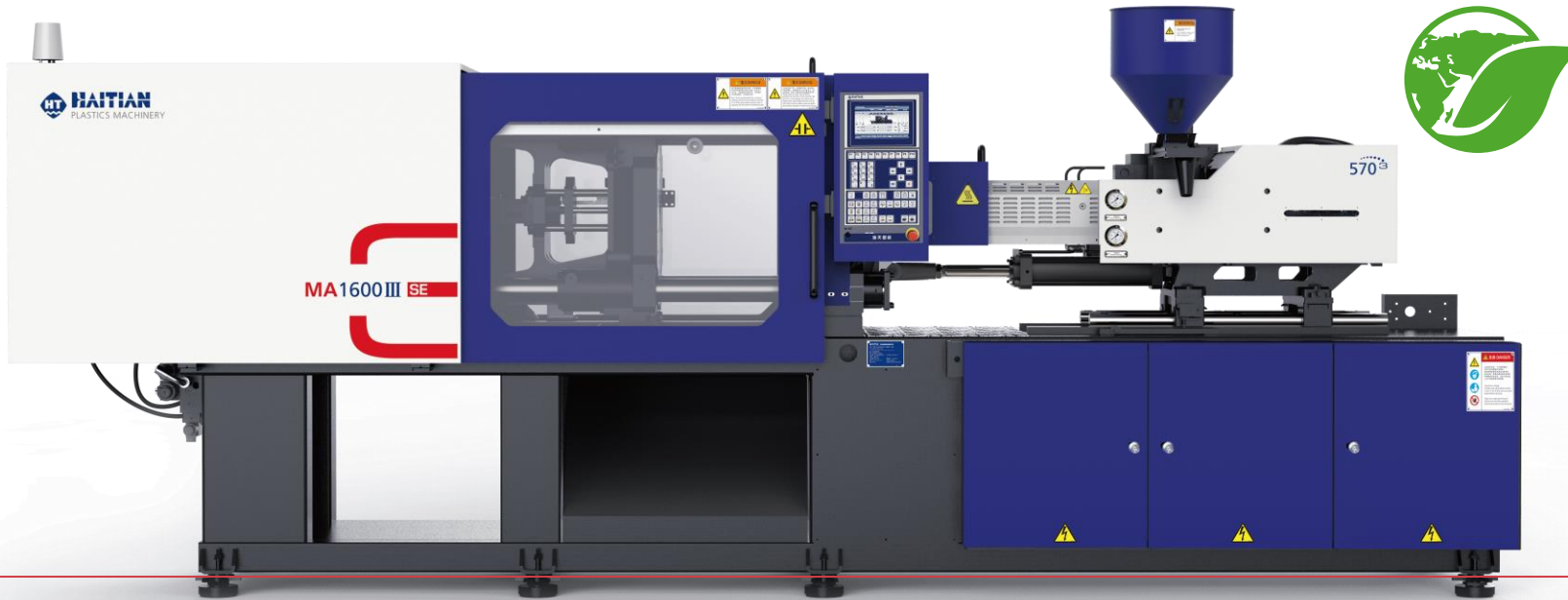




HAITIAN
PLASTICS MACHINERY



HAITIAN MAIII/SE SERIES

All new MAIII/SE models



•Mature technology and excellent cost performance

Since its launch in 2006, Haitian MA series has sold more than 350,000 units in total, making it the world's best-selling servo hydraulic energy-saving injection molding machine . Adhering to the product development concept of "technology to the point", Haitian constantly optimize the product, On the basis of inheriting the high performance gene of MA Tianlong series, MAIII/SE servo energy-saving injection molding machine with high cost performance is extended

Super strength, **not just cost performance:**

- The injection is fully closed-loop control with superior injection performance
- Intelligent algorithm for mold open/close, high precision of repeated positioning
- Mature technology, stability and efficiency double guarantee
- Super application expansion, can well meet the diversified needs of a wide range of industries such as daily necessities and home appliances

MAIISE Series

	Injection unit													
Clamping unit	280	400	570	1000	1350	1800	2250	3200	4000	4550	6350	7950	10600	
900	Standard													
1200		Standard												
1600			Standard											
2000				Standard										
2600					Standard									
3200						Standard								
3800							Standard							
4700								Standard						
5300									Standard					
6500										Standard				
8000											Standard			
10000												Standard		
12000													Standard	
14000														Standard

Machine high light



Higher cost performance

Low investment cost and high production efficiency

Green Vantage

Highly efficient and energy saving power unit



High Modularity & Flexibility

Wide Range of combinations within the series as well as a flexible machine concept for other Injection Molding Technologies

Strong injection molding capability

Wide range of injection process coverage and flexible combination of different injection units

Flexible & Open Integration

Freely choose integrated cooperation unit to easily achieve upstream and downstream integration

