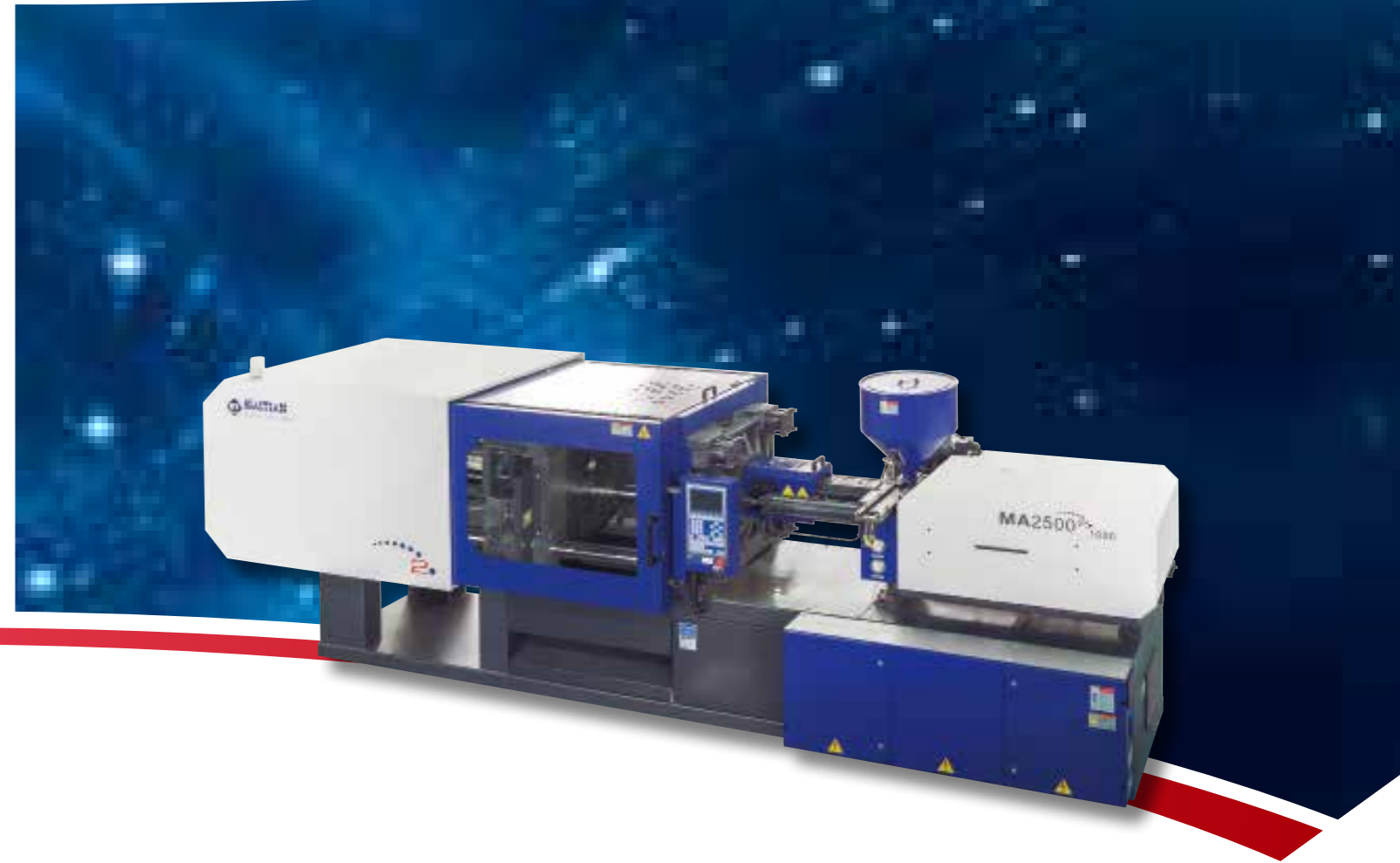


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Haitian **Mars²** Series

Haitian Partner:



HT 20140902-IV

Haitian Mars II Series

Second generation energy-saving servo injection molding machines



With the market success of the Mars Series machine, Haitian is proud to release the next generation.

