

J III
GLOBAL



HAITIAN JUPITER III SERIES

Servo hydraulic two-platen solution

4,500 - 66,000 kN

3rd GENERATION TECHNOLOGY

HAITIAN JUPITER III SERIES

The Haitian JU III Series, as developed based on Haitian's extensive experience in sustainable research and development of two-platen solutions in the past two decades, has significant improvements to the previous machine generation and provides more advantages for many different molding applications. The new design incorporates additional functions and user benefits which greatly enhance the machine performance and part quality. With flexible clamping unit to injection unit combinations, the machine can be tailored to specific or general molding applications.

As a product with **Technology to the Point**, the new generation of the Haitian Jupiter Series provides a wide variety of combination possibilities in a compact footprint, which maximizes the usable space of the plants to the customers' benefit. No matter large parts such as trash bins and logistics boxes, or high-precision automotive parts and high-tech parts with high surface quality such as white goods, JU III Series provides the best solution for customers.



TECHNOLOGY TO THE POINT.



LOGISTICS

- Plastics parts with high weight and large surface
- Highly efficient solution with big clamping force, big tie bar distance and short toggle stroke



TRASH BINS

- Large plastics parts with deep cavities
- Good quality injection molding solution for thin wall parts but short cooling times

IN NINGBO, CHINA

MANUFACTURING POWER

The production plant for the Haitian Jupiter Series, located in Tongtu Road, Ningbo, occupies an area of 180,000 sqm. The plant consists of 7 workshops in 5 production halls. It covers the entire production process for Haitian's medium and large size two-platen machines, from parts machining and sub-as-

sembly to final assembly, etc. Currently, 650 employees produce the Jupiter Series with clamping forces between 4,500 and 40,000 kN. Actually, the plant has been designed to produce machines up to 88,000 kN with an annual production capacity above 2,000 units.



WHITE GOODS

- Large interior parts for white goods
- Highly efficient, flexible and stable injection molding solution for the required product characteristics



AUTOMOTIVE

- Plastics parts for automotive industry
- Economic and efficient solution for a variety of standard interior and motor parts

CLAMPING UNIT

- More compact structure and smoother operation
- More sizes planned for clamping units to cover diversified requirements for mold and process
- More precise and faster clamping movement providing shorter cycle times, quiet operation
- Safe and user-friendly design of safety doors
- More flexible international interface design

INJECTION UNIT

- Linear guides for main linear movement, lower friction and energy consumption while more sensitive in initiating and producing higher precision movement
- Free selection between differential and non-differential injection function, providing larger injection molding capacity and extending the application scope of the process
- Swiveling injection unit, making it easier for screw and barrel maintenance

Fast cycle

Fast and smooth mold open/close movement and fast clamping in short strokes, greatly shortening the cycle time

