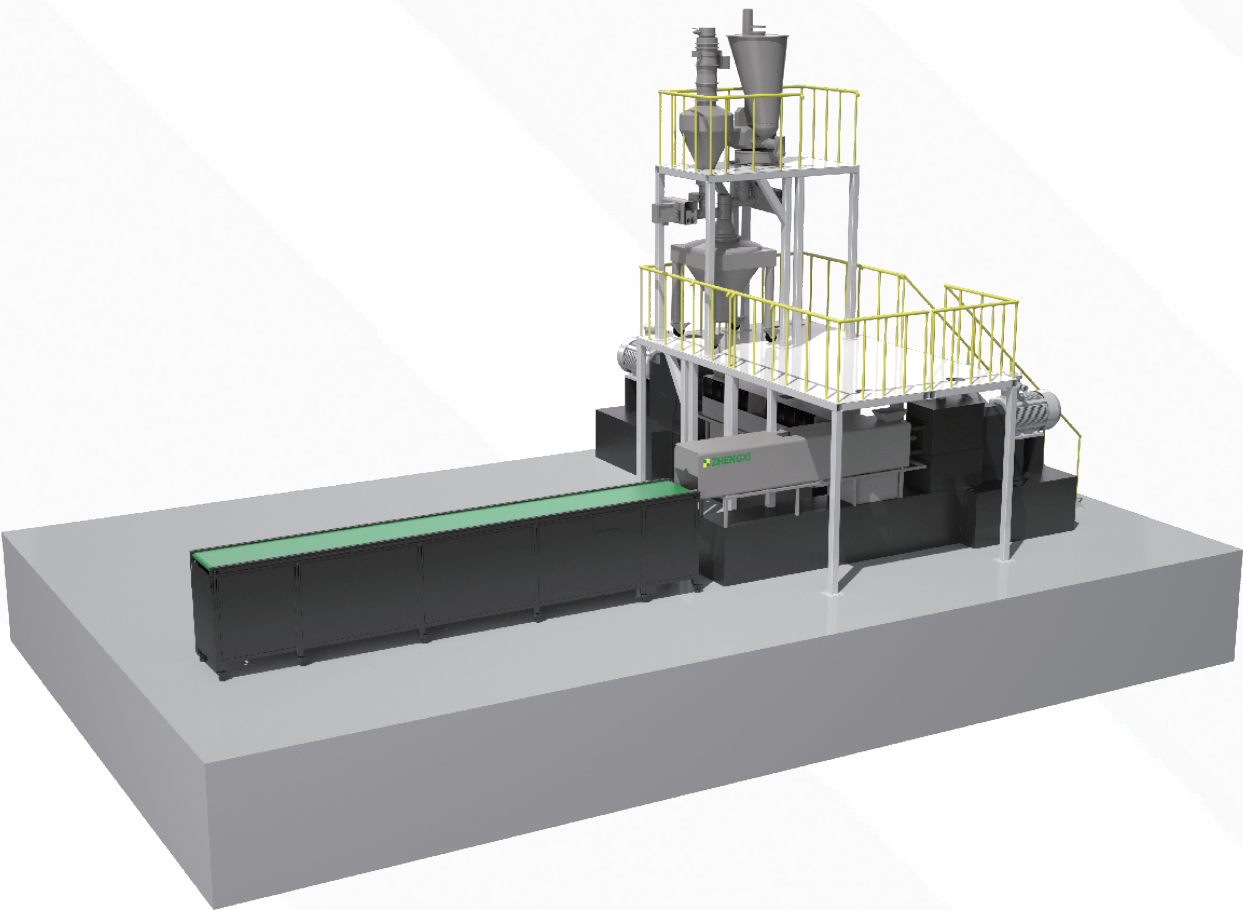
- High-pressure injection, rapid mold filling, three-component independent temperature control and degassing;
- Full pipeline insulation to prevent curing blockage.