The Mars II Series machine brings advances in clamping Unit design with improvements to the servo hydraulic system. Providing more energy-saving advantages and faster machine movements.

The new control system increases the machine functionality and overall system efficiency.



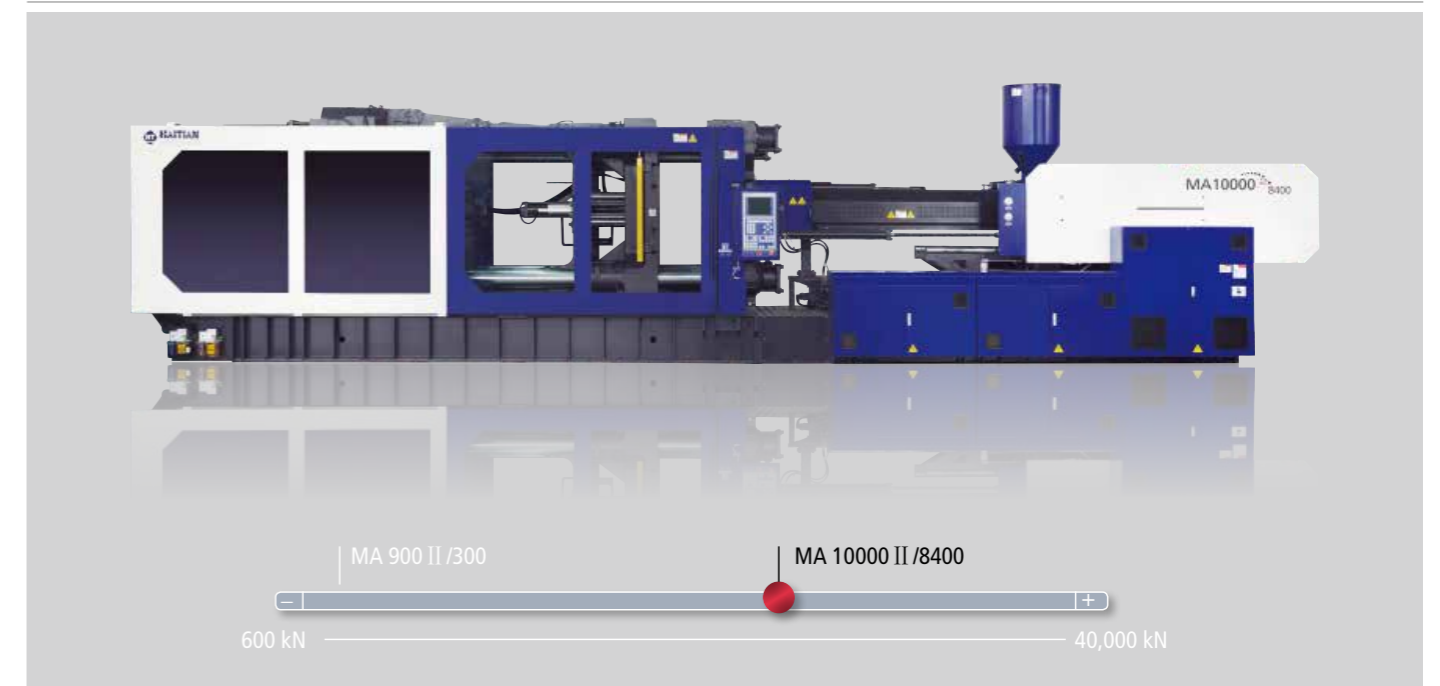
We Create Advantage

- Energy-saving:** Highly optimized servo energy-saving technology, with improved efficiency and lower energy consumption.
- Precision:** Redesigned clamping unit with optimized kinematics for higher precision.
- Higher Efficiency:** Optimized clamping unit provides lower energy consumption and faster movements for reduced cycle times.
- Safety:** Safety system incorporating hydraulic safety valve with feedback to meet national safety standards.
- Stable:** Closed loop servo drive system providing stable conditions for various molding applications.

