Haitian Jupiter JU/j Series
Energy Saving Technology

Haitian JU/j energy-saving injection molding machine series have inherited and extended the excellent performance of JU standard machine. Equipped with high performance servo motor power control system, it not only enhances the injection precision, and shortens the reacting time, but also saves the electricity and water. This series can be regarded as a revolution on the basis of the traditional hydraulic injection molding machine.

**Upgraded Power Unit**
The traditional hydraulic unit control mode→high performance servo motor power control system

**Features of the energy-saving Haitian Mars Series injection molding machines**

The output of the drive system is sensitively altered, according to the actual need of the plastic parts being produced. The beauty of this concept is the avoidance of energy waste. During the pressure holding period the rotational speed of the drive will be significantly reduced, the resultant output provided by the drive system, will only be used for actual requirements of production. During the cooling period the output from the drive system is zero, which means there is no energy cost at all. Depending on the plastic parts being produced and the material being processed, energy-savings of is 20% to 80% are achievable.

Equipped with a rotary encoder and pressure sensor, the pressure flow state of the energy saving Haitian Mars Series machine will be transmitted to the controller, the command of which will be sent out to the efficient synchronous servo motor to change the rotation and the torque accordingly. The corresponding flow and pressure adjustment ensures the highest quality and precision of the plastic parts produced, with energy savings and fast response times.

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*Image showing energy consumption curves and system diagram.*
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Equipped with several large power and high performance servo motors power combination control systems, and a small power and high performance servo motors power control system, Haitian JU/j injection molding machine series have the advantages of low noise and high efficiency, besides they can output the flow pressure according to the movement needs and realize the power conservation.

With high performance servo motor and high performance gear pump power unit, this series feature in the stable performance, quick reaction, energy conservation, environmental protection and super low noise which have manifested sufficiently our purpose of considering for the customers.

The small power and high performance servo motor control system adopts the air cooling system while the large power and high performance servo motor control system adopts the oil cooling system. Both of the two cooling ways can satisfy their demands for cooling, enable the machines to keep working under the best state, enhance the stability and prolong the service life.

The clamping force keeps using a separate power control system consisting of a small power but high performance servo motor and a high performance gear pump, in this way, the clamping force can be more precise and the system more energy-saving. The cartridge valve adopts the accumulator to control the oil, therefore the cartridge valve can react more promptly.

With simpler and closer structure of oil circuit control valve and high precision and high sensitivity pressure feedback equipment, this series realize the precise control of close-loop and thus provide the customers with the excellent products with good stability.

Standard Devices

Clamping Devices
- Four cylinders two-platen clamping structure
- 5-stage pressure, speed and position control for mold open
- 5-stage pressure, speed and position control for mold close
- Electrical and Hydraulic Mold Close Safety Interlock device
- Centralized grease lubrication system in the clamping unit
- Self-adjusted movable platen hydraulic supporting device
- Diagonal symmetrical fast platen-moving device
- kinds of hydraulic ejection means
- Cylinder direct-acting mold height adjusting function
- High rigid and high intensity Haitian patent platen
- Multi-stages proportion control for clamping force
- Safe pressure limit function for breaking mold
- Clamping mold over-stroke electrohydraulic double protection function
- Mold open and ejection separate system with interlocking function
- Inverted double-cylinder ejecting device
- Ejector backward-pulling structure
- Adjustable ejector back stroke
- Haitian standard T-slot platen
- Mold clamping pressure sensor inspection function
- Mechanical positional locking function
- Split locking device
- Skidproof aluminum pattern pedal
- Tie bar protecting device
- Mold feeding with low clamping force maintaining function when turning off the machine
- The clamping force pressure releasing automatically when turning off the machine

Injection Devices
- Balanced double cylinder injection unit
- Double symmetrical distributed cylinder
- Injection shield
- Purge cover with safety switch
- Barrel heating shield
- Timing heating function
- Additional long nozzle(12000KN-20000KN)
- Nozzle alignment delicate adjudgement device
- Three modes for injection unit returning
- Screw suck back device
- Injection unit rotating device
- Drying machine and feeding machine
- High torque hydraulic motor driving screw turning
- Screw speed testing device
- Mixing loop for increasing the effect of plasticization and color-mixing
- Peloplastication proportional back pressure control
- Automatic purging function
- 5-stage for setting up the injection speed, pressure and position
- 5-stage for setting up the speed of holding pressure, pressure and position
- 3-stage for setting up the plasticizing speed, pressure and position
- Skidproof aluminum pattern pedal
- Nitride screw and barrel (with the screw diameter of 17mm or above)
- Chrome plated alloy screw and nitride barrel

Hydraulic Devices
- High Quality Fixed Pump system
- Low Pressure Mold Protection device
- Fast Mold Closing Device
- Fast speed proportional direction valve of mold open and close
- Oil temperature alarm equipment
- Imported hydraulic component optimal combination