| Application Areas

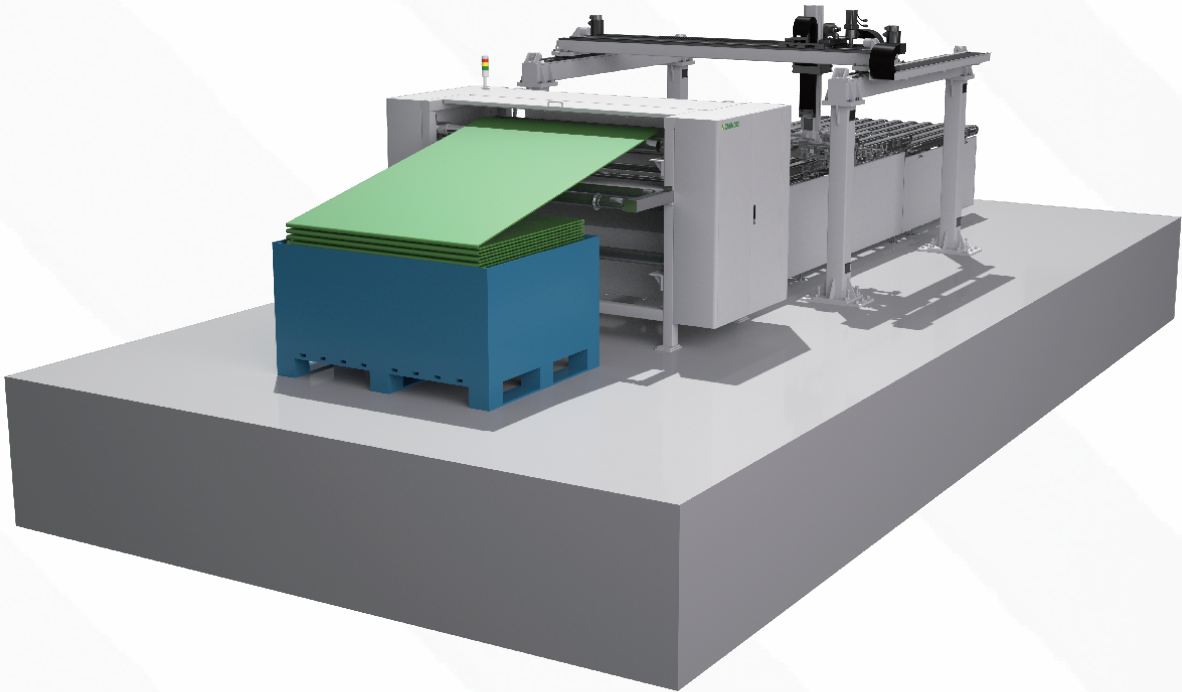
- Molding of lightweight automotive components and aerospace composite materials.

Supporting equipment

Twin-screw extruder



Automatic tearing and slicing machine
intelligent weighing platform



| Product Introduction

- Used in the LFT-D process, the upper stage involves mixing thermoplastic composite materials, while the lower stage completes the coating, shearing, and dispersion of the molten material and glass fiber. The equipment includes a feeding and conveying system. It requires a matching glass fiber yarn rack and pelletizing equipment, and the power load must meet the high power requirements of the equipment.

| Performance Characteristics

- Two-stage design optimizes fiber dispersion and material properties;
- High torque, adaptable to high-filler formulations, and enables automated continuous production.

| Application Areas

- Long fiber reinforced thermoplastic products (such as automotive parts and sporting goods).

| Product Introduction

- Used for automatically completing demolding and high-precision slicing operations after compression molding, integrating an intelligent weighing system to effectively ensure product quality consistency and stability. It needs to be linked with the hydraulic press outlet conveyor belt for seamless integration into the production line, improving overall automation and production efficiency.

| Performance Characteristics

- Automated operation improves post-processing efficiency and accuracy;
- Weighing feedback enables real-time quality monitoring.

| Application Areas

- Post-processing of molded products.

Supporting equipment

Sheet preheater



| Product Introduction

- Used for preheating and softening SMC/RTM sheets, it effectively reduces material viscosity, enhances flowability and filling effect, and improves molding efficiency and quality. It should be located close to the molding station to achieve rapid and seamless transfer, avoid heat loss, and ensure that the preheated sheet enters the mold for pressing in a timely manner.