MA 900 II / 300



MA 10000 II / 8400



Haitian Mars II Series

Second generation energy-saving servo injection molding machines

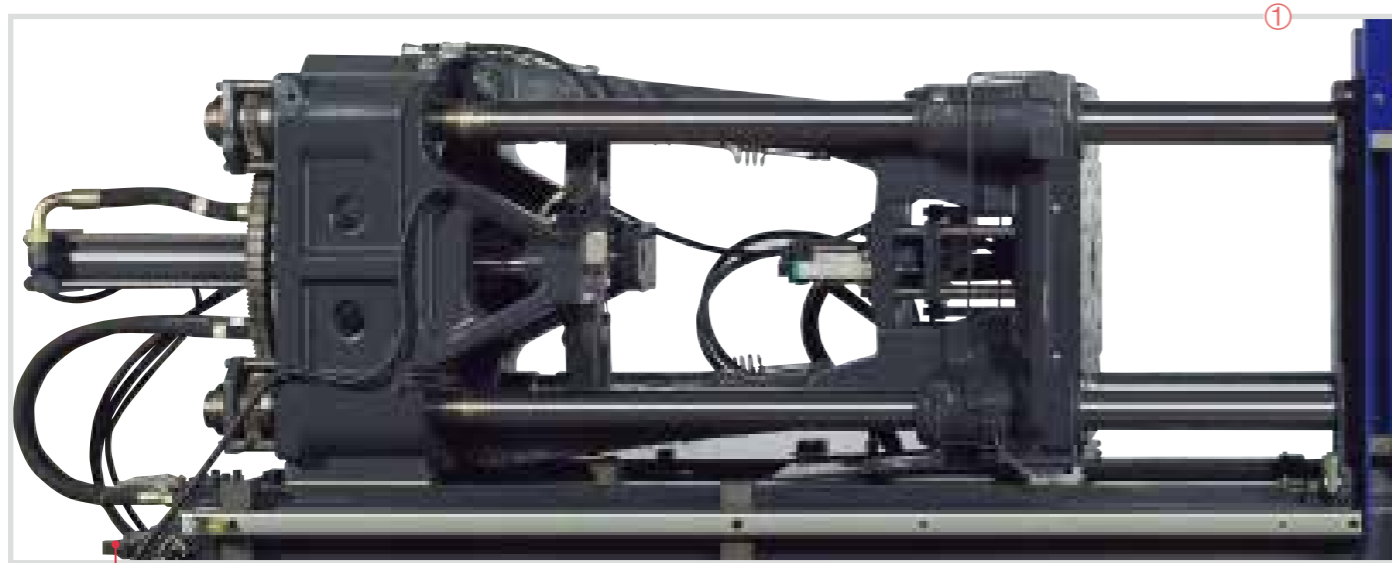


Figure ①
Optimized platen design using FEA software. Higher rigidity and stability.

Figure ②
Hydraulic safety valve with electrical feedback for optimal safety.

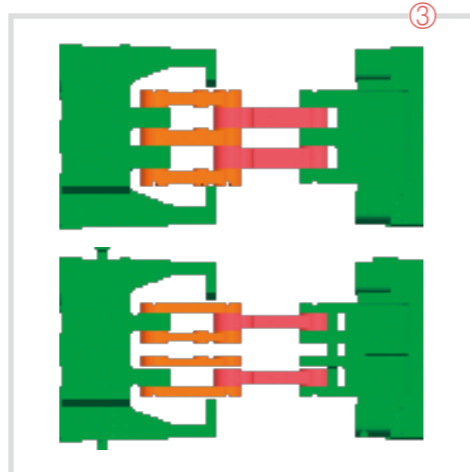


Figure ③
Redesigned toggle kinematics for higher efficiency and lower energy consumption for small and large machines.

Figure ④
Faster clamping movements due to optimized toggle kinematics and position sensing.