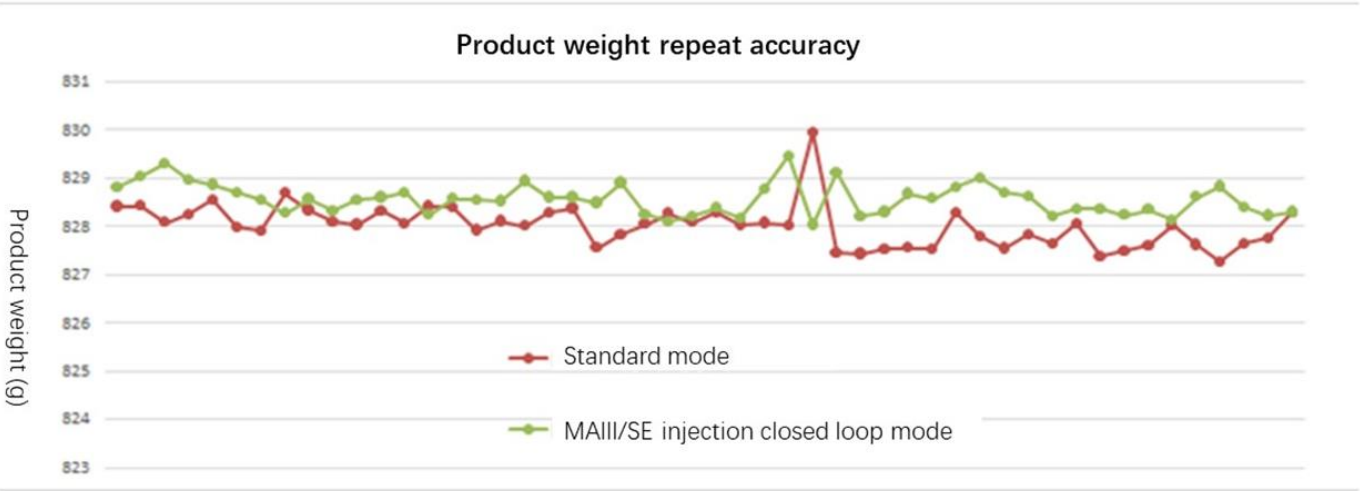
INJECTION UNIT



Linear guide for injection

- Precise guidance and smooth action
- Small friction coefficient, high operation precision
- Low energy consumption
- Fast acceleration and deceleration response
- Precise backpressure control

Full closed loop injection, high injection repetition accuracy



Product: Plate (PS)
Machine: 470T

470T	Standard mode	Full closed loop mode
Product weight Max(g)	829.95	829.47
Product weight Min(g)	827.27	828.04
Maximum deviation(g)	2.68	1.43
Product weight repetition accuracy (Old GB)	0.324%	0.173%
Repeatability (New GB)	0.054%	0.038%

