



Haas
F1 Team
OFFICIAL MACHINE TOOL



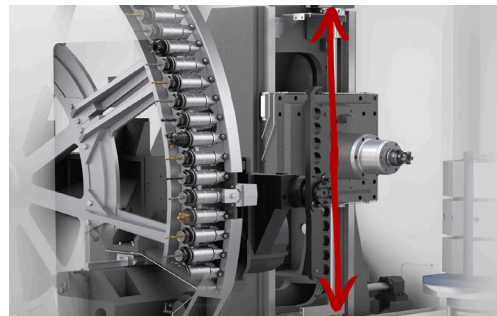
Built-in Twin-Pallet Horizontal Mills

Designed for Improved Production



FAST. RIGID. CAPABLE.

Built for high-volume production and unattended operation, Haas 40-taper pallet-changing HMCs are faster, more compact, more rigid, and more capable than ever before. They feature large work envelopes, 1400 ipm (35.6 m/min) rapids, and full 4th-axis pallet indexing.

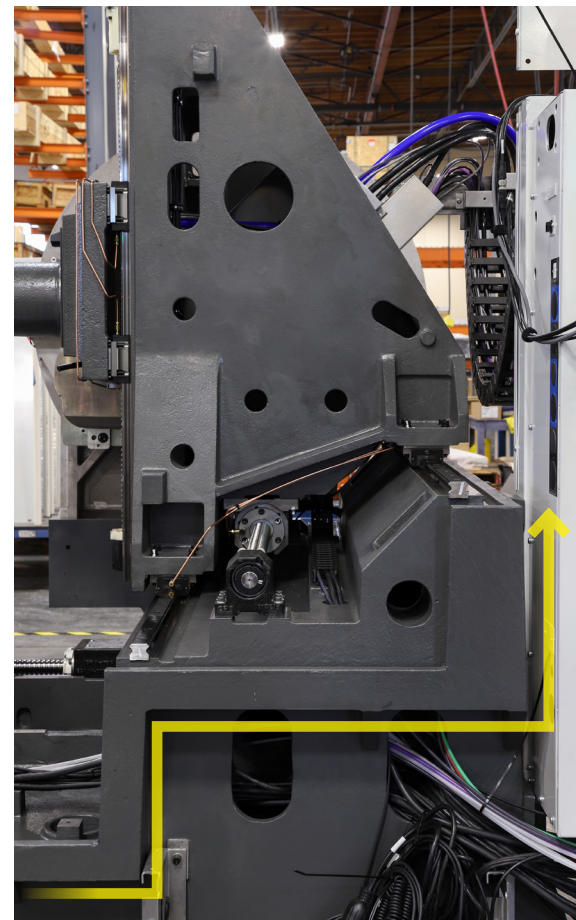


Increased Axis Travels

An extra 5" (127 mm) of Y-axis travel can make all the difference in the world. Now, the spindle centerline can get 27.13" (689 mm) above the surface of the pallet. We also increased the X and Z-axis travels by 2" (51 mm) on the EC-400.

Cycloidal Rotary Drive

The cycloidal rotary drive system – designed for machine tools and robotics – provides a great combination of speed, accuracy, and durability to the B axis. The rugged design provides long service life, with little or no maintenance, and is especially durable in a crash. The cycloidal rotary drive can be back driven to absorb energy from an impact. The shock-load capacity is 5 times the rated torque of the gearbox, and the entire gearbox is a simple drop-in replacement, should damage occur.



Stepped base and column

The stepped base and column design of the EC-400/500 Series, where one X-axis linear guide rail is on a different horizontal plane than the other, increases the rigidity and stability of the spindle-head/column assembly. With hydraulic pallet clamping and the stepped base/column design, they are more rigid than ever, all the way to the top!

EC-400/500 Series Standard Features:

- 8100-rpm Spindle
- 30+1 Side-Mount Tool Changer, with options for 50+1 or 100+1
- Full 4th-Axis Rotary System
- Belt-Type Chip Conveyor
- CNC Control Cabinet Cooler
- HaasConnect Remote Monitoring
- M130 Media Display M-Code
- Power-Failure Detection Module
- HaasDrop Wireless File Transfer
- Second Home Position
- Built-In USB Port
- Control Touchscreen
- Ethernet and WiFi Connectivity
- 1 GB Standard Program Memory
- Rigid Tapping
- 1-Year Standard Warranty