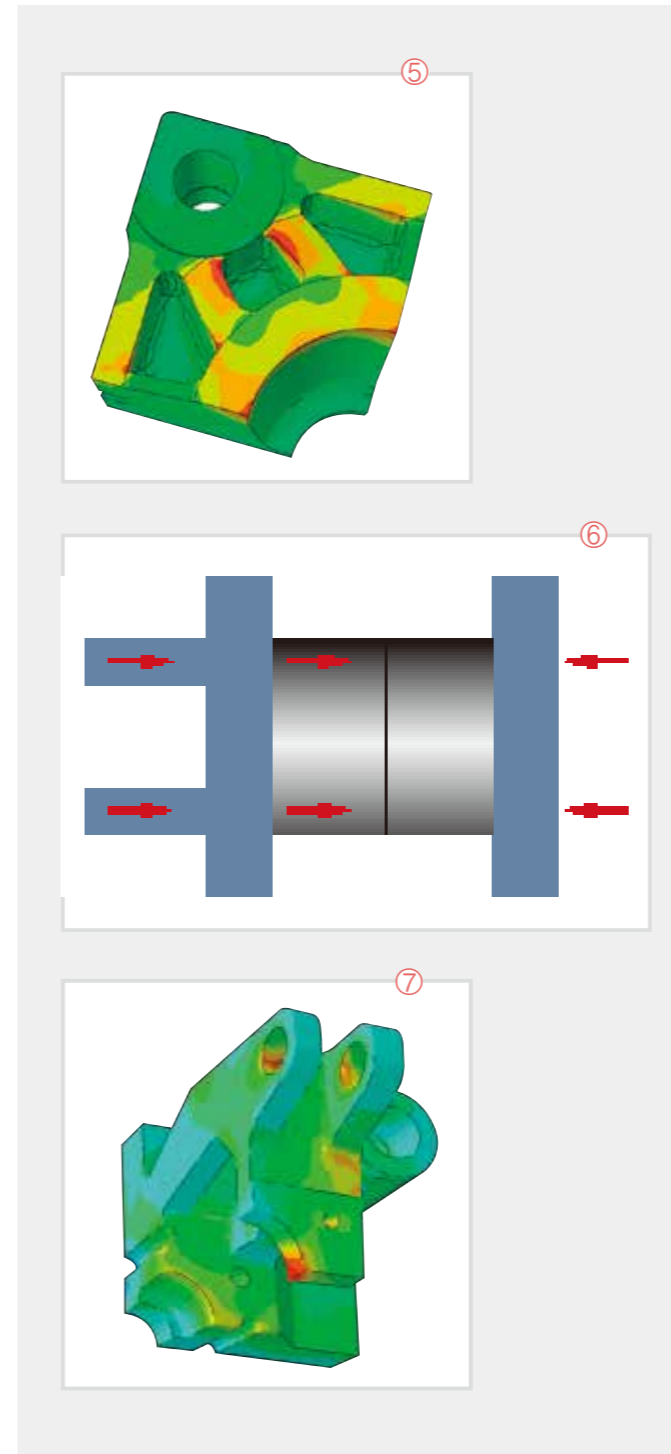
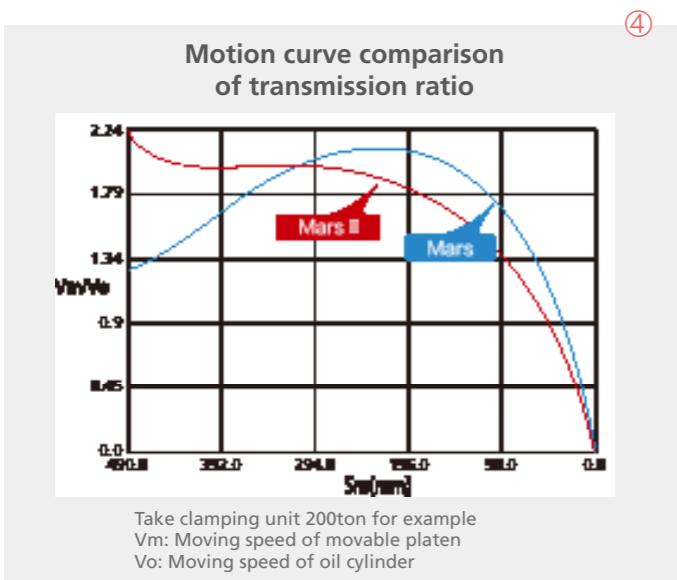


Figure ⑤
Fixed platen with centralized force loading and less platen flexing.

