Products are subject to all applicable export control laws and regulations.
The all new H.Plus-300.
A fusion of cutting edge CNC design functionality coupled with an eclectic mix of classic and ultra modern aesthetics.
The next generation of Matsuura H.Plus Horizontals has arrived.

Largest Working Envelope in its Class

Upgraded Specification as Standard (compared to previous model)

- Y-axis stroke increased to **560 mm** (22.04 in.) [+60 mm (2.36 in.)]
- Max. work piece envelope increased to **ø530 x H760 mm** (ø20.86 x H29.52 in.) [+H650 mm (2.56 in.)]. No competitor machine has a larger working envelope.
- Rapid traverse rate (XY/Z) increased to **60 m/min** (2.362 ipm) [+10 m/min (393.7 ipm)].
- Min. distance from spindle to pallet center reduced to **70 mm** (2.75 in.) [-50 mm (1.96 in.)]
- **51 tools** ATC as standard [+20 tools] incorporating a new Matsuura developed high speed ATC tool indexing system.
- High speed indexing increased to **100 min⁻¹** [+50 min⁻¹], the rotary table can be supplied with a DD Motor as an option.
- Floor space reduced by 15% to 7.8 m².

Superb Reliability

- THERMAL MEISTER™ (Thermal Displacement Compensation for Spindle & Feed Axis) is provided as standard.
- Feed Axis Grease Auto Supply System is provided as standard.
- Spindle Grease Auto Supply System is provided as standard.
- Powerful Swarf Management by W-Type Cover for Z-Axis + X-Type APC Door.

User Friendly

- Ergonomic design – based around maximum operator comfort & productivity.
- Supplied with powerful NC Matsuura G-Tech 30i / Matsuura G-Tech 840DI
Unmanned Multi Pallet Excellence

Matsuura offer 3 proven, expandable & highly productive multi pallet systems – tailored to your production process

<table>
<thead>
<tr>
<th>Type</th>
<th>Features</th>
<th>Production Volume</th>
<th>Number of Pallets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Pallet System</td>
<td>Compact, fully integrated &amp; expandable multi pallet system</td>
<td>Low to Medium Volume</td>
<td>PC5  PC11</td>
</tr>
<tr>
<td>Tower Pallet System</td>
<td>Vertically aligned space saving multi pallet system</td>
<td>Medium to High Volume</td>
<td>PC15</td>
</tr>
<tr>
<td>Linear Pallet System</td>
<td>Twin decked &amp; fully expandable linear pallet system</td>
<td>High to Continuous High Volume</td>
<td>PC17-</td>
</tr>
</tbody>
</table>

Floor Pallet System Option Compact floor area

Tower Pallet System Option Vertically aligned space saving stocker

Linear Pallet System Option Effective, proven & continual unmanned production

All Matsuura H.Plus Series horizontal pallet storage options can be upgraded after the initial purchase of your machine to support your changing production environment. Retrofits at your premises can be accommodated quickly, efficiently & cost effectively. Linear pallet systems have the added advantage of being able to fully support both 4-axis Matsuura horizontal & certain Matsuura 5-axis machines, providing they have the same pallet size.
Unrivaled Tool Storage & Management Capacity - Supporting Your Unmanned Production Process

**High Speed Index Drum Tool Magazine**

<table>
<thead>
<tr>
<th>51 (Bi-Directional Address Code) Standard</th>
<th>52 (Memory Random) Option</th>
</tr>
</thead>
</table>

Maximum 240 tools can be stored in this ATC tool magazine.

**Max. 240 tool storage Matrix Tool Magazine**

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>180</td>
</tr>
<tr>
<td>210</td>
</tr>
<tr>
<td>240</td>
</tr>
</tbody>
</table>

Maximum 320 tools can be stored in this ATC tool magazine.

**Max. 320 tool storage Matrix Tool Magazine**

<table>
<thead>
<tr>
<th>Option</th>
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</thead>
<tbody>
<tr>
<td>120</td>
</tr>
<tr>
<td>160</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>240</td>
</tr>
<tr>
<td>280</td>
</tr>
<tr>
<td>320</td>
</tr>
</tbody>
</table>

Maximum 520 tools can be stored in this ATC tool magazine.

**Max. 520 tool storage Matrix Tool Magazine**

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>360</td>
</tr>
<tr>
<td>400</td>
</tr>
<tr>
<td>440</td>
</tr>
<tr>
<td>480</td>
</tr>
<tr>
<td>520</td>
</tr>
</tbody>
</table>

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**New ATC Technology**

Designed & fully proven by Matsuura this new drum type ATC magazine offers vastly reduced tool change times. Tool indexing time has been reduced by a massive 60%.

**Drum Type ATC – Specification**

- ATC time: 2.44 sec.
- Neighbor tool calling time: 0.4 sec.
- The longest next tool calling time: 3.2 sec.

**New ATC touch panel display – larger screen, ergonomic & user friendly.**

All tool management & ATC functionality can be controlled from this screen.
NC Controlled Indexing Rotary Table: High Speed, Accuracy & Reliability

DD Motor Driven 100 min⁻¹

The DD (Direct Drive) motor driving the NC controlled rotary table indexes twice as fast as a conventional worm gear set up.

DD Motors also possess the added advantage of being non contact. The non contact aspect of the DD Motor also eliminates not only the abrasive wear on components associated with conventional worm gear set ups but also completely removes backlash, offering increased and sustained positional accuracy as well as high speed operation.

