The Haitian Saturn series (standard hydraulic IMM), which targets the mass market, is the most popular injection molding machine in the molding industry of China and abroad with the best price and performance ratio. With the 40 years experience in machine design and manufacture, the Haitian Saturn series, based on the Saturn series platform, is providing the maximum necessity to the market, which satisfies the customers by the simplicity, reliability, high standardization and whole production consistency. Haitian Saturn series is flexible to expand the functions by adding up the options to meet the special requirements of customers in need of high efficiency.

Haitian Saturn series based on:

» 40 years R&D and manufacturing experience
» Cost driven design based on innovation
» High accurate imported tooling machines
» Careful selection of components
» High efficient assembling process
» Quality control at each manufacturing stage.
» Accessible pre-sales and after-sales service
» Customer optimizations according to requirements

Top quality
at a unique price-performance ratio.
Haitian Saturn Series

in detail.

General:
- Haitian standard color
- Optimized machine housing
- Adjustable footpad
- Standard hopper
- Extended nozzle
- Spare parts
- Professional machine tools

Clamping unit
- 5-point double toggle system
- Mechanical, electrical safety gate interlock.
- Low pressure mould protection
- Multi stage control of pressure, speed and position of mould open/close
- Variable mode of ejector movement
- Wear-resistant track of moveable platen.
- Splitter of cooling water for mould
- One pair of hydraulic core puller (2 pairs for 5300 KN to 14000 KN, 3 pairs for 16000 KN to 28000 KN, 4 pairs for 33000 KN to 40000 KN).
- Automatic safety sliding door on the operating side (above 10000 KN)
- Automatic central lubrication
- Fast mould clamping with differential device.
- Braking device for mould protection
- Automatic mould height adjustment
- Chrome plated tie bar
- Controlled mould opening and clamping by stroke sensor
- Controlled ejector by stroke sensor
- Robot interface

Dynamic and sensitive
The 5-point double toggle provides short locking time and high opening forces.

European standard layout
European standard layout of the platen ensure the flexibility of fixing mould

Safety as priority:
The newly developed integrated safety bar for improved operator safety.

Increased flexibility
Free programmable core pullers with 1 to 6 circuits.

Advanced technology:
Keba control ensure the precision of the plastic parts processing.

Time and cost saving:
Automatic mold height adjustment ensure the time and cost saving during the mould changing.

Optimized machine housing
Optimized Machine housing design with consideration of the fast and easy mould changing.

Wear resistant tie-bar
Chrome plated tie bars, made from alloy structural steel are designed and manufactured for high rigidity and wear-resistance.

Easily accessible
Discharge area opens on three sides to allow simple integration of peripheral components.

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Injection unit

- Two drive cylinder for the stroke of injection unit
- Two drive cylinder for screw injection
- Multi-stage installation of injection speed, pressure and position.
- Multi-stage installation of holding pressure, time and speed.
- Multi-stage installation of charging speed, time and position.
- Adjusted back pressure during charging
- Automatic barrel heating function
- Screw speed inspection
- Controlled transmission position of injection to pressure holding
- Monitored ending position of injection
- Controlled injection process by stoke sensor
- Prevented screw movement before full plasticization.
- Nozzle protecting cover
- Anti-slip barrel aluminum cover
- Three retraction modes of injection unit
- Self-cleaning function
- Efficient plasticization device with strong torque motor
- Mechanical supporting device for barrel (above 5300 KN)
- Free selection of variable screw sizes depending on application
- Injection unit can be swivelled out to operator side (above 7000 KN).
- Controlled temperature of barrel by PID
- Ceramic heater bands (above 2800 KN)
- Cooling device at the feeding throat
- Nozzle alignment adjusting device

Hydraulics

- Efficient hydraulic pump with sound insulation.
- Stable and powerful fixed hydraulic pump
- By-pass oil filter
- Oil tank with level control
- Oil temperature alarm
- Oil pre-heated function
- Alarm in case of filter clogged
- Oil cooling device controlled by valve
- Core pull function parallel to mould opening/closing (16000KN-24000KN)

Hydraulic Block
The energy-saving hydraulics are fitted with sound insulation and are made of high-quality European components. They allow much greater forces to be transferred and enable very uniform and precise movements of the machine.

Hydraulic Block

Low servicing costs
Permanent fine filtration of the oil in the bypass increases oil quality in time and the intervals between oil changes.

Powerful and stable:
Fixed pump system provides stable output, quick response, powerful strength

Customized configuration
Up to three injection units per clamping unit available.

Increased choice
Free selection of a variety of screw sizes depending on application.