Figure ⑥
Redesigned clamping unit providing lower platen stress and higher mold force stability. Reducing mold wear and improving molded product stability.

Figure ⑦
Redesigned moving platen providing centralized force distribution from the toggle system to the mold.

Figure ⑧
New graphite/steel bushings providing better lubrication and lower lubrication consumption which improves the life of the clamping unit.(600-13000KN)

Figure ⑨
OPTION- Automatic tie bar removal device for easier loading of large or complicated molds into the machine.



Haitian Mars II Series

Second generation energy-saving servo injection molding machines



Figure ①
The rigid one piece injection base supports the common slide rail for injection and screw movements, reducing stress and increasing movement precision. The balanced twin injection cylinders apply equal force to the screw during injection.

Figure ②
Special coupling designed for strong screw forces required during the injection/charging/decompression process. Designed for easy removal during screw changes.

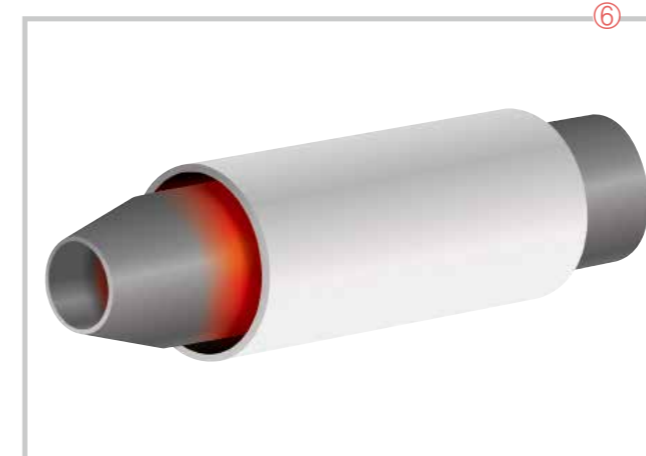
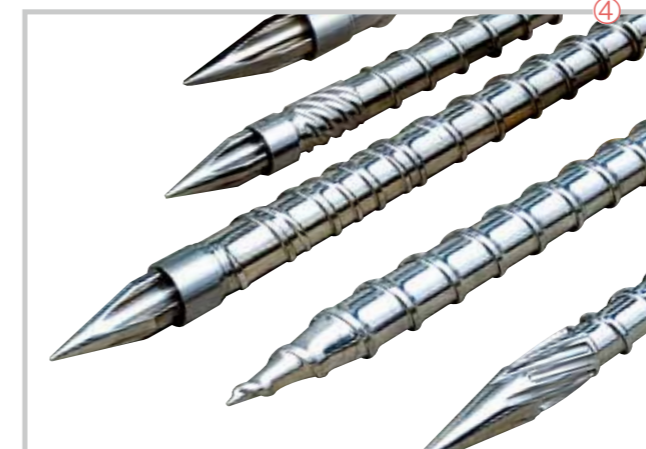


Figure ③
Nozzle cover with safety limit switch.

Figure ④
Optional screw designs for different material processing applications

Figure ⑤
Two layer barrel cover with optional insulation material for increased energy savings.



Figure ⑥
Option
Energy saving thermal covers for each heater. Reducing the radiant heating losses by 20-50%.

Figure ⑦
Safety chains for high pressure hoses can prevent hoses hurt people.