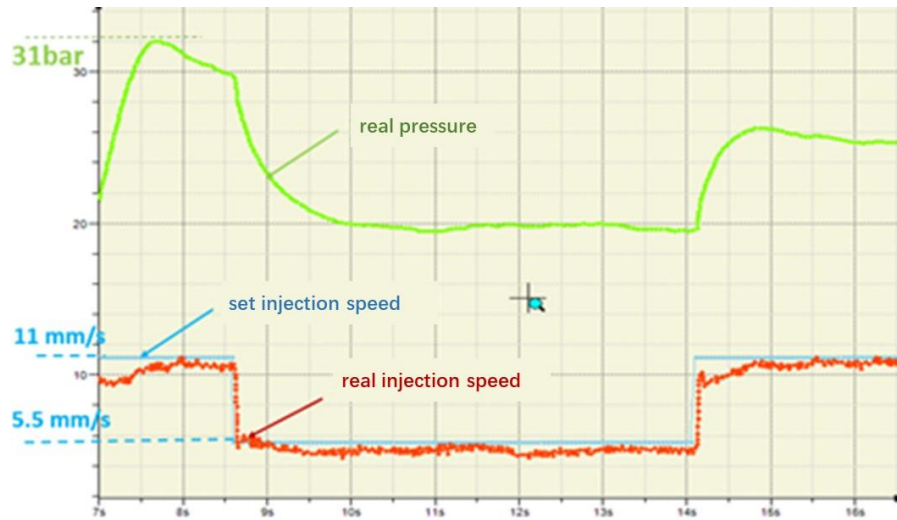
30 % Repetition accuracy improvement

Full closed loop injection, Low speed stability

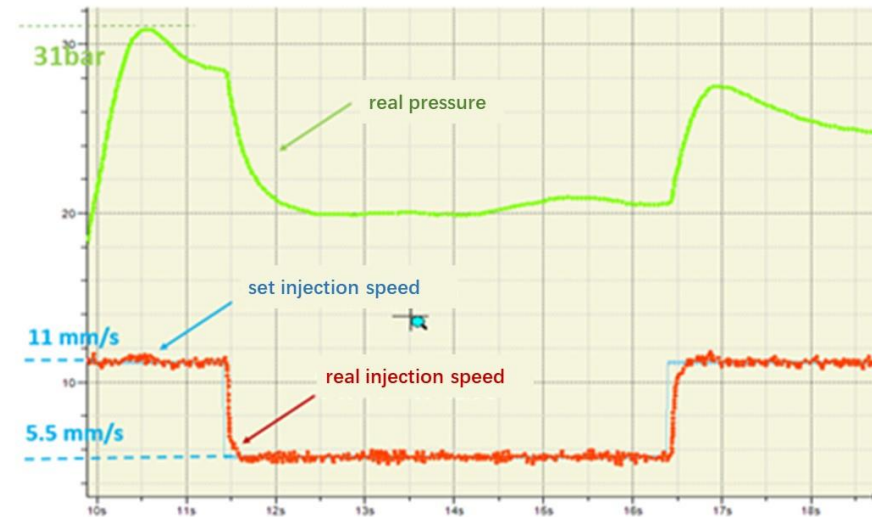
Product: Acrylic cosmetics box

Machine: MA3200IISE

•Standard mode graph

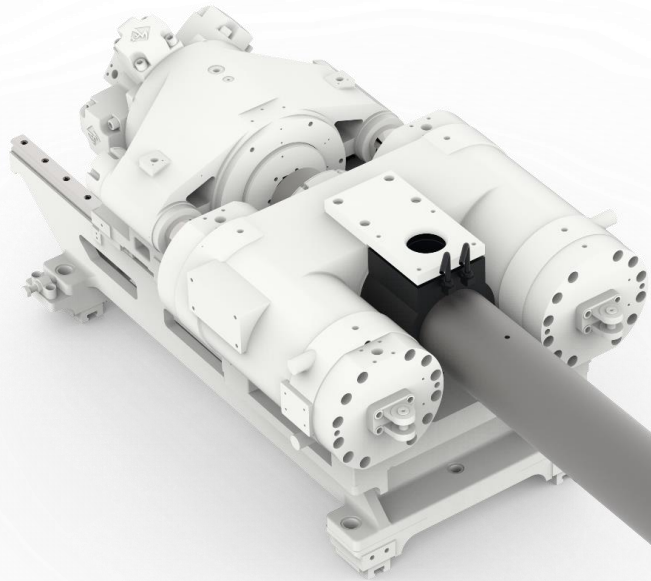


Full closed loop mode graph



Injection unit

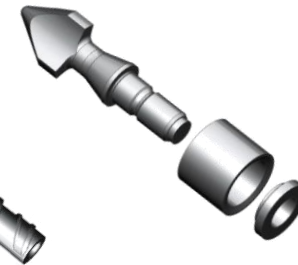
Efficient plasticizing components



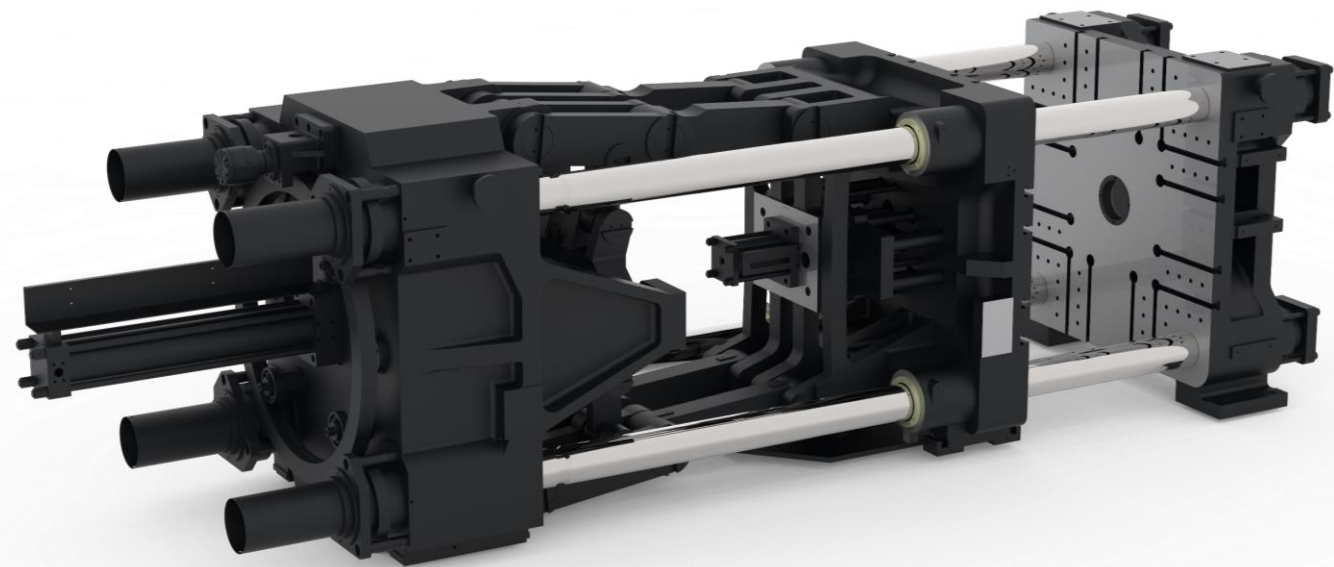
Newly designed



Further improve plasticizing efficiency



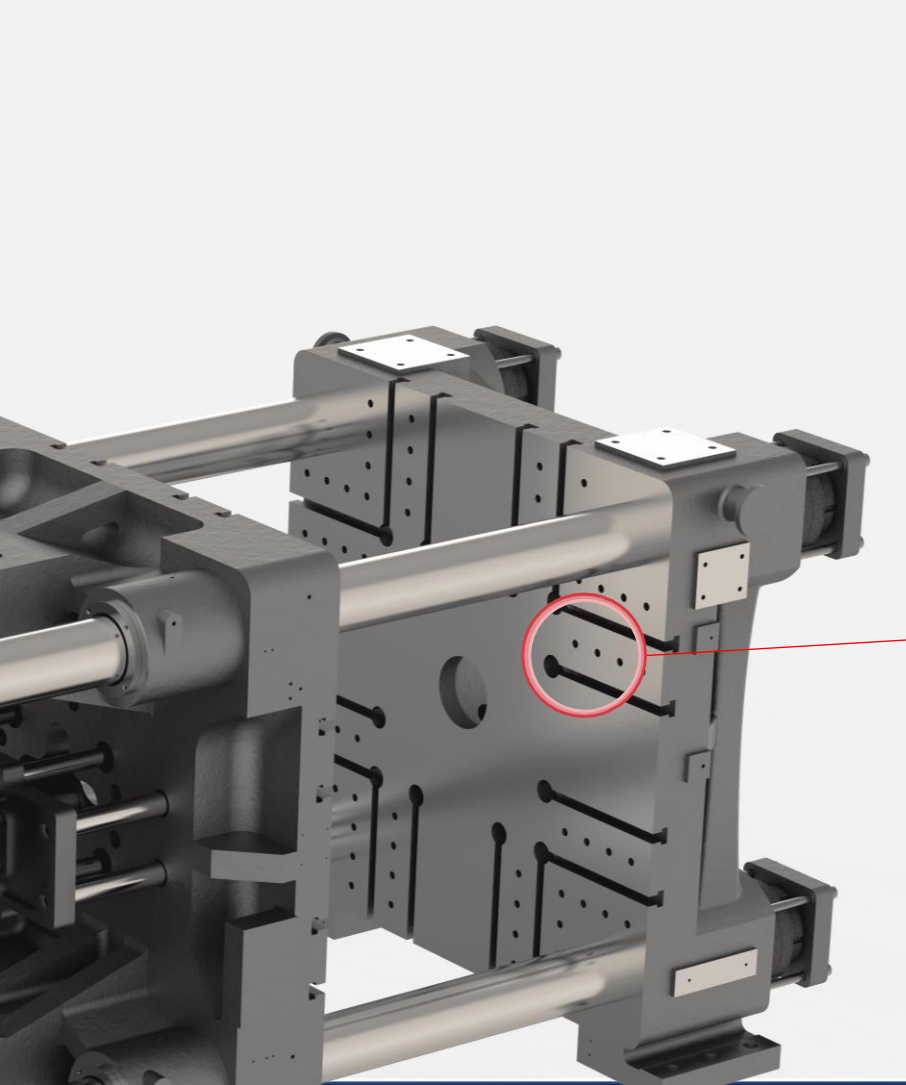
Clamping unit



- High-functional platen design
- High rigidity
- Graphite steel sleeve automatic lubrication system
- Intelligent algorithm for mold open/close , Fast and accurate positioning
- Automatic mold adjustment system

Clamping Unit

Platen optimization, high rigidity



Full series of T-shot + threaded hole, fixed mold diversification, convenient and quick up and down mold, improve the efficiency of mold change.

Clamping Unit

Lubrication system



- Graphite steel sleeve (copper sleeve) : solid lubricant inlaid on the surface of steel sleeve and copper sleeve is a kind of non-metallic wear reducing material, which greatly improves the lubrication effect of crankshaft and the tie bar;
- The machine adopts thin oil lubrication to increase the life of parts and make the whole machine cleaner.