EC-400/500 Series Specifications:

| TRAVELS | | TOOL CHANGER | | PALLETS | |
|----------------|--|------------------------------------|----------------|------------------|--|
| • EC-400 | 22" x 25" x 22" (559 x 635 x 559 mm) | • Capacity / Type | 30+1/ SMTC | • EC-400 | 15.75 in (400 mm) |
| • EC-500 | 32" x 25" x 28" (813 x 635 x 711 mm) | • Max Tool Diameter (full) | 2.5" (64 mm) | • EC-500 | 19.69 in (500 mm) |
| SPINDLE | | • Max Tool Dia (adjacent empty) | 5.0" (127 mm) | FEEDRATES | |
| • Max Rating | 30 hp (22.4 kW) | • Max Tool Length (from gage line) | 12 in (305 mm) | • Max Cutting | 833 ipm (21.2 m/min) |
| • Max Speed | 8100 rpm | • Max Tool Weight | 12 lb (5.4 kg) | • Rapids (xyz) | 1400 ipm (35.6 m/min) |
| • Max Torque | 90 ft-lbf @ 2000 rpm (122.0 Nm @ 2000 rpm) | • Tool-to-Tool (avg) | 2.8 s | AIR REQUIREMENTS | |
| • Drive System | Inline Direct-Drive | • Chip-to-Chip (avg) | 3.6 s | • Air Required | 9 scfm @ 100 psi (255 L/min @ 6.9 bar) |

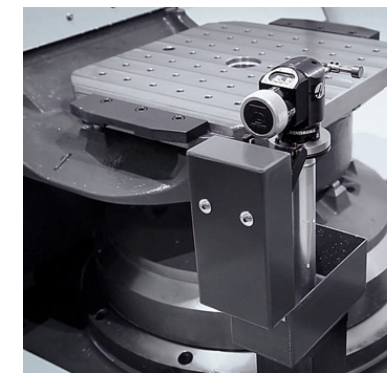
Versatile Production Machines



Spindles

All Haas spindles are designed and built in-house at our Southern California manufacturing facility. These 40-taper HMCs come standard with an 8100-rpm, inline direct-drive, 40-taper spindle.

For high-speed cutting, optional spindles up to 15,000 rpm are available, including HSK-A63 taper.



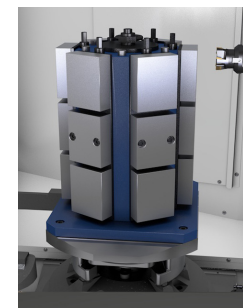
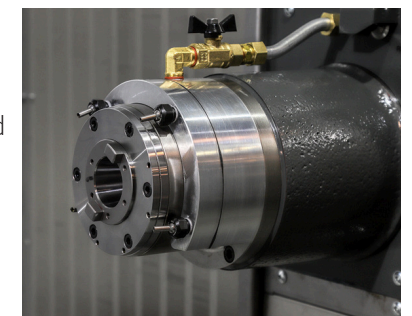
Automatic Probe Riser

An automatic probe arm stores the tool setting probe in a protective compartment during machining operations. When the tool probe is needed, an M104 code activates the automatic probe arm to lift the probe and lock it into place. When probing is complete, an M105 retracts the probe to its protective compartment.

Spindle Coolant Ring

The 4-nozzle coolant ring surrounding the spindle nose is perfectly positioned so that nozzles can be pointed at the shortest tools, and others can be positioned for longer tools. The compact, cylindrical design prevents chips from collecting on top.

NOTE: The Haas Programmable Coolant Nozzle (P-COOL) is not available on the EC-400/500.



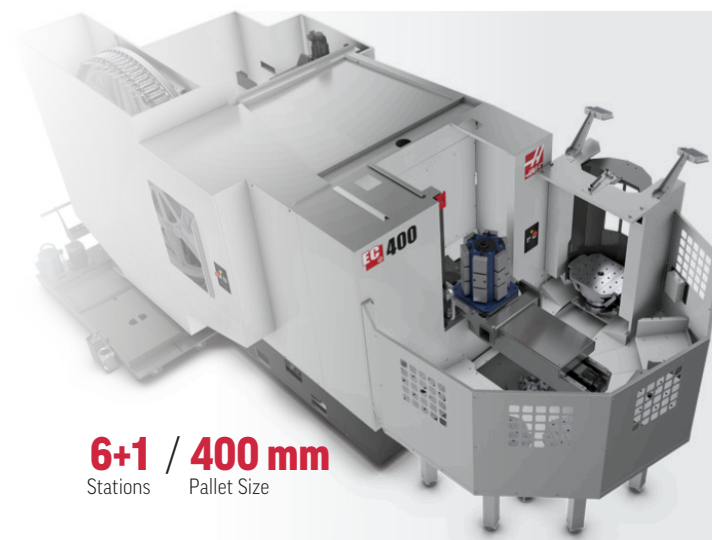
Full 4th-Axis Rotary Indexer

A standard full 4th-axis rotary indexer provides high-accuracy positioning for tombstones and 3+1 work, as well as simultaneous 4-