Self-adjustment
As standard the Moving platen is fitted with adjustable slide supports or the self-adjusting hydraulic supporting system to improve platen parallelism and provide better tie bar and mould protection.

Simple and smart:
Nozzle alignment is provided using a simple mechanism with fine adjustment for accurate mold protection:

Mold protection:
Multi stage ejector os able to satisfy all requirements for ejector position, speed and pressure. It is the optimal design for mould protection.

High pressure resistance:
Oil pipelines are positioned for aesthetic appearance and easy of maintenance.
Uniform control

The latest technology from Keba.

The Saturn series uses the latest control technology from Keba. This high-performance control system provides the ideal communication between the injection molding machine and the operator. The uniform operating concept and logical, clear structure of the functions make machine operation easy and user-oriented.

Model 1075 is suitable for standard applications, while model 4030 lends itself to more complex injection molding processes. Both versions are currently delivered in 15 languages.

Because of the large quantity of units required per year, Haitian is given high priority by their European partner. Haitian experts work closely with the Keba development team, positively influencing the development and expansion of hardware and software as well as the reliable services provided.

Both versions – 1075 and 4030 – have USB and Ethernet interfaces to enable the quick transfer of machine data for software updates and for connections to external printers.

The graphical temperature displays for hot runner systems and heating equipment help to make controlling, monitoring, and document machine processes easy and clear. This makes life easier for operators.

1075 system

Special features.

» Keyboard operated 10.4 inch colour screen
» Temperature display for up to 12 hot runners
» Easy-to-use injection, holding pressure, and dosing settings for the specified profile
» Cascade control injection valve gate up to 6 pneumatic or hydraulic
» USB interfaces for the external backup of form data and for connecting printers
» Ethernet interface

4030 system

Special features.

» 12 inch touch screen monitor for easy, ergonomic use
» Temperature display for up to 40 hot runners
» Easy-to-use injection, holding pressure, and dosing settings for the specified profiles
» Cascade control injection valve gate up to 12 pneumatic or hydraulic
» 3 USB interfaces for the external backup of form data and for connecting printers
» Ethernet interface
» RS232 and RS485 interfaces
Options & Customization
--Tailor-made and cost effective

Options
» Customized injection unit depending on application
» Close-loop control system with the help of Moog valve
» Temperature controller for mould protection
» Core pull function parallel to mould opening/closing
» Spring shut-off nozzle
» Accumulator
» Mixing nozzle
» Air valve
» Additional core puller
» Heat insulating board for platen
» Flow meter
» Variable pump
» 3 color alarm light
» E67 robot interface
» Mould opening/closing controlled by proportional valve
» Mould fixing pad
» Autoloader
» Hopper dryer
» Magnet frame in hopper dryer
» Dehumidifier
» Chiller
» Compressor
» Conveyor belt
» CE certificate
» CSA certificate

Function package PVC
The updating Haitian Saturn standard machines is always requiring for PVC processing. A special screw design prevents the melt from being exposed to excessive friction and thereby ensures that the treatment process is ideally suited to the material. Additional core pulling should be equipped for the complicated structure of the Plastic parts. A wider machine housing greatly allows the retraction of the core.

Functional package PET
It is necessary to update Haitian Saturn standard machines for processing the standard PET preform. A special screw design with L/D= 25:1, requiring a longer machine housing, driven by a higher consumption motor is dynamically improving the plasticization of PET material, which ensure the quality of PET preform. Automatic ejection of plastics parts is committed by increased ejection force.

Functional package Thermosetting material
The opportunity for processing thermosetting material by Haitian Saturn series machines is available by adding up the upgrading package. A special design screw of bimetal with the accurate melt prevents from the material overflowing and corrosion, which prolong the service life of the machine. The heating is ensured by the special heat-resistance sheet to improve the plasticization.

Function of air releasing is implemented to perfect the quality of plastic part.

Shorten your cycle time: It will shorten your cycle time. The cycle time will be shortened by installation hydraulic nozzle which allowing the mold opening during the charging and plasticization.

Higher efficiency with lower energy consumption: Electric screw drive is used for increasing plasticization and high precision with the benefits reducing the energy consumption in charging duration.

Increased injection speed: By installation accumulator the injection speed will improved significantly. It is recommended to be used for processing thin wall plastic parts.

Up to your choice: A wide variety of screw design are available for different polymer processing requirements.

Be clear at one glance: Equipped with the flow meter, the level of cooling water will be clear at even one glance. It also allow you to adjust the flowing volume and pressure for each melt of cooling water separately.

Notes: The selection of options requires pre-sales communication. We reserve the right to make alterations to the content in this brochure without notification.