- Automatic lubrication system can accurately realize the lubrication of all moving parts.



Intelligent algorithm for mold open/close

Easier operation

Standard Mode of machine

OpnStroke

	#1	#2	#3	LowP	HighP
Position	19.5	5.6	3.0	0.86	
Press	50	30	30	15	60
Speed	50	30	30	25	40

	#5	#4	#3	#2	#1
Position	359.5	172.7	49.1	5.6	0.9
Press	50	50	70	70	70
Speed	30	50	40	50	35

Intelligent Mode of machine

MoldP	ClcMld
Position <input type="text" value="9.3"/>	Position <input type="text" value="3.48"/>
Pres <input type="text" value="15"/>	Pres <input type="text" value="60"/>
Speed <input type="text" value="25.0"/>	Speed <input type="text" value="40.0"/>
ClcSpd <input type="text" value="30.0"/>	

Open	MldRel
Trav. <input type="text" value="399.5"/>	Position <input type="text" value="3.5"/>
OpnSpd <input type="text" value="50.0"/>	Pres <input type="text" value="70"/>
	Speed <input type="text" value="35.0"/>

HiPresTime	<input type="text" value="0.00"/> sec
LoPresTime	<input type="text" value="0.00"/> sec
Act. Time	<input type="text" value="0.00"/> sec
ClmpPosn	<input type="text" value="137.7"/> mm
OpenTime	<input type="text" value="0.00"/> sec
Sensor	<input type="text" value="0"/> Ton
Cls. Time	<input type="text" value="0.00"/> sec
Mold Opn	<input type="text" value="0.0"/> mm