Options Devices
- The size of mold clamping unit and injection unit can exchange and match
- Close-loop control system using a Moog servo valve
- Wide Selection of Special Screws for Specific Customer Applications
- Mold Temperature Controller
- Spring Shut-Off nozzle
- Accumulator assistant fast injection
- Multi-group blowing valve
- Multi-group loose core device
- Platen heat shield
- Mold Cooling Water regulator
- Plastic dehumanize
- Hopper magnet
- Mold clamp

Options Devices
- Memory storage using 3.5” floppy disk drive
- RS-232 communication interface prepared for the upgrading of host machine
- Auto inspect system of function program
- 3 Sets of Auxiliary Power Outlets for Auxiliary Equipment
- Emergency stop safeguard device
- Oil level indicator with low level alarm
- Fast fuse core when meeting the electric leakage of electrical heater
- Inner air assistant interface
- The cover of electrical wires
- Automatic turning off function when no operation
- Alarm Light

Others Devices
- Haitian Standard Color
- Adjustable Machine Leveling device
- Standard accessories
- Easily damaged spare parts
- Professional tools
- Safety Foot Board with pump stop inter lock(24000KN-40000KN)
- Add to anticipate terriace(16000KN-60000KN)
- Automatic Operator side Safety Gate device
- Turnable control box
- European fully closed shield in the clamping unit
- Outside-hanging auto lubricant pump
- Outside-hanging auto lubricant pump
- The water cooling interface for 16 groups of moving half and fixed half mold respectively(12000KN-24000KN)
- The water cooling interface for 8 groups of moving half and fixed half mold respectively(38000KN-60000KN)
- Technical data prior setting
- Robot interface
- Unattended Running Operation Lock switch
- Pre-heating and temperature control for producing RD
- Solid relay temperature controlling device
- Barrel Temperature Monitoring function
- Four high precision moving sensors, i.e. Mold open and close, injection, ejection and mold clamping.
- High precision displacement Sensor(16000KN-60000KN)
- Technimation 7000 (12000KN-14000KN)
- KEBA4200(16000KN-60000KN)
- Mould EMS memory can store 36 sets of molds, with floppy disk for storing mold settings
- Memory storage using 3.5” floppy disk drive
- RS-232 communication interface prepared for the upgrading of host machine
- Auto inspect system of function program
- 3 Sets of Auxiliary Power Outlets for Auxiliary Equipment
- Emergency stop safeguard device
- Oil level indicator with low level alarm
- Fast fuse core when meeting the electric leakage of electrical heater
- Inner air assistant interface
- The cover of electrical wires
- Automatic turning off function when no opera-
## Specification

### INJECTION UNIT
- **Screw Diameter**
  - **A**: 100
  - **B**: 110
  - **C**: 120
  - **D**: 130
- **Screw L/D Ratio**: 24.2
- **Injection Weight (PS)**
  - **A**: 3645
  - **B**: 4411
  - **C**: 5249
  - **D**: 6160
- **Injection Rate**:
  - **A**: 663
  - **B**: 802
  - **C**: 955
  - **D**: 1120
- **Injection Pressure**:
  - **A**: 211
  - **B**: 174
  - **C**: 146
  - **D**: 125

### CLAMPING UNIT
- **Clamp Tonnage**:
  - Minimum: 12000
  - Maximum: 18000
- **Mould Opening Stroke**:
  - Minimum: 1400
  - Maximum: 1700
- **Space Between Tie Bars**:
  - Minimum: 1300×1200
  - Maximum: 1460×1360
- **Min. Mold Height**:
  - Minimum: 600
  - Maximum: 700
- **Max. Mold Height**:
  - Minimum: 600
  - Maximum: 400
- **Ejector Stroke**:
  - Minimum: 350
  - Maximum: 318
- **Ejector Number**:
  - Minimum: 25
  - Maximum: 33

### OTHERS
- **Max. Pump Pressure**:
  - Minimum: 18
  - Maximum: 17.5
- **Pump Motor Power**:
  - Minimum: 55+37+7.5
  - Maximum: 45+45+7.5
- **Heater Power**:
  - Minimum: 68.75
  - Maximum: 94.9
- **Machine Dimension (L × W × H)**: 1660
- **Machine Weight (t)**: 62
- **Hopper Capacity (Kg)**: 200
- **Oil Tank Capacity (L)**: 400

### Moving platen
- **Platen dimensions**
- **Mounting hole for robot/sprue picker top view from fixed platen**

### Machine dimensions
- We reserve the right to make changes as a result of further technical advantages.
### Specification

#### INJECTION UNIT

<table>
<thead>
<tr>
<th>Parameter</th>
<th>JU18000/13700j</th>
<th>JU20000/15800j</th>
<th>JU20000/j</th>
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#### CLAMPING UNIT

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#### OTHERS

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**Moving platen.**

**Mounting hole for robot/sprue picker top view from fixed platen.**
## Specification

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<tr>
<th>INJECTION UNIT</th>
<th>( JU28000/J )</th>
<th>( JU33000/J )</th>
<th>( JU40000/J )</th>
<th>( JU50000/J )</th>
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**Platen dimensions**

Moving platen

**Machine dimensions**

Mounting hole for robot/sprue picker top view from fixed platen

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