Realizing dreams with a new fusion. The future is here.

We Deliver World Class Performance

Specifications are subject to change without prior notice.

Printed in Japan
"Dreams and Future"!
Our unlimited technology offers expanded moulding possibilities with the new HH (Double H) Series

The UM “HH Series” all electric injection moulding machines reflect the qualities of “Dreams and Future” and provide moulding possibilities based on reliable technologies.

- New MAC-IX Controller “connecting to the Internet”
- UM IoT solutions
- Varied selection of screw sizes
- DIEPREST for improved functionality and moulding capabilities
- Direct Drive (DD) injection servomotors for fast response, high-powered injection
- Highly rigid, wide platens to realize precise moulding
- Highly reliable, long-life ball screws
- Electric regeneration system for carbon neutrality

Machine line-up of HH series

<table>
<thead>
<tr>
<th>Clamp unit</th>
<th>Injection unit</th>
<th>Screw diameter</th>
<th>Injection speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>350HH</td>
<td>i17</td>
<td>A Ø62 mm</td>
<td>U (300mm/sec)</td>
</tr>
<tr>
<td>450HH</td>
<td>i25</td>
<td>A Ø70 mm, Y Ø62 mm</td>
<td>H (200mm/sec)</td>
</tr>
<tr>
<td>550HH</td>
<td>i35</td>
<td>A Ø80 mm, Y Ø70 mm</td>
<td>S (150mm/sec)</td>
</tr>
<tr>
<td>650HH</td>
<td>i50</td>
<td>A Ø90 mm, Y Ø80 mm</td>
<td>U (125mm/sec)</td>
</tr>
<tr>
<td>850HH</td>
<td>i80</td>
<td>B Ø115 mm, A Ø105 mm</td>
<td>H (160mm/sec)</td>
</tr>
<tr>
<td>850HHW</td>
<td>i80</td>
<td>A Ø105 mm, Y Ø90 mm</td>
<td>H (125mm/sec)</td>
</tr>
<tr>
<td>1300HH</td>
<td>i120</td>
<td>A Ø120 mm</td>
<td>H (25mm/sec)</td>
</tr>
</tbody>
</table>
The new and improved MAC-IX Controller

- Exceptional operability with two separate screens implemented in large screens.
- An upgraded security function that uses ID card authentication is equipped as standard.
- Stable moulding by high-speed control that is six times that of a conventional system.

Upgraded Operability

- Pivoting mechanism, two separate large LCD screens
  Two screens are selectable as you choose, and allows for an unprecedented user-friendly operation environment.
- Injection waveform memory
  Comparable to good item’s waveform, and helpful for good production.
- Vertically long screen
  Long, vertical screens can display twice the trend data compared to a conventional system.

High Speed, Highly Accurate Control

- Shortened scan time
  Scan time is shortened to a sixth of a conventional system by using EtherCAT\textsuperscript{TM} High-speed communication which provides for stable weight of the moulded product.
  \textsuperscript{TM} is a registered trademark of Beckhoff Automation GmbH.
- Security ID card system
  Login by ID card which can be assigned to an operator.
- Automatic change of languages and units
- Prevention of password loss
- Traceability management
  Operator’s information is added to the operational/setting records.
- Control of operator access
  4 levels of access can be set for each operator.

User Support Function

- Alarm guidance
  Actions for alarm resolution by using a flow chart which can be restored easily.
  Easy identification of faults by improved alarm messages.
- Fault record function
  Input-output data both pre and post trouble is automatically stored to a large-capacity HDD, and helps to reduce the time for troubleshooting.
- E-manual
  The machine manual is available for viewing on screen.

Global Reliability

- An uninterruptable power supply (UPS) is standard equipment
  Prevents trouble caused by voltage drop or brownout, even in areas having an unstable electric power supply.
  Data can be safely backed-up in case of power outage.
- A surge suppressor is standard equipment
  Protects the control system from lightning strikes.
- Multi-language selection
  The standard languages available are Japanese, English, Chinese, and Thai (new addition).
  Eight other languages are available as an option.
  A maximum of three languages is selectable from a total of 13 languages.
- Pictographic switches (ISO-compliant)
  Easy to operate by pictographic switches.
- Various International Standard compliance
  Complies with JIMS, ANSI, EN, GB, and KCS standards.
- IEC 61131-3-compliant ladder
  The operation sequence is created by global standard ladder language.

Connection for Globalisation

- UBE - FANUC SHOT-LINK\textsuperscript{i}
  Product and Quality information management for globalization of moulding facilities (connectable up to a maximum of 128 machines).

Alarms and Trouble Diagnosis

- 30-shot trend data is displayed by long screen layout.
- Injection conditions can be changed while reviewing process records.

Alarm guidence

- Alarm data is automatically stored and displayed for each machine.

High Speed, Highly Accurate Control

- Shortened scan time
  Scan time is shortened to a sixth of a conventional system by using EtherCAT\textsuperscript{TM} High-speed communication which provides for stable weight of the moulded product.
- Stable moulding by high-speed control that is six times that of a conventional system.