Intelligent algorithm for mold open/close

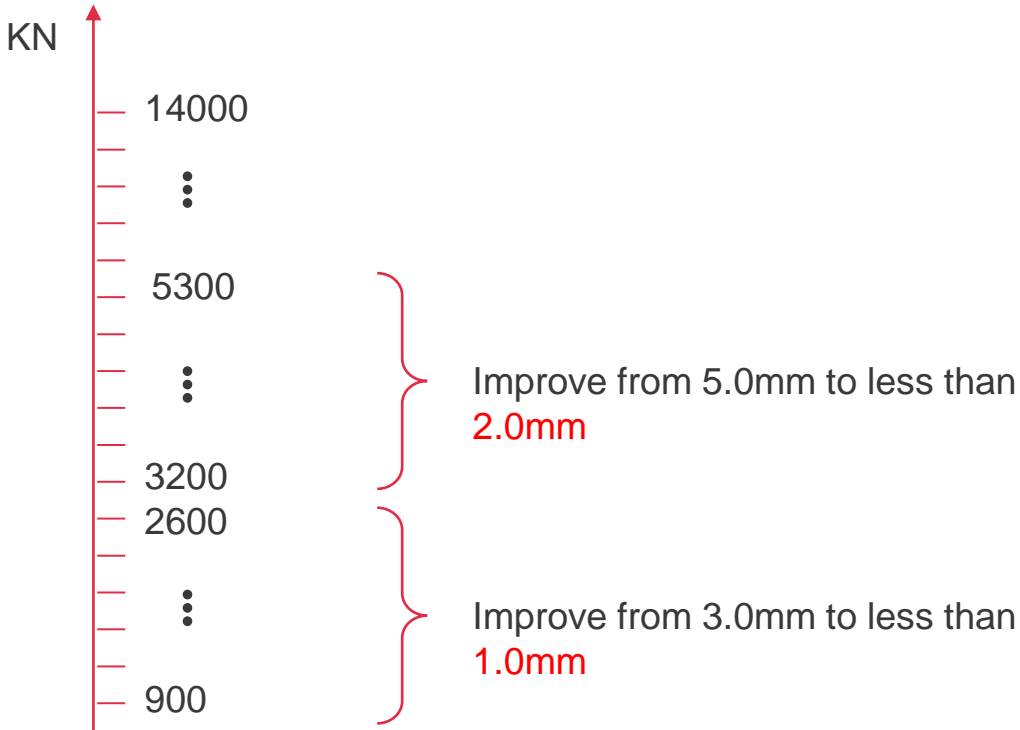
Shorter dry cycles

120T	Old mode	Intelligent mode
Mold close time (s)	0.81	0.70
Mold open time (s)	0.72	0.74
Dry cycle (s)	1.65	1.55

Intelligent algorithm for mold open/close

Higher repeatability accuracy

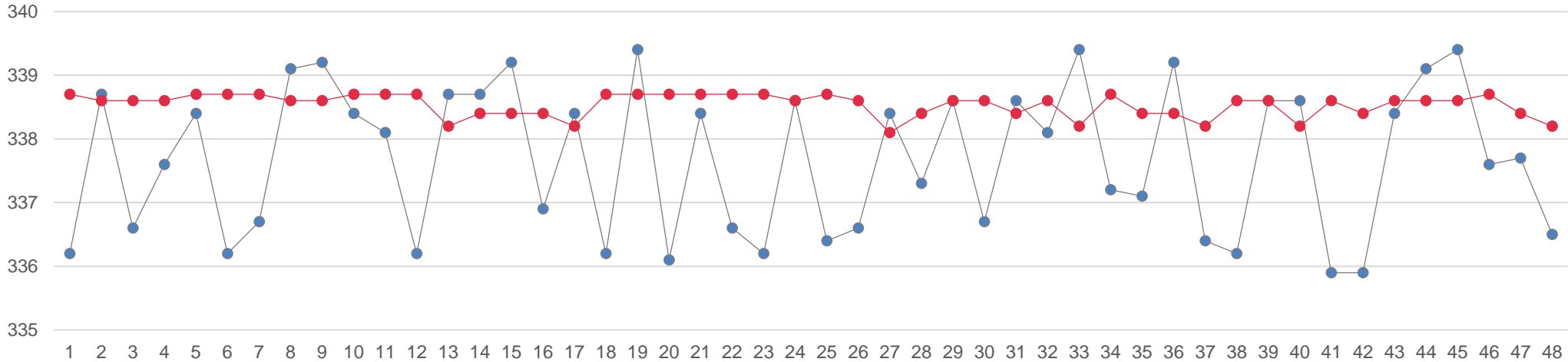
Improved repeatability of the mold opening and closing by further optimizing the overall structure, oil circuit and programming



Intelligent algorithm for mold open/close

Higher repeatability accuracy – test example

Repeatability Accuracy of 1200KN Mold Opening and Closing

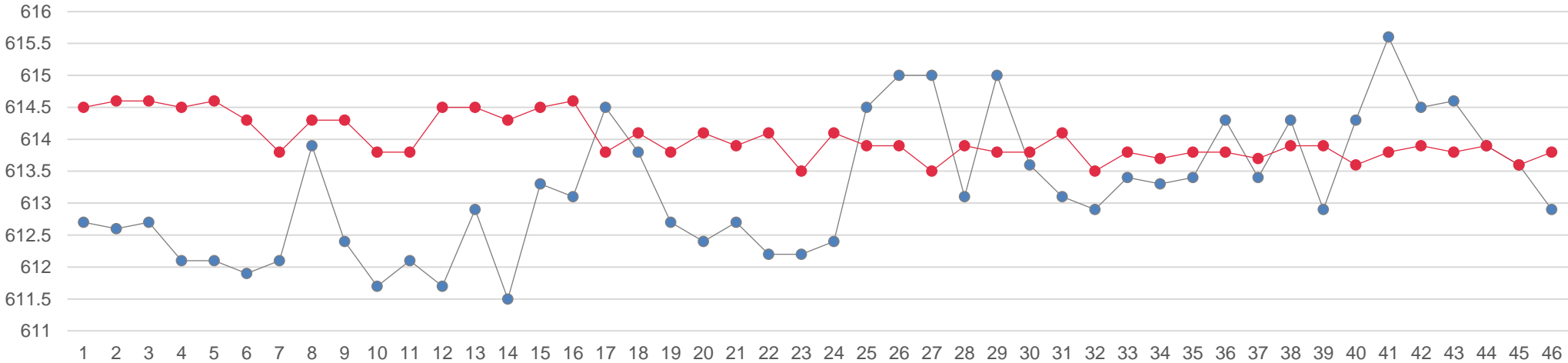


Less than
1.0mm

Intelligent algorithm for mold open/close

Higher repeatability accuracy – test example

Repeatability Accuracy of 5300KN Mold Opening and Closing



Less than
2.0mm

Intelligent algorithm for mold open/close

Advantages

The use of intelligent mold opening, opening position is accurate, robot take parts easier, more stable!

