



INTRODUCING HAITIAN GENERATION 5

Smart Technology. Flexible Integration. Sustainable Solutions.

Take a look at the innovative technology launched in Haitian International's Generation 5 injection molding machines

In 2024, Absolute Haitian brought the fifth generation of the Haitian servo-hydraulic and Zhafir electric injection molding machines to injection molders in the U.S. and Canada. Generation 5 IMMs provide molders with an overall performance upgrade, with an emphasis on enhancements in energy efficiency and intelligence.

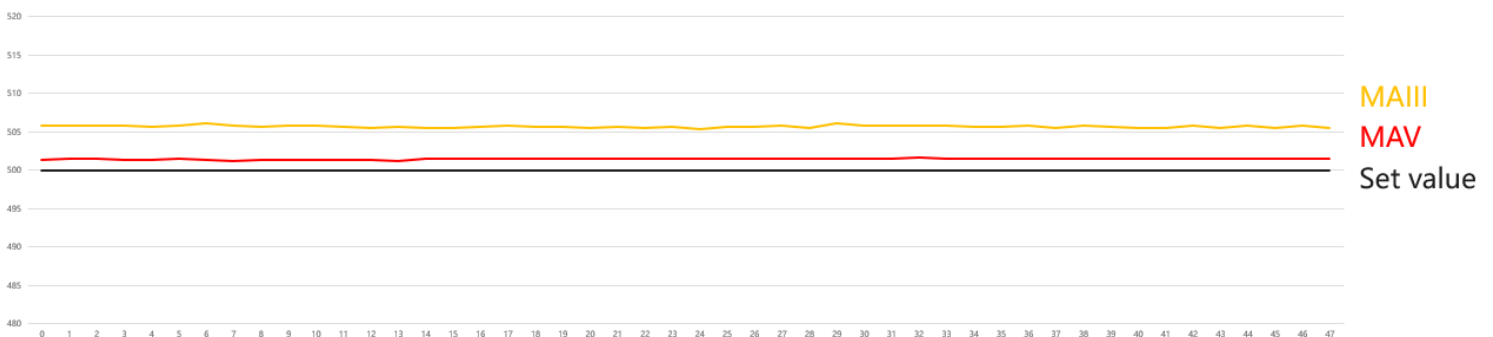
For injection molders looking to expand or replace aging machines, Haitian's 5th generation offers faster and more powerful machine performance, integrated adaptive control technology, and more machine capacity for the same competitive price point – no price increase from the previous generation of machines. Here is a snapshot of the major improvements you will find when making your next machine purchase a Haitian servo-hydraulic Jupiter V or Mars V and the Zhafir electric Zeres V and Venus V injection molding machines.

SMART TECHNOLOGY

These new IMMs combine innovative hardware with digital intelligence, reducing purchase and operating costs while increasing the efficiency of production. Smart Technology features on the Generation 5 IMMs include:

HT Clamp / HT Clamp Force

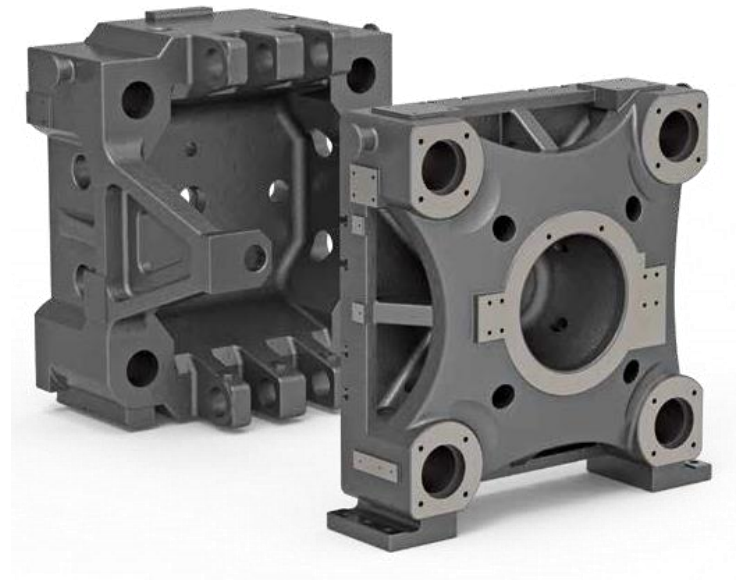
HT Clamp is a self-learning and self-correcting algorithm that automatically adjusts clamp position to meet the desired set point. HT Clamp Force automatically reduces clamp tonnage to the minimum tonnage needed to prevent mold break/flash, reducing energy consumption and unnecessary machine wear. Below is an example of the improvement in clamp position repeatability from the Generation 3 to Generation 5 clamp design:



Improved mold open and "positioning" accuracy

Highly Rigid Platens

An innovative design of the center platen structure reduces mold cavity size deformation and improves product molding accuracy.



Highly rigid platen design with even distribution of force

Upgraded Injection Units

The plasticizing performance of the Generation 5 IMMs has been improved with increased plasticizing rates for reduced cycle times. There's been an upgrade to the plasticizing parts – screws and barrels – for substantially improved wear resistance.

The ZE 5 and VE 5 have long been electric. Now, the JU 5 and MA 5 are equipped with electric screw drive (screw rotate function) as standard on the servo-hydraulic series up to 120mm diameter screws. This reduces overall energy usage by at least 20% and improves processing stability. Electric screw drive is optional on larger injection units for the JU 5 and MA 5.



Electric screw drive is standard on the JU 5 and MA 5 from 60T to 1200T. Results? Up to 20% lower energy consumption and cycle time improvement.