Haitian Mars II Series

Second generation energy-saving servo injection molding machines

Patented Servo Hydraulic Drive System for Injection Molding Machines

Haitian is the global leader for servo hydraulic plastic injection molding machines.

The Mars Series machine was launched to the market in 2007, with more than 80,000 machines sold has become the industry bench mark.

The patented servo motor /gear pump drive system was designed as a system and not the combination of standard market components as used by our competitors.

This translates into a significant advantage for repeatable high precision and low energy consumption for different molding applications and processing materials.

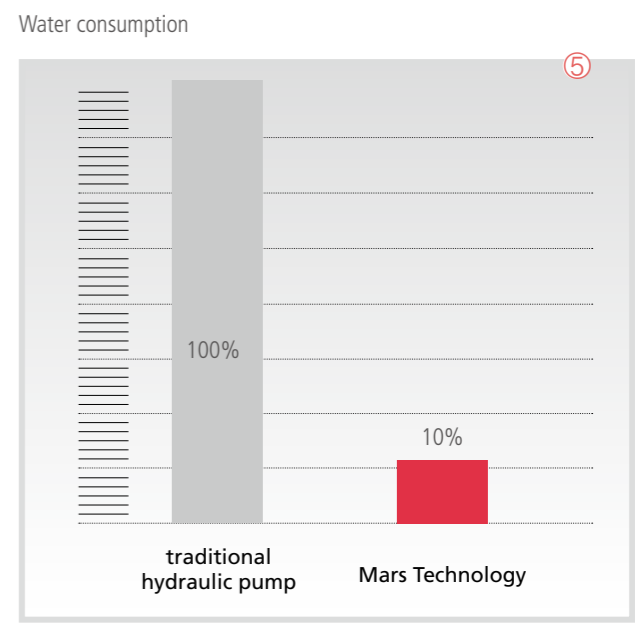
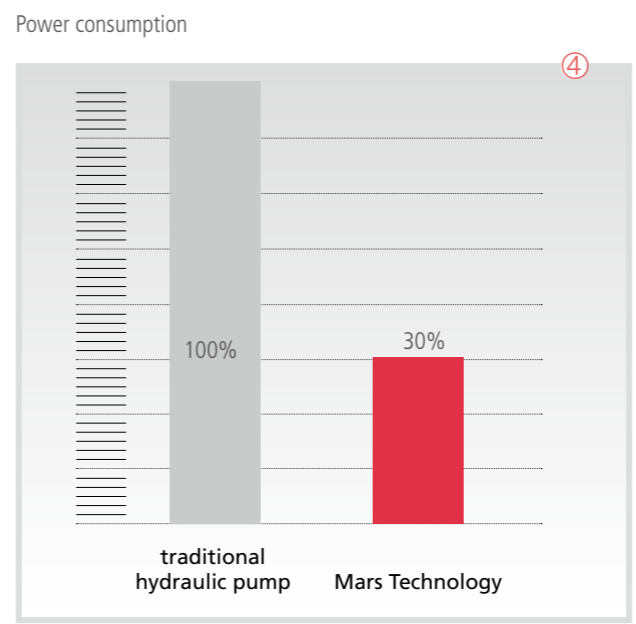
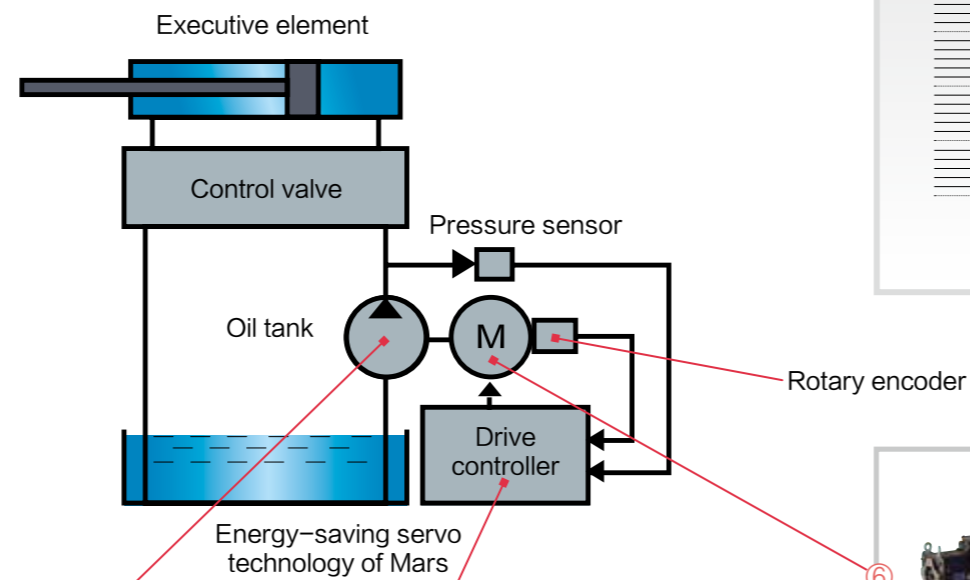