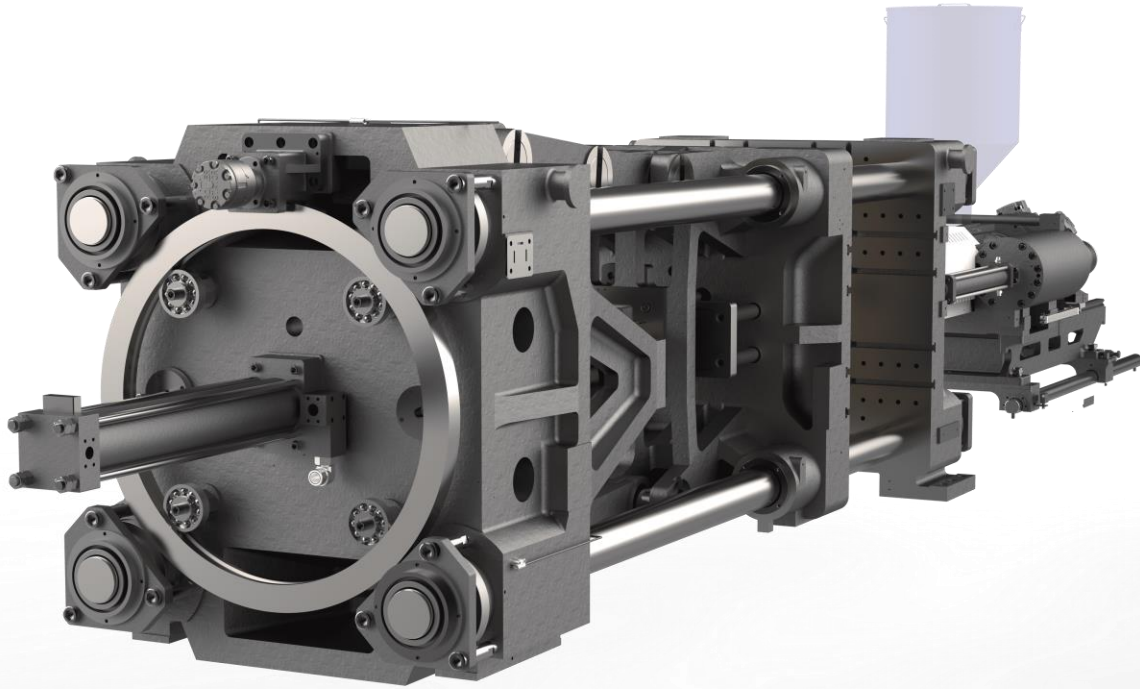
In the same time, the machine mold open/close is more stable, compliant!

Parameter setting is reduced, so that the operation is easier and the requirements of the operator are reduced!

Machine mold open/close intelligent control, dry cycle faster!

Clamping Unit

Automatic mold adjustment function



- 650T and above automatic lubrication function
- Save manual maintenance time
- Convenient automatic operation of the machine

Servo Drive System

Relying on mature modular drive technology, launch an efficient servo power system

- **Speed +**

- The servo system has a wide speed regulation capacity (a large variable range). With its embedded structure, it has excellent speed performance, higher oil pump speed, and lower noise.

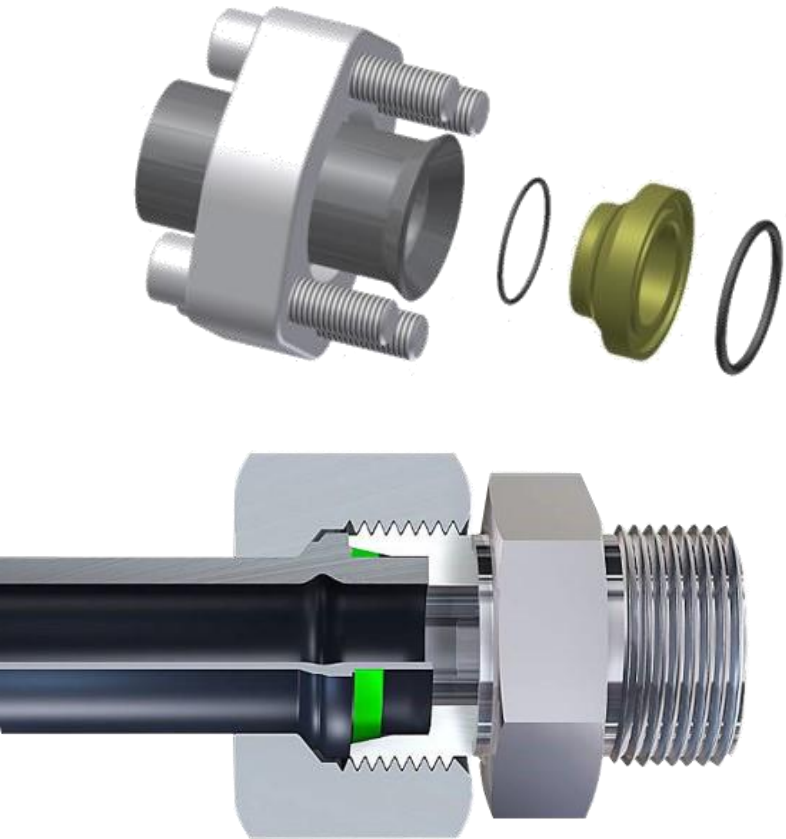
- **Loading +**

- The servo system has a low-speed and large torque capacity. It relies on super-efficient high-performance chips and its advanced driving algorithm and optimized heat dissipation system. The overload and efficiency capacity is strong.
- The new high-temperature-resistant material, the temperature resistance capacity is greatly improved



The hydraulic system

High pressure grade, no welding process for pipeline



- The system pressure is **17.5MPa**, and the process adjustment range is wider
- The system pressure is increased, the tank volume is reduced compared with the traditional machine, more fuel saving
- The whole series of **power pipeline welding process**, reduce the risk of oil leakage; Improve the cleanliness of pipelines and the service life of hydraulic components