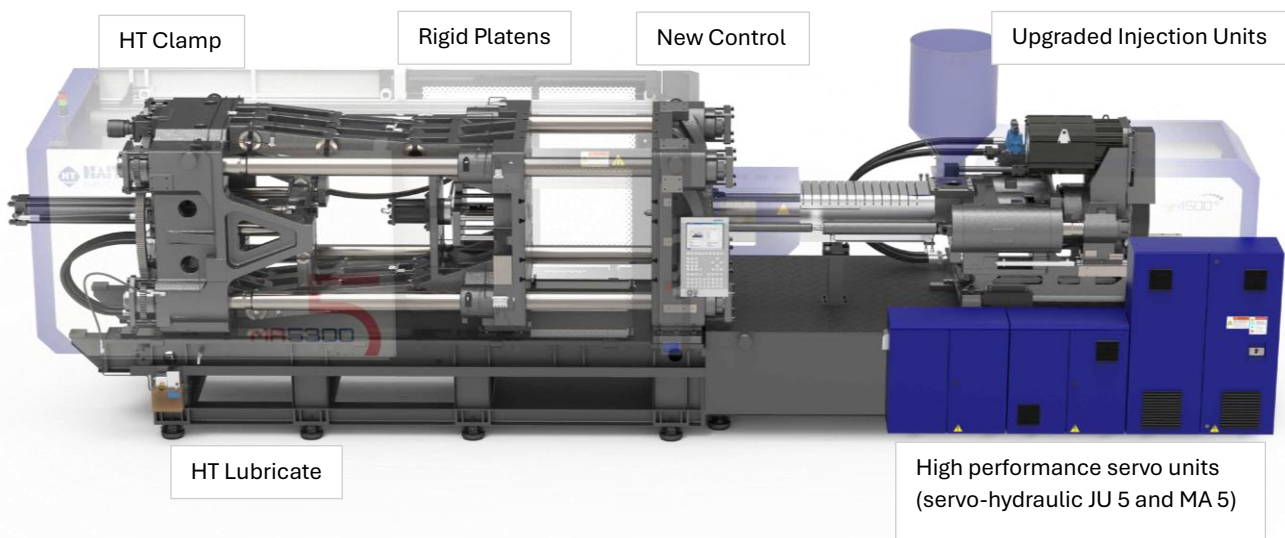
High Performance Servo Units (JU 5 and MA 5)

The Generation 5 proprietary servo power system for the JU 5 and MA 5 provides high-speed response, dynamic sensitivity and power. With research and development based on injection molding applications, the newest generation of servo drives delivers on the high performance and repeatability molders are looking for. The result: efficient and energy-saving, high performance, quiet and stable operation.

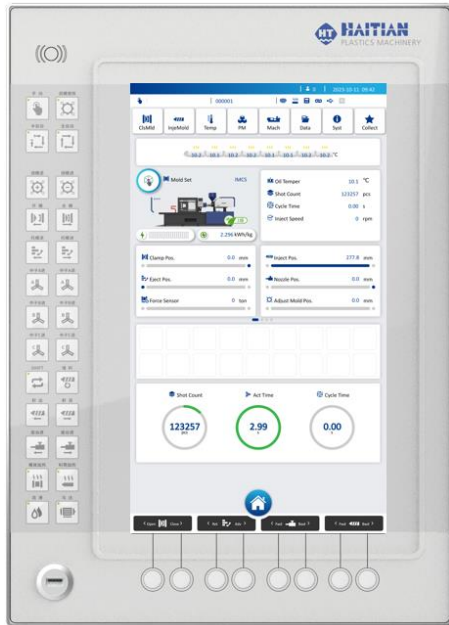
Dynamic signal response of 100 milliseconds or less allows for high precision closed-loop control of the injection process. This improvement allows for a more customized injection profile along with significant stability control during low-speed injection.

HT Lubricate

An advanced algorithm optimizes lubrication control. This simplifies the maintenance and extends the life of the machine – maximizing uptime.



HT Control



A new 15-inch screen control panel and new UI design make the interactive experience intuitive. From an intelligence perspective, the newly improved control systems have applied AI algorithms and sensor technology to improve various functions such as energy management, accuracy, consistency, diagnostics and assistance.

FLEXIBLE INTEGRATION

OPC-UA communication is now standard on all Haitian machines for the USA/Canadian markets. The control technology provides flexible integration with auxiliary equipment and automation. Easily analyze upstream and downstream data from one control, thus creating a production ecosystem that generates extensive information for the plastics processor.



Through the powerful standard OPC-UA interface, Haitian machines can connect with any MES/ Monitoring system on the market. Monitor your machines from anywhere and on any device. From plant status, production planning, process control, quality traceability, full life-cycle management,

energy consumption, decision analysis, etc., the result is an integrated production environment.

SUSTAINABLE SOLUTIONS

Energy efficiency and sustainability are topics of growing importance and are one of our core competencies. Here are just a few of the features that address these challenges:

- For all the new injection molding machine models, the collective features of the Generation 5 IMMs offer between 20% to 40% energy savings
- All models have reduced their machine footprint for greater productivity per square foot
- Smart control algorithms help reduce/optimize unnecessary energy consumption during cycles
- Intelligent Energy Management and real-time monitoring help you keep track of and manage energy usage. The easy-to-understand display allows molders to view how each step within the cycle impacts their overall power consumption. No need to attach an external electric meter.



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Smart Technology • Flexible Integration • Sustainable Solutions

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The image shows a row of three white injection molding machines in a dark blue, futuristic setting with glowing blue lines. The machines are labeled with '5' and 'J15500', 'J16500', and 'J17500'.