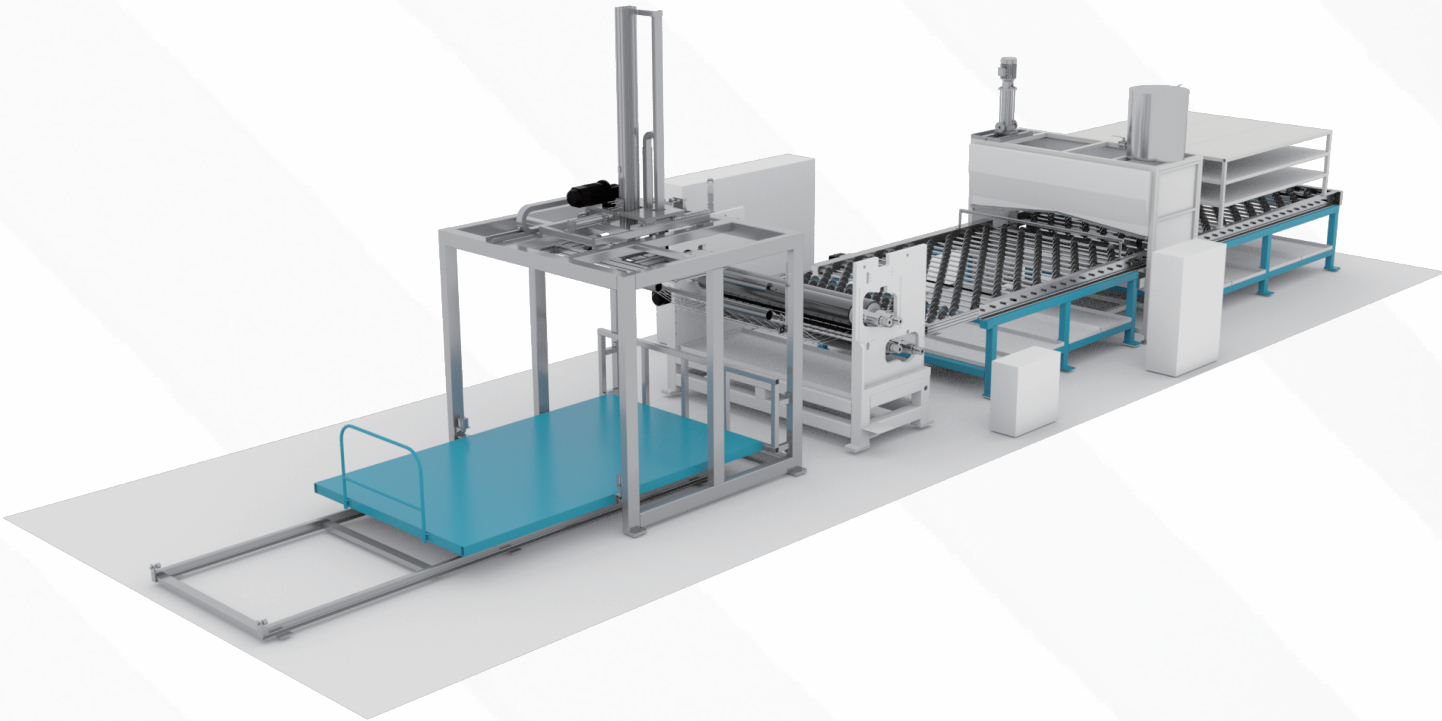
| Performance Characteristics

- Precise temperature control to match material curing characteristics;
- Improves the surface and internal quality of molded products.

| Application Areas

- Pre-treatment of sheet material before SMC/RTM molding.