LAN, Communications capability (VPL, etc.)

- Remote office

Multi-Language Selection

- Japanese
- Chinese
- Thai
- English
- Spanish

Multi-Language Selection

- Japanese
- Chinese
- Thai
- English
- Spanish

Quality radar

- Displays the correlation of the data

- Same place: Same correlation data
- Symmetrical to center point: Reversal correlation data
- Distance from center point: Variation impact is great.
Variety of screw sizes available

The highly regarded UB screw with outstanding mixing and plasticizing capacity properties is standard equipment. Various screw designs tailored to the wide-ranging needs of the industry are also available.

- For high-cycle, general-purpose, “UB screw” (Standard equipment)
- For super-high color mixing, “MF-UB screw” (Optional)
- For Long Fiber Thermoplastics, “LFT screw” (Optional)
- For low shear, low heat generating, “F screw” (Optional)
- For high cycle, high mixing, “SP screw” (Optional)

High rigidity wide platen

Platen design is optimized for high rigidity.

- New 1300HH model is added to the line up, and 650HH is standardized with a wide platen.

Highly reliable ball screw

The estimated ball screw service life is based on original long-term endurance testing. The surface pressure testing system and original structural analysis methods ensure long ball screw service life and lower maintenance cost.

High-response, high-powered injection, dedicated DD Motor

Featuring high-powered AC servo motors developed with original power electronic technology specifically for injection moulding applications.

- The DD (Direct Drive) mechanism directly connects the injection drive ball screw and the motor, making thin-wall moulding possible by low inertia, highly responsive, and high acceleration/deceleration performance.
- Maintenance costs are reduced by the backlashless mechanism, and thin-wall moulding, which needs longer holding pressure times is also possible. The benefits of the DD System are useful for a broad range of process conditions.

Electric regeneration system

During the braking phase of motion, the motors act as generators, and the generated power is converted to electric power for reuse by the system.

- Warpage and sink marks reduced, Thin wall moulding, Clamping force reduction, Gas release moulding
- High value-added products
- Reduced skin material losses
- Reduced manufacturing process
DLFT system – Direct Long Fiber reinforced Thermoplastics injection moulding system (Optional)

The DLFT system is an injection moulding system for Long Fiber reinforced Thermoplastics, which allows the direct mixing of the base resin material and the reinforcing fiber material in the barrel. Allows LFT products, which have high strength, lightweight, and are suitable for substitute metal parts, to be produced at a lower cost!
### Machine Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>3500HH</th>
<th>4500HH</th>
<th>5500HH</th>
<th>6500HH</th>
<th>8500HH</th>
<th>8500HH-W</th>
<th>13000HH</th>
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<tbody>
<tr>
<td>Injection unit size</td>
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<td>Y</td>
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<tr>
<td>Screw Diameter (mm)</td>
<td>57.15</td>
<td>62.55</td>
<td>70</td>
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<td>Calculated Injection Volume (cm³)</td>
<td>795</td>
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<td>1055</td>
<td>1345</td>
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<td>1770</td>
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<td>Weight (g)</td>
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<td>Max. injection pressure (MPa)</td>
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<td>Max. Holding Pressure (MPa)</td>
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<td>Injection Rate (cm³/s)</td>
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<td>455</td>
<td>480</td>
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<td>Plasticizing Pressure (kN)</td>
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<td>Ejector Stroke (mm)</td>
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<td>Screw Speed (rpm)</td>
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<td>Max. Mould Clamping Force (kN)</td>
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<td>Platen Size (HxV)</td>
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<td>1300×1300</td>
<td>1300×1300</td>
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<td>Distance Between Tie Bars (mm)</td>
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<td>Max. Mould Opening Stroke (mm)</td>
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<td>Max. Daylight (mm)</td>
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<td>mould Height (mm)</td>
<td>300−670</td>
<td>350−750</td>
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<tr>
<td>Ejector Force (kN)</td>
<td>78 (B)</td>
<td>98 (10)</td>
<td>127 (3.0)</td>
<td>196 (2.0)</td>
<td>196 (2.0)</td>
<td>196 (2.0)</td>
<td>240 (3.0)</td>
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<td>Ejector Stroke (mm)</td>
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<td>Electric Heat Power (kW)</td>
<td>13.4</td>
<td>17.1</td>
<td>17.1</td>
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<td>Overall Dimension (LxWxH) (mm)</td>
<td>7.1×1.9×2.2</td>
<td>7.5×1.9×2.2</td>
<td>7.7×2.1×2.2</td>
<td>8.1×2.1×2.2</td>
<td>8.4×2.1×2.2</td>
<td>8.8×2.3×2.2</td>
<td>9.6×2.3×2.3</td>
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<tr>
<td>shipping Weight (kg)</td>
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<td>54.9</td>
<td>54.9</td>
<td>54.9</td>
<td>54.9</td>
<td>54.9</td>
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</tr>
</tbody>
</table>

### External Dimensions of Machine

![Diagram](image-url)