The functional simplicity and reliability of the DD mechanism is also maintenance free.

DCS Dynamic Clamp System

Matsuura are proud to announce the development of our DCS System (Dynamic Clamp System). This automatic feature of the DD Motor mechanism will clamp the rotary table if and when a pre-determined force greater than the DD Motor can hold is brought to bear against it – as in heavy milling operations.

Once the force is lower than the pre-determined level, the clamp will automatically remove itself. This set up offers yet another substantial advantage over traditional worm gear set ups.

Owing to the automatic functionality of the DCS System, un-necessary clamping is eliminated – offering further reductions in indexing, cycle & operational times.

Conventional Machining

Application of the DCS system
- On the light machining, it skips M21 & M22 operation.
- On the heavy duty machining, if the loading force exceeds a designated value then it keeps M21 & M22 command.

Vacuum Type Coolant Thru Spindle System

This newly proven option removes all residual coolant from the tool and spindle during tool changing operations.

* Vacuum Type Coolant-Thru for 30,000 mm⁻⁻ Spindle is not available.
Effective & Reliable Swarf Management

**W-Type Protection Cover**
The Z-axis protective cover offers a slant of 45 deg – assuring rapid fall away of swarf & chips. The design of the enclosure assures no swarf traps – protecting your unmanned production processes & offering peace of mind lights out unattended operation.

**X-Type APC Door**
The new design of the X-Type APC door (Patent Pending) between the machining enclosure and the APC was first introduced on our highly acclaimed **H.Plus-500**. This design has proven itself to be highly effective in eliminating swarf build up around the APC door.

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**Thermal Displacement Compensation**

**THERMAL MEISTER™**
Thermal Meister™ monitors the temperature of the spindle and the X, Y and Z axes and supplies a constant feed of compensation values to the NC to maintain assured accuracy.

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**Access & Maintenance**

**Improved Accessibility**
The minimum distance from the spindle to the gauge line has been reduced by 50mm to 70mm. Even though Matsuura H.Plus machines are renowned for their rigidity, previously unattainable levels of ultra rigid machining with a shorter cutter can now be effortlessly achieved.

**Minimum Maintenance**
An automatic grease supply unit as standard feeds the spindle & all axes – eliminating maintenance intervention.

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**Reduced Machine Footprint**
The new H.Plus-300 offers a saving on floor space of 15% on the standard twin pallet machine when compared to the previous incarnation.

**Improved Spindle Maintenance**
On the rare occasion that your Matsuura Hi-Tech Spindle requires removal from headstock, the operation can be efficiently & quickly expedited – with minimum fuss & machine downtime.

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**Access & Maintenance**

**Minimum Maintenance**
An automatic grease supply unit as standard feeds the spindle & all axes – eliminating maintenance intervention.

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**Diffusion Chamber**

**Spindle Centre**

**Spindle Headstock**

**Spindle Motor**

**Feed Motor**

**Spindle Cartridge**

**Spindle Motor**

**Feed Motor**

**Spindle Cartridge**

**Spindle Motor**

**Feed Motor**

**Spindle Cartridge**

Drawing out the spindle cartridge from the headstock by using extra fixture
The Latest High Performance NC

Powerful NC Choices Matsuura G-Tech 840DI or Matsuura G-Tech 30i!

Matsuura G-Tech 840DI
Equipped with the latest high performance CPU, Windows XP Professional, graphical user interface, USB port.
10.4 inch color LCD, soft keys vertically arranged.
Expanded media for data backup such as PC card drive, USB Memory, USB HDD.

For High Speed & Superb Surface Finish
Machining for General Parts or Mold & Die
Advanced Zee LagY
Machining for more Complex, Precision Parts
IZ-1/COMP
(Max. 5,000 Block Look Ahead + Spline Interpolation)
After compressing a maximum of 50 blocks and engaging the 100 Block Look Ahead function, IZ-1/COMP interpolates & applies to the B-Spline to the nearest point selected

Matsuura G-Tech 30i
High speed CPU and FSSB, internal CNC bus, optical fiber cables used for high speed data transfer.
Nanometer resolution.
10.4 inch color LCD, soft keys vertically arranged.
Compact Flash Port, PC file management structure

For High Speed & Superb Surface Finish
Machining for General Parts or Mold & Die
IZ-1/15F
Machining for more Complex, Precision Parts
IZ-1/30NF, IZ-2/150NF
(Look Ahead Linear Acc./dec. + Nano Interpolation)
Executing the max. 200(IZ-1/30NF) or 600*(IZ-2/150NF) - block look ahead linear acc./dec. before interpolation achieves a smooth acc./dec. across the multiple blocks calculated by nano order.

* Max. 1,000 block available as option.

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Proven Software Performance

IPC High-Speed Precision Machining Program Support Function
When utilizing this software, setting the required part accuracy level is quick, simple and user friendly, allowing you to prioritize precision against speed.

Handy Man II Y,F
Handy Man II provides major savings by reducing set-up, programming, operation, and maintenance times.
Please contact Matsuura for a copy of our in-depth Handy Mailing brochure.

H.S.M. NC Package
This extensive package of High Speed software has been developed from our many decades as primary leaders in the field of High Speed Machining.

Special Pallet (400 x 400 mm 15.75 x 15.75 in.)
The new H.Plus-300 can operate with a 400mm pallet with minor limitations.

400 x 400 mm
(15.75 x 15.75 in.)

300 x 300 mm
(11.81 x 11.81 in.)
It is not possible to attach the edge locations.