Automatic wet roller coating line



| Product Introduction

- This equipment is primarily designed for conveying and laminating raw materials in the wet process of ceiling fabrication. The conveyed materials mainly consist of double-sided rolled PU foam, the back substrate of the ceiling, and the front substrate.

| Performance Characteristics

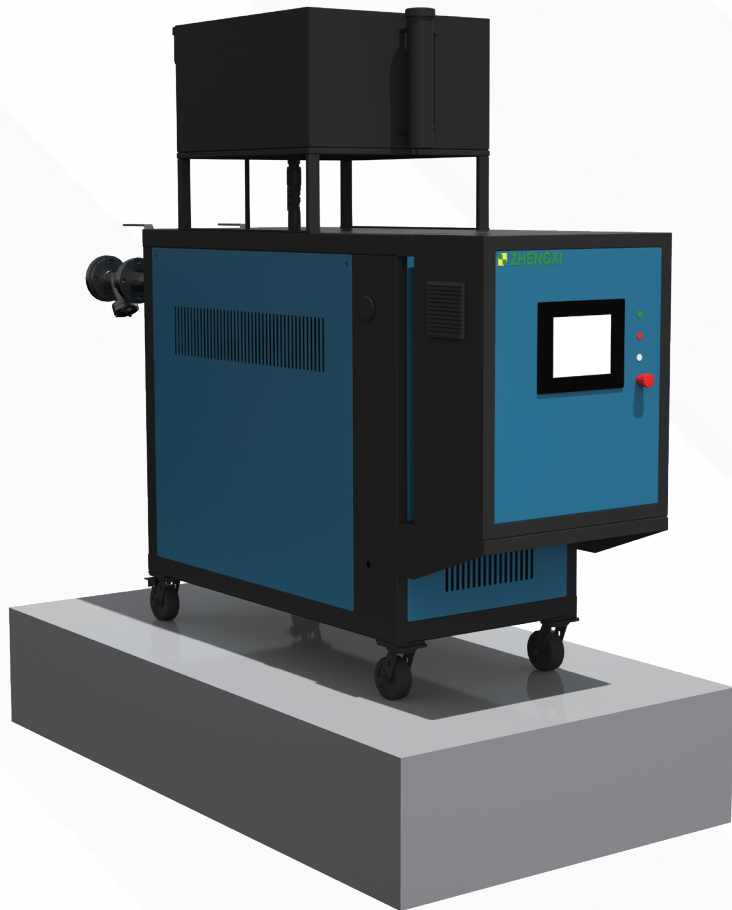
- Uniform impregnation with precise control of adhesive content;
- Stable drying system ensuring prepreg quality.

| Application Areas

- Applications include composite material manufacturing in aerospace, high-end sporting goods, and other industries.

Supporting equipment

Mold temperature controller



| Product Introduction

- Used in injection molding and extrusion processes, providing continuous and stable mold temperature control to ensure product molding quality. The equipment includes heating and cooling units and a pump circulation system. Piping interfaces and temperature control instruments are required; power and water supplies must meet the equipment's operational needs.