Figure ③ The European servo motor controller is matched to the drive motor for optimal efficiency and repeatable accuracy.

Figure ④ The Mars II drive system provides significant cost savings for machine energy consumption compared to traditional hydraulic drive systems.

Figure ⑤ The consumption of hydraulic oil cooling water is dramatically reduced due to the on-demand control of the servo drive system. Only the required quantity of oil is used during each stage of the machine cycle, which eliminates bypass oil wastage as found in traditional hydraulic systems.

Figure ① Patented servo motor to gear pump design. The direct drive connection between the servo motor and the gear pump, provides excellent drive torque giving maximum acceleration and deceleration speeds for all machine functions. The patented drive system is a true advantage for high stability and repeatable molding conditions.

Figure ② High efficiency gear pump for stable operation and low energy consumption.

Figure ⑥ Servo motors ranging from 7.5 kW to 160 kW are specially designed to meet the high demands of the plastic injection molding machine process requirements.

Haitian Mars II Series

Second generation energy-saving servo injection molding machines

Standard Controller



10" or 12" high resolution LCD screen with optimized panel layout for convenient machine operation.

Optional Controller:- KEBA 2580



12" or 15" high resolution LCD touch screen. with extended machine functions and flexibility to meet complex machine operations.



Mold screen: Mold opening/closing position precise control



Injection screen: 6 stage injection control



Charge screen: Back pressure proportional valve control



Quick setting screen: Overview

Standard controller

- » Two parallel CPU's for faster data processing with full digital control .
- » Network compatible with the i-net factory management system for real time monitoring of the production data for statistical analysis and process optimization (Optional)
- » Large Internal memory for mold data storage
- » Closed loop PID barrel heating temperature control

Optional controller

- » Extended functions for molding applications requiring a higher level of machine options.
- » Cycle sequencer for full function control.

Options

- » Clamping unit/injection unit combinations for specific applications
- » Mold adjust Automatic clamp force control
- » Increase of the maximum mold height.
- » E67 robot interface
- » Proportional valve for mold open/close control.
- » Core/ejection parallel with mold opening.
- » Injection proportional valve
- » Transducer for injection unit position control
- » Special screw and barrels for specific applications
- » Integrated mold hot runner control
- » Closed loop barrel feed throat temperature control
- » Hydraulic or pneumatic shut off nozzle
- » Spring type shut off nozzle
- » Air valve for part ejection
- » Core puller pressure release
- » Mold valve gate control - hydraulic or pneumatic.
- » Oil pre-heating
- » E62 - gas injection interface
- » Platen heat insulation plates
- » Barrel heater blanket
- » Cooling water flow regulators
- » Hopper vacuum loader
- » Magnetic hopper draw
- » Hot air material dryer
- » Dehumidifier material dryer
- » Mold thermoregulators - water or oil
- » Water chiller
- » Air compressor
- » Parts conveyor
- » Product removal robot
- » Robot safety enclosure

Note:-
Mars Series can not have accumulator assisted injection!