Large mold area

Extended opening and ejection stroke for diversified application needs



Small footprint

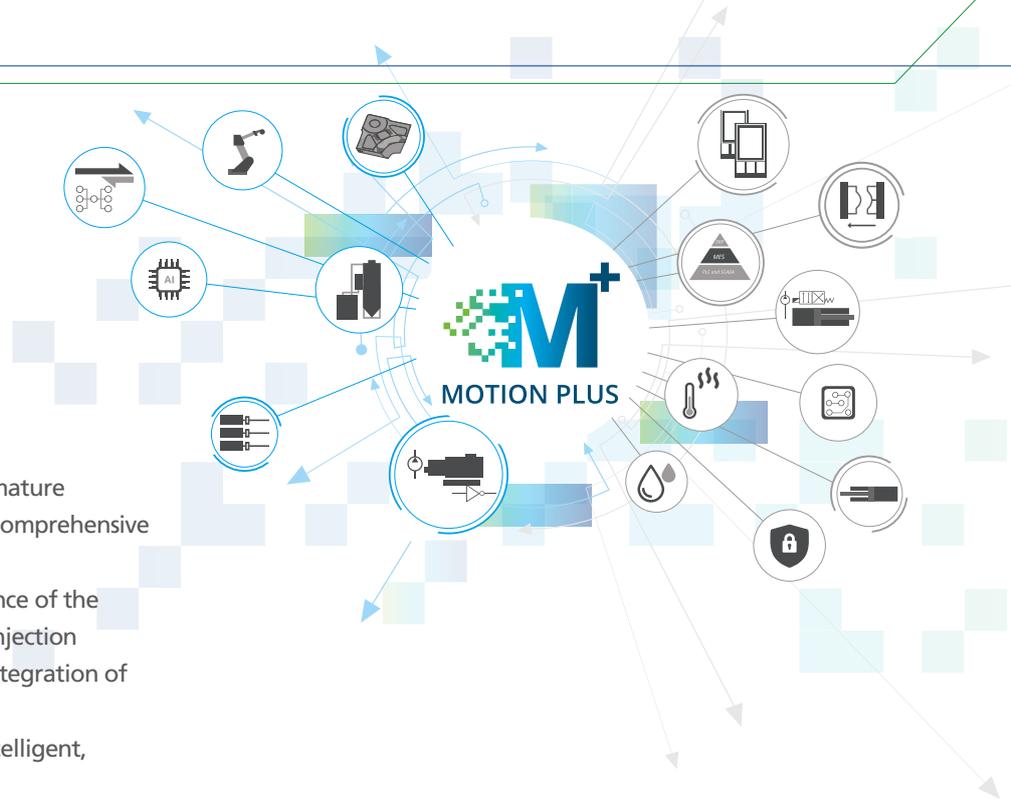
The compact structure of the machine offers higher productivity per sqm

Intelligent

Intelligent core hardware, with precise digital control compatible with latest international information interface, user-friendly HMI

MOTION PLUS

- ◎ MOTION PLUS merges the advantages of mature proven and new digital technologies to a comprehensive platform system.
- ◎ MOTION PLUS improves motion performance of the injection molding production – including injection process, electric system, automation and integration of MES environments.
- ◎ MOTION PLUS makes injection molding intelligent, flexible and open for all future tasks.



GreenVantage

The highly efficient and energy saving power unit, highly dynamic and sensitive with higher efficiency and lower energy consumption



Strong injection molding capability

With wider range of injection process coverage and flexible combination of different injection units

3rd GENERATION TECHNOLOGY

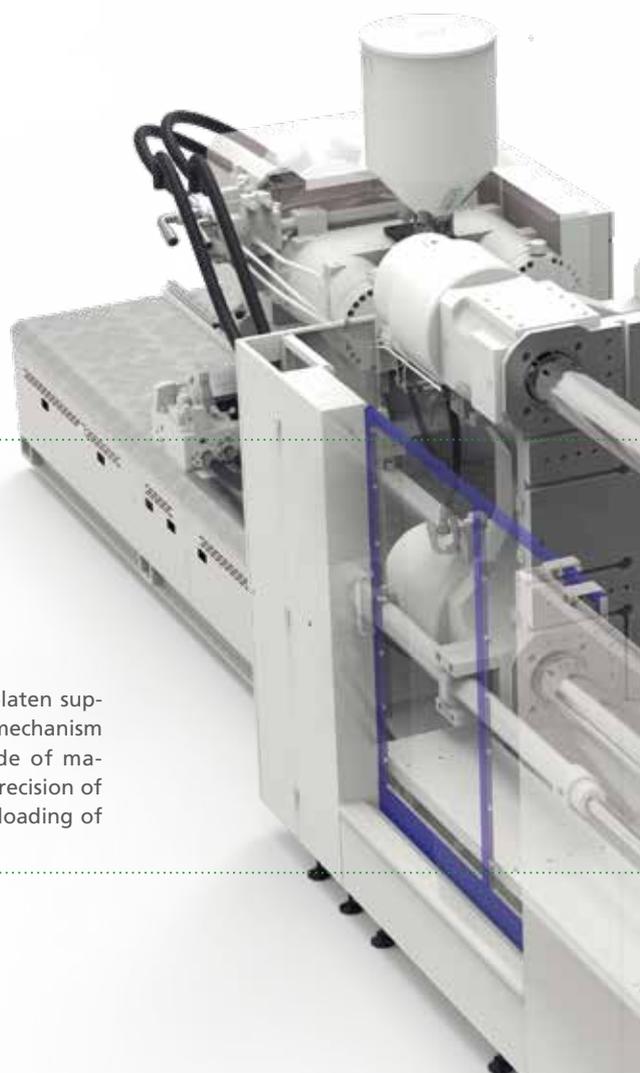
JUPITER CLAMPING UNIT



Large pressure sensitive floor for better safety protection (9,000 kN and above)



High-rigidity movable platen support device and guide mechanism on the bottom and side of machine bed ensures the precision of movable platen during loading of heavy molds

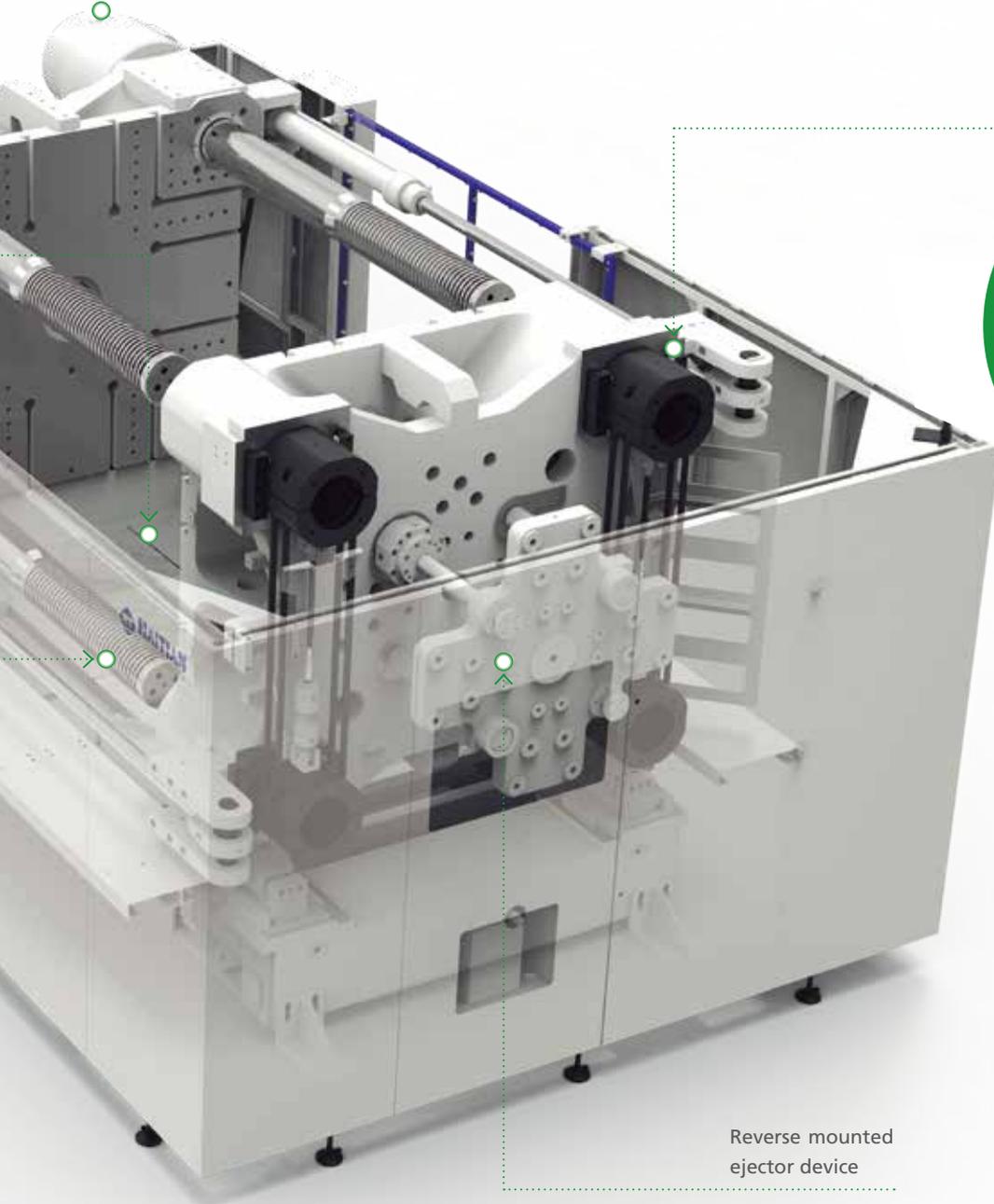


- Two-platen clamping unit
- Low-pressure mold protection
- High-rigid movable platen support device
- Diagonally oblique fast platen moving mechanism
- Synchronous clamping mechanism
- Ejector pin pull-back mechanism
- Haitian standard T-slot and threaded hole platen
- Robot with threaded hole interface (Euomap 18)
- 5-phase mold open, 5-phase mold close, pressure and speed adjustable
- Automatic mold height adjustment function
- Electric and hydraulic double safety switch
- Adjustable function of ejector return stroke
- Three hydraulic ejection modes (vibration, holding, multiple times)
- Delayed ejector forward/return function
- Controllable ejector pin program (2-phase ejection)
- Easy set up of clamping force and real-time display
- Cores in multiple sets
- 8-16 sets mold cooling water interface for fixed platen

The four short-stroke clamping cylinders on the fixed platen enables quick set-up of the clamping force on the mold. Real-time monitoring through the pressure sensor contributes to the high repeatability of the clamping force



Parallel lock nut operation ensures fast and accurate response



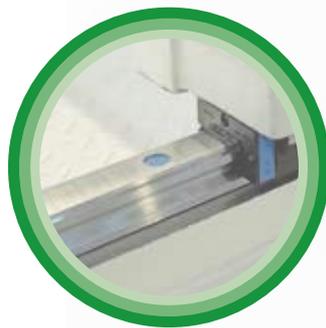
Reverse mounted ejector device

3rd GENERATION TECHNOLOGY

INJECTION UNIT & POWER UNIT



Linear guide of the rear platen of injection unit, lower friction but faster response



Twin cylinder balanced injection system, with support of linear guide for improved operational precision

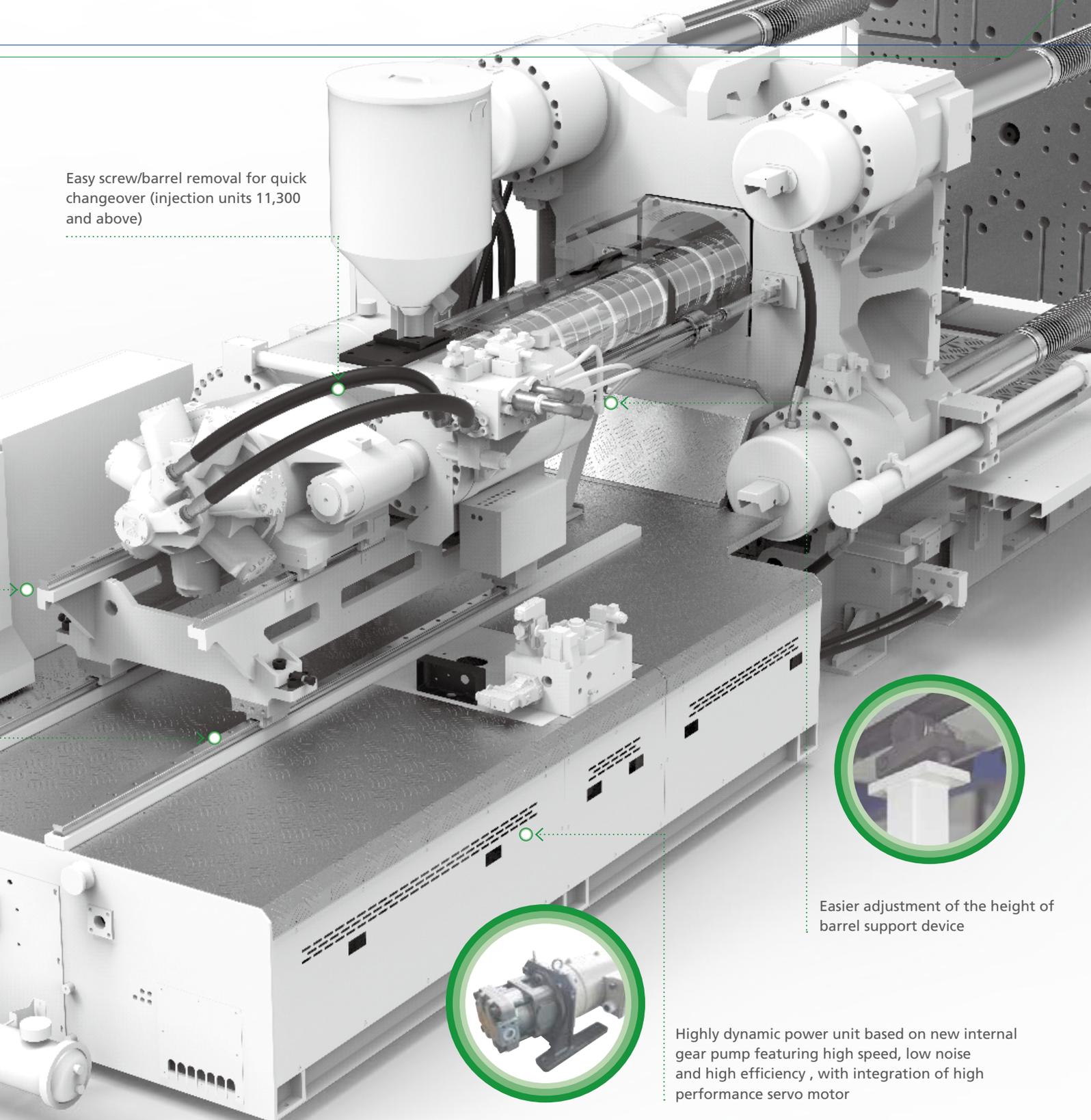


- Twin cylinder balanced injection system
- Swiveling injection unit
- Nozzle centering alignment device
- Linear guide for injection and screw drive guidance
- High torque hydraulic motor for dosing
- Closed-loop control of barrel heating temperature (both for K and J types)
- Screw cold start prevention function
- Injection curve monitoring and memory function
- Ejection program controlling 6 phases (1 to 6 phases can be set)

- Holding program controlling 5 phases (1 to 5 phases can be set)
- Dosing program controlling 5 phases (1 to 5 phases can be set)
- Back pressure program controlling 5 phases (1 to 5 phases can be set)
- V/P switching (position, time, pressure OPT)
- Three nozzle retract modes (after dosing, before mold open, and after ejector forward)
- Dosing proportion back pressure control

- Automatic purging function
- Cold charge shooting function
- Second-time dosing function
- External oil cooler
- Servo control hydraulic system
- Mold open/close proportional and directional control
- Oil temperature sensing and alarming function
- Bypass ultrathin independent filtering system
- Detachable oil suction and filtering device

Easy screw/barrel removal for quick changeover (injection units 11,300 and above)



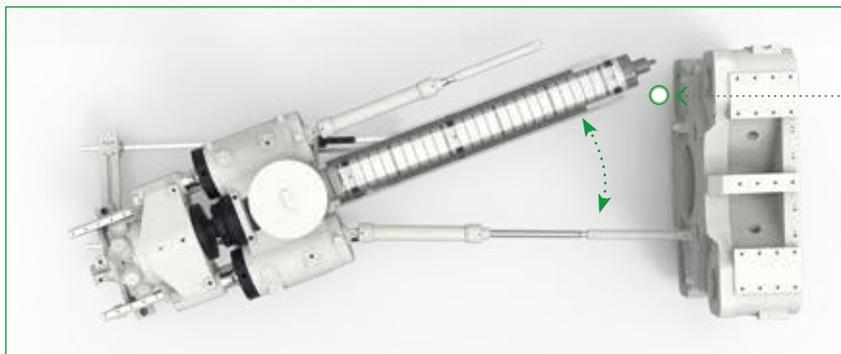
Easier adjustment of the height of barrel support device



Highly dynamic power unit based on new internal gear pump featuring high speed, low noise and high efficiency, with integration of high performance servo motor



The swiveling injection unit for easier replacement and maintenance of screw and barrel





3rd GENERATION TECHNOLOGY

THE ELECTRIC SYSTEM AS A PART OF MOTION PLUS

As an important part of the upgraded MOTION PLUS platform, the electric system optimizes the injection molding processes and supports the communication with all common interfaces. Based on Linux OS with its open and flexible features, the controller system coordinates the user and injection molding machine much more efficiently. The in-house developed „J6 BOX“ (see picture below) is the core part of MOTION PLUS and acts as a communication center to convert and filter the IMM parameters for MES environments (edge computing). Due to this digital technology, sensors control almost each movement independently and optimize algorithms of the key process parameters. The J6 BOX improves the entire process through more precise movements and faster responsiveness.

NEW CONTROL GENERATION

- ◎ Multi-PID control for different control objects and operating conditions makes the control more accurate and efficient
- ◎ Power system integration based on EtherCAT bus has high signal precision and strong antijamming capability
- ◎ Linux operating system offers better compatibility; more possibilities for third-party software integration
- ◎ Integration of the new generation OPC UA communication protocol, fully compatible with the latest international and domestic communication standards
- ◎ Servo control system, smart sensors and other important equipment state parameters and control parameters are quantitatively displayed to make the equipment more friendly to use
- ◎ The new generation intelligent algorithm can effectively sense process deviation and offset it in real time to ensure the stability of process results
- ◎ Centralized control combined with edge calculation, modular control of key functions, good system flexibility, scalability and tailoring, taking into account general performance and flexibility
- ◎ New dynamic temperature control algorithm



Controller tailor made for two-platen machine

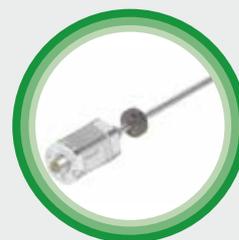
The controller uses big LCD color-screen; easier operation and faster response.

Monitoring of production process in real time and display of fault diagnosis



J6 BOX

High precision non-contact digital sensor



Position sensor for tie bar



Position sensor for mold open/close and injection

Optional program functions



Platen parallelism monitoring for effective protection of the mold and smooth operation of the machine



Integrated one-key mold exchange control for unmanned process exchange and improved productivity



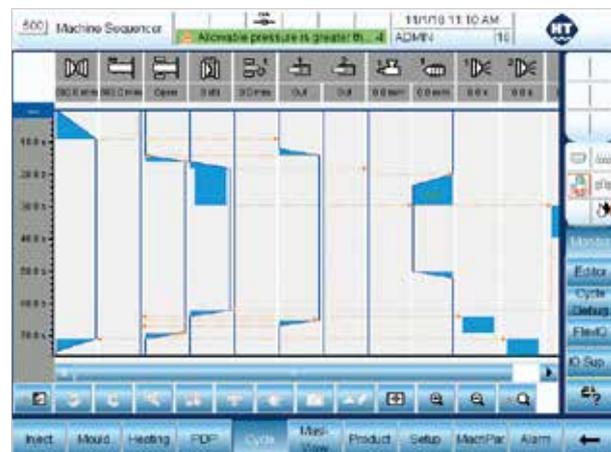
Graphic display of the safety operation status for better user-friendliness



Energy control and monitoring over the production process and equipment operation status



Programmable I/O with external connection



Sequential control for online matching of the equipment on complicated application site

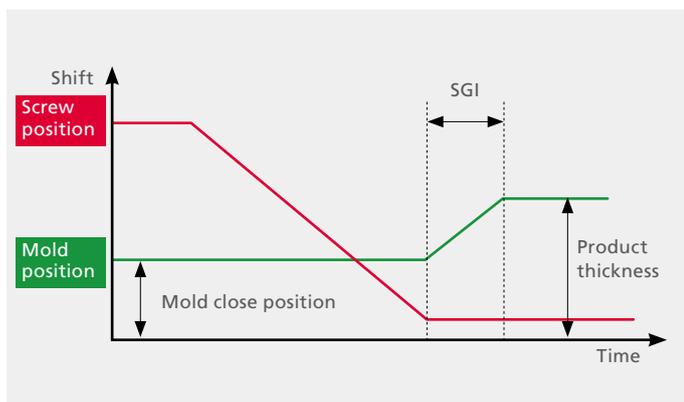
3rd GENERATION TECHNOLOGY

OPTIONAL FUNCTIONS

The Haitian JUIII Series provides a variety of options to meet the customers' personalized processing requirements, thus ensuring the quality and accuracy of the plastics parts - Technology to the point.

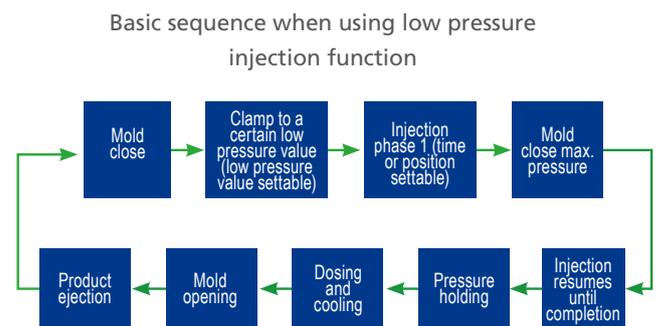
- The clamping mechanism and the injection mechanism are matched in size
- Mold temperature control device
- Mold close simultaneously with preplasticizing
- Hydraulic (pneumatic) nozzle
- Electric pre-plasticizing
- Injection servo closed-loop control
- Injection direction proportional control
- Pneumatic cores
- Glass tube flowmeter
- Valve gate (pneumatic/hydraulic)
- Closed-loop temperature control at feed opening
- Mold hot runner control
- Tie bar extraction function
- Automation equipment
- Oil tray for the entire machine
- Function of multiple-set cores
- E67 robot interface
- E70 magnetic platen interface
- E12 robot interface
- OPC DA digital interface
- Mold locating ring
- Dryer, dehumidifier and feeder 3-in-1 machine
- Cooling and heating machine
- Conveyor belt
- CE certification
- UL certification

Micro-opening process (optional)



Controllable, fast and accurate mold cavity micro-opening, combined with special foaming materials, for lightweight and cost reduction of the molded products.

Compression injection (optional)



Low pressure injection can be optionally configured to ensure the machine meets the special process requirements; multi-step injection to eliminate the internal stress of the products.