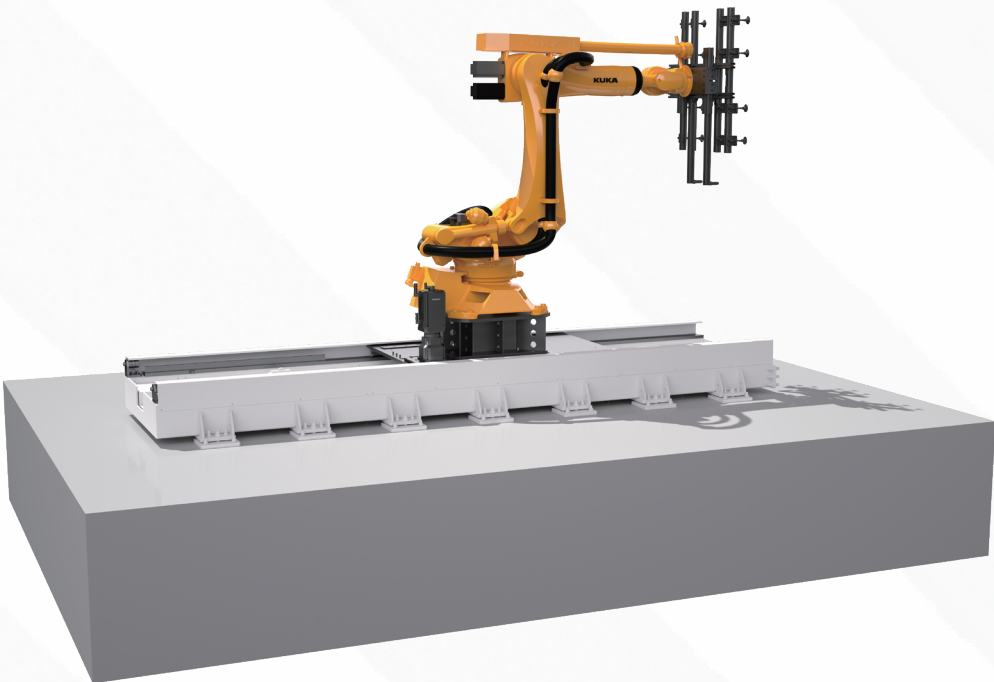
| Performance Characteristics

- High-precision PID temperature control with rapid response and minimal temperature fluctuations;
- High-efficiency heating and cooling capabilities, adaptable to various mold conditions, and automated temperature control.

| Application Areas

- Suitable for the plastics and rubber molding industry (e.g., automotive parts, electronic housings).

Robotic arm



| Product Introduction

- Used in automated production lines for precise workpiece gripping, handling, and positioning. The equipment includes a multi-jointed mechanical body and a servo control system. It requires an end effector and a programming teach pendant, and the power and air supply must meet the demands of high-precision, high-cycle operation.