Convenient human-computer interaction

User-oriented panel design brings large screens with friendly design



- The control panel adopts LCD 12" color screen and Techmation 55 controller
- Special computer controller for injection molding machine, double CPU parallel processing data;
- The whole machine control system adopts full digital control, good controllability, high reliability, quick response period;
- Monitor production progress in real time and display various fault diagnosis;
- More powerful software functions, injection molding machine scalability is better, such as providing gas auxiliary, manipulator and other expansion support
- Reserved I-NET network management system, can realize the remote real-time monitoring and maintenance diagnosis of each injection molding machine, reasonable production scheduling and other advanced management methods; Built-in multi-group mold forming process parameter access system, convenient for factory management of mold, can realize the rapid adjustment of mold parameters, high speed and efficiency of production preparation;
- The temperature of barrel can be controlled accurately by computer setting and PID closed-loop mode. The temperature range can be set from 0°C to 400°C.

Multi-Stage Dynamics Control

- Multi-PID control for more accurate movement of each executive components and movements.
- Apart from standard mode, we also offer various tailor-made modes to cope with particular applications such as thick-wall parts, deep cavity parts.



Standard



Low speed high pressure



High system dynamic



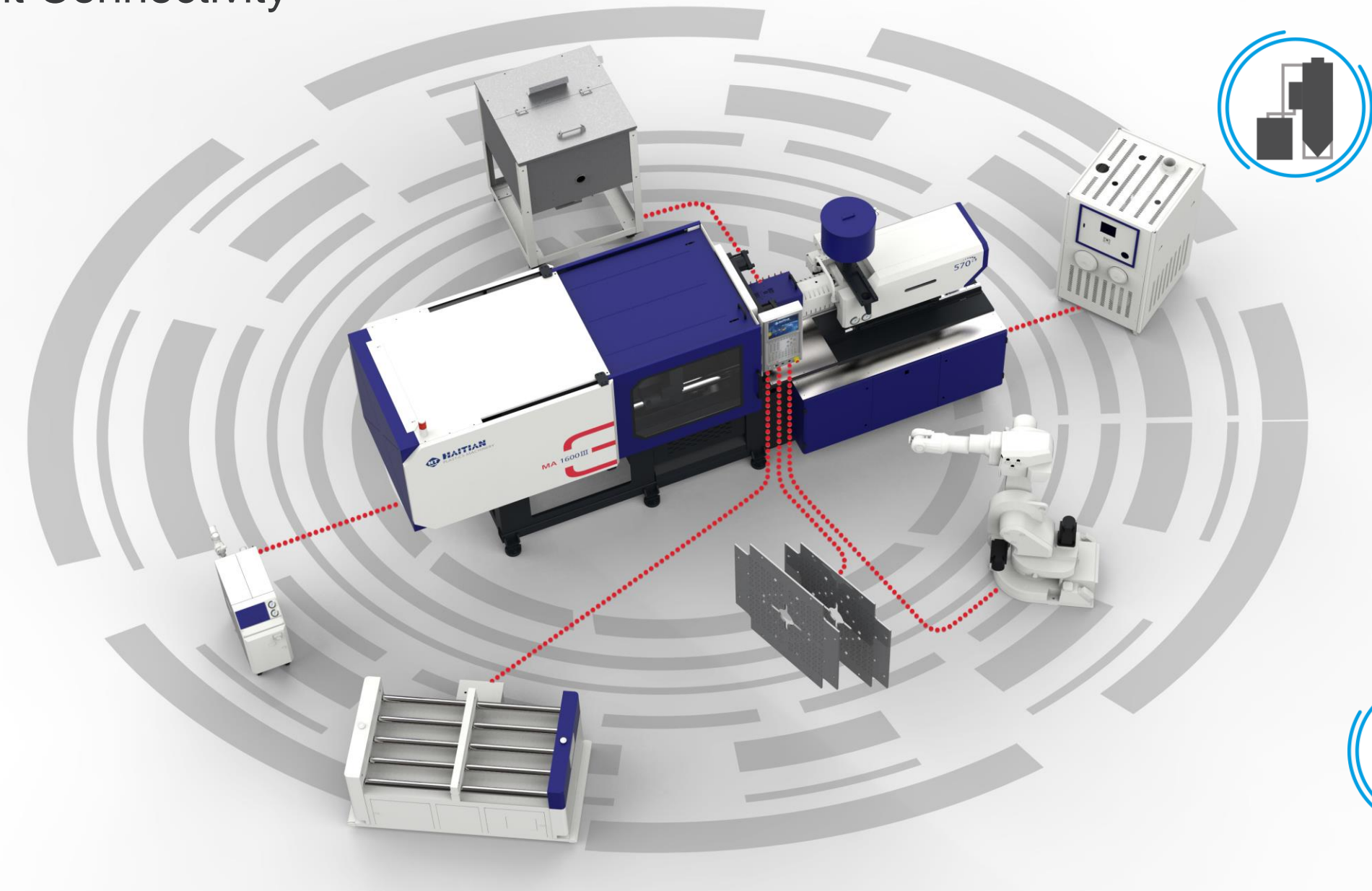
Advantages of J6 card applications

•Common interfaces for intelligent interaction include:

- Peripherals, IoT
- Software
- MES system
- Customer



Intelligent Connectivity



Smart Control

Standard "GO Factory" wireless communication interface
Easy access to the "GO Factory" cloud platform