Electric plasticizing

Improved plasticizing speed and quality with reduced energy consumption



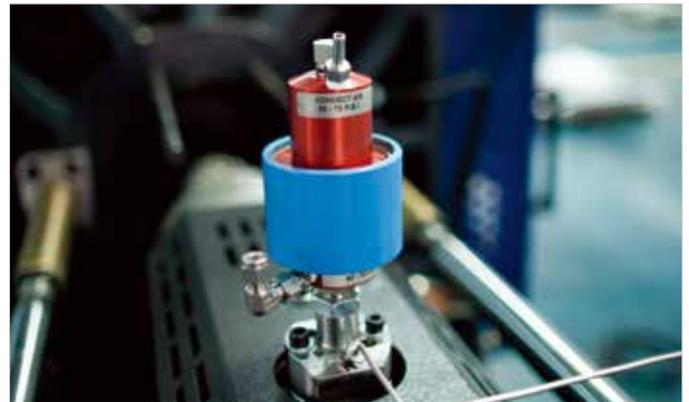
Extended interfaces

Hot runner, core, sequential valve and other interfaces can be tailor-made.



Hydraulic nozzle

Plasticizing during mold opening, to shorten the cycle time



MCF

To improve the quality of the product and reduce the cost while maintaining its original mechanical properties



The tie bar extraction device

To facilitate the installation and disassembly of molds, can be applied in various mold installation, and thus reduce the height requirement of the plant



One-key mold changing function

To facilitate automatic mold installation and disassembly

GLOBAL NETWORK

Headquarters



China

- :: More than 800,000 sqm of production area
- :: More than 32,000 machines manufactured and delivered each year

Subsidiaries



Germany

- :: Located in Ebermannsdorf
- :: Sales and service for German market
- :: Training and technical support for customers and distributors in 18 countries
- :: Manufacturing site with 12,000 sqm



Mexico

- :: Located in Mexico City
- :: Sales and service organization
- :: 2,300 sqm for spare parts and stock machines
- :: 200 sqm application center for mold testing



Brazil

- :: Located in Sao Paulo
- :: Sales and service organization
- :: Manufacturing site with 4,600 sqm



India

- :: Located in Gujarat
- :: Sales and service organization
- :: Manufacturing site with 19,800 sqm
- :: Application center for mold testing





- Sales and Service Partners
- Subsidiaries
- 🏢 R&D, Headquarters



Turkey
 :: Located in Istanbul
 :: Sales and service organization
 :: 5,000 sqm site for spare parts and stock machines
 :: Application center for mold testing



Japan
 :: Located in Odawara Kanagawa, Japan
 :: Sales and service organization
 :: 300 sqm for service and stock control
 :: Application center for mold testing



Indonesia
 :: Located in North Jakarta
 :: Sales and service organization
 :: Application center for mold testing
 :: 3,000 sqm for spare parts and stock machines



Vietnam
 :: Located in Binh Duong Province
 :: Sales and service organization
 :: Manufacturing site with 6,600 sqm
 :: 80 sqm application center for mold testing



Thailand
 :: Located in Bangkok
 :: Sales and service organization
 :: 1,400 sqm for spare parts and stock machines
 :: 200 sqm application center for mold testing

HAITIAN PLASTICS MACHINERY GROUP CO., LTD

No. 1688 Haitian road, Xiaogang, Beilun,
Ningbo, P. R. China 315801
+ 86 574 86177005 (China)
+ 86 574 86177242 (International)
haitian@mail.haitian.com
www.haitianpm.com

NINGBO HAITIAN HUAYUAN MACHINERY CO., LTD

Export processing zone, Fuchun middle road,
Beilun district,
Ningbo, P. R. China 315806
+ 86 574 86177242
+ 86 574 86182601
inter-sales@mail.haitian.com
www.haitianpm.com

Your contact in Europe:

HAITIAN INTERNATIONAL GERMANY GMBH
Haitianstraße 1, 92263 Ebermannsdorf, Germany
+49 94 3894390
info@haitiangermany.com
www.haitiangermany.com