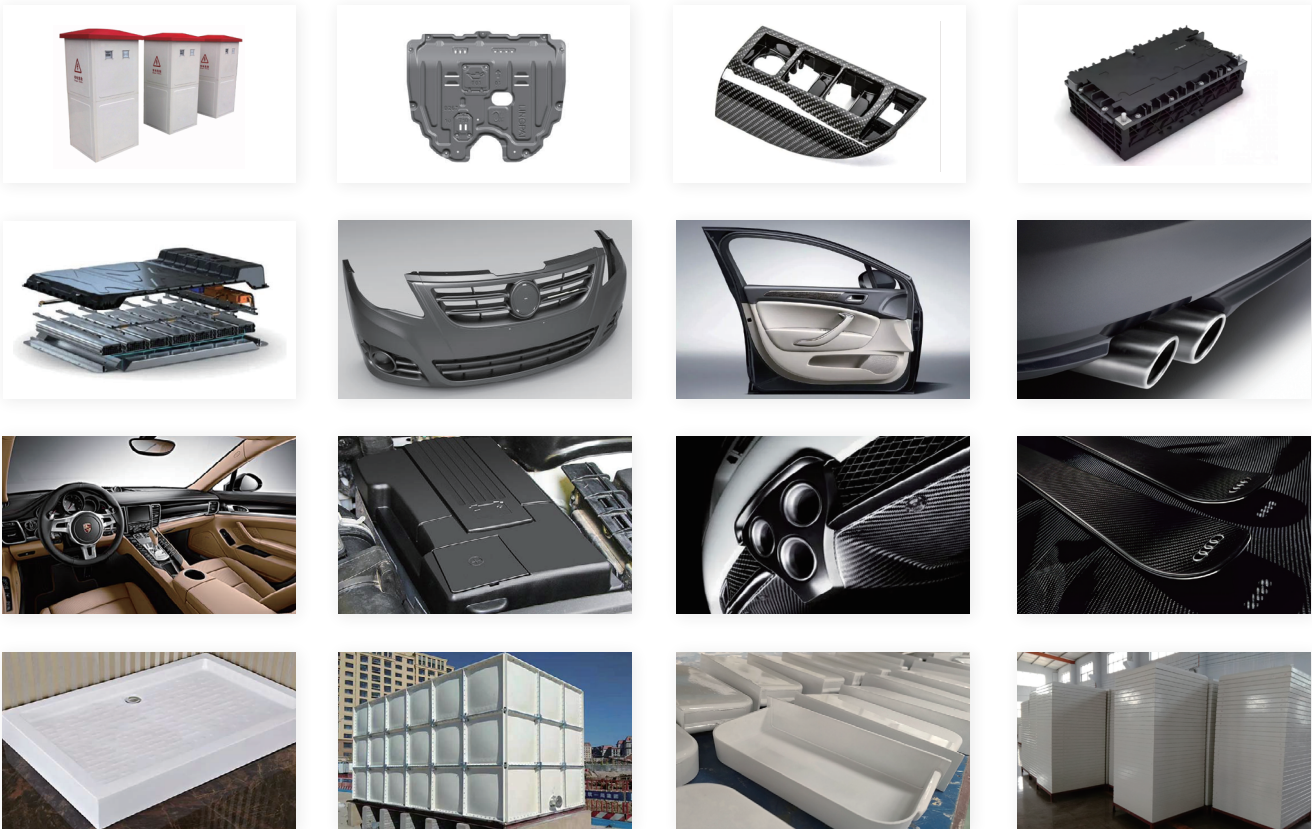
| Performance Characteristics

- Multi-jointed design optimizes motion trajectory and operational flexibility;
- High load capacity, adaptable to various complex tasks, supporting automated continuous operation.

| Application Areas

- Industrial automated production lines (e.g., automotive manufacturing, electronics assembly, logistics sorting).

Some products and applications



Partners



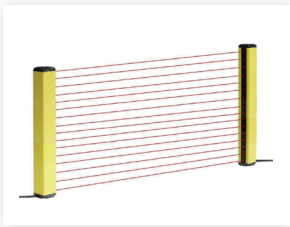
Accessory Brands



Standard accessories



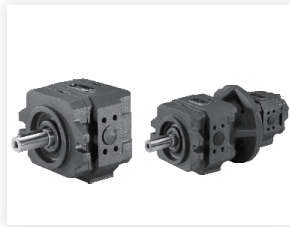
Displacement sensor



Safety light curtain



Servo motor



Servo vane pump/gear pump



High-definition touch-screen



Industrial forced refrigeration unit



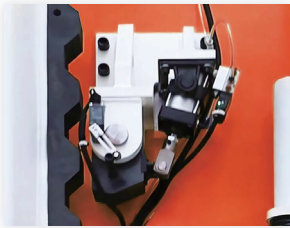
drive



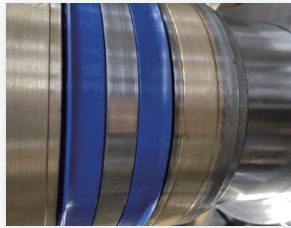
Quick-release precision filter



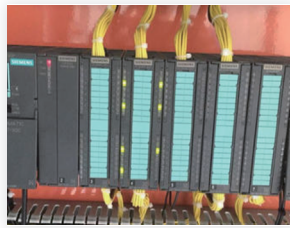
upper limit safety cylinder of slider



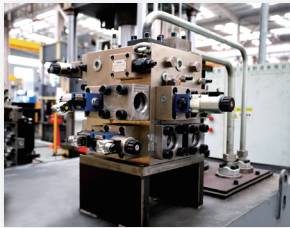
Inclined locking device



Piston head copper stacking process



Siemens PLC



Large diameter cartridge valve



High-precision guiding mechanism



Schneider Electric and other electrical com-



Electrical control system

Technical specifications (customizable)

MODEL	UNIT	315T	500T	630T	800T	1000T	1200T	1600T	2000T	2500T	3000T	3500T	4000T	5000T
Pressur capacity	KN	3150	5000	6300	8000	10000	12000	16000	20000	25000	30000	35000	40000	50000
Mold opening force	KN	450	580	650	1200	1600	2000	2500	3150	4000	4000	4500	5000	6000
Opening height	mm	1200	1500	1600	2000	2200	2400	2600	3000	3000	3200	3200	3400	3400
Slider stroke	mm	800	1000	1200	1400	1600	1800	2000	2200	2200	2200	2200	2400	2400
Worktable size (left/right)	mm	1260	1400	1600	2200	2600	2800	3000	3200	3600	3600	3800	4000	4000
Worktable size (front/back)	mm	1200	1400	1600	1600	1800	2000	2000	2000	2400	2400	2600	3000	3000
Slider rapid descent speed	mm/s	200			300				400					
Slider pressing speed	mm/s	3-20												
Slow mold opening speed	mm/s	8-15			5-10									
Slider rapid return speed	mm/s	160	180	180	200									
Total power (approx.)	KW	19	31	31	48	48	60	96	96	120	146	180	180	240

Real machine case