 GoFactory Cloud. 2.0

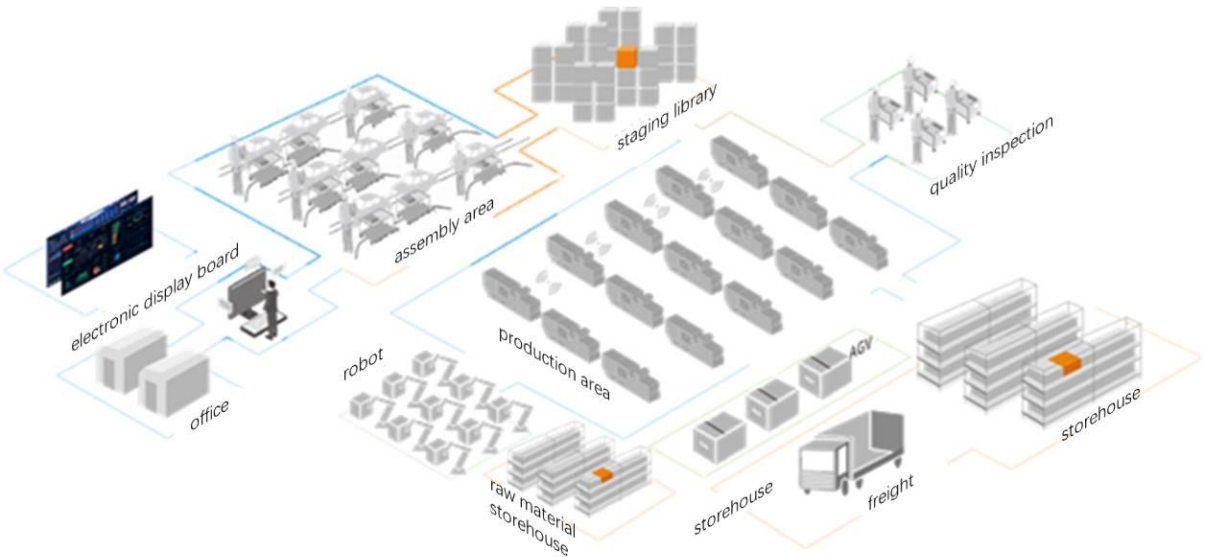
Intelligent Connectivity

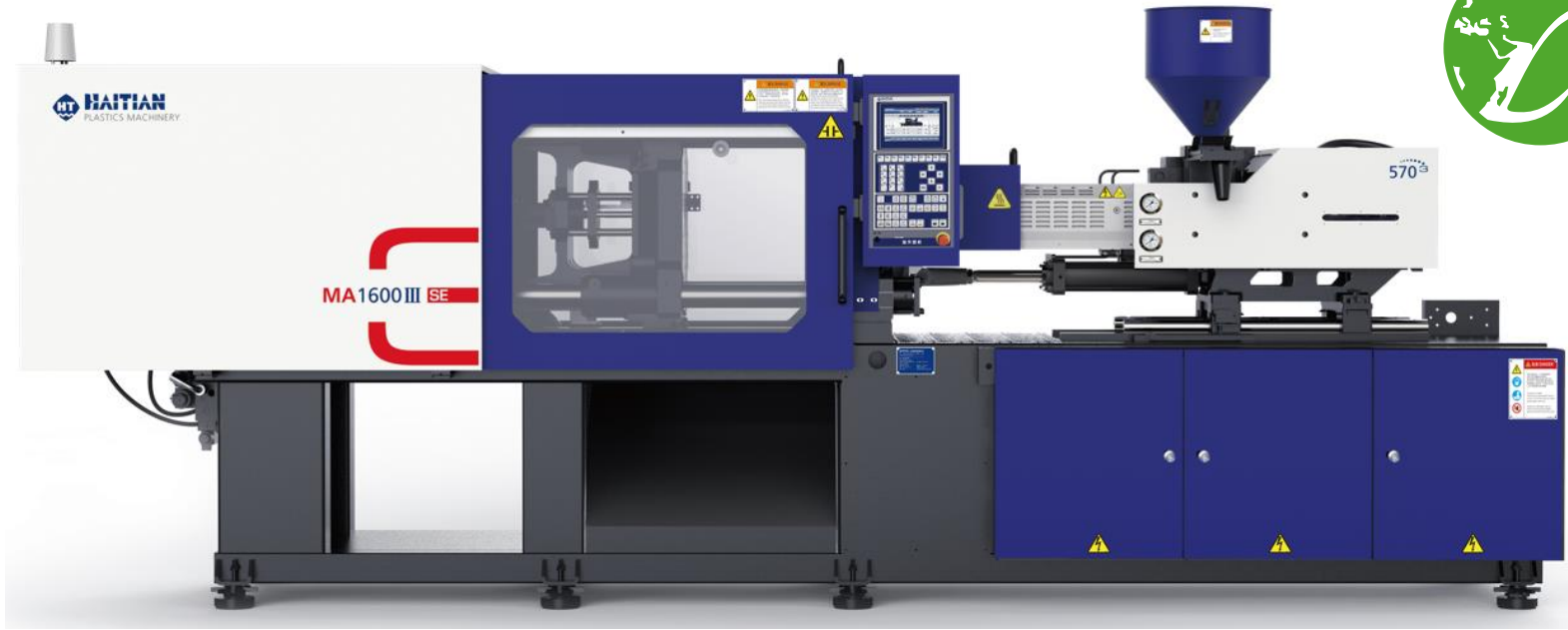
AUTOMATION

MES SYSTEMS



ALL COMMON INTERFACES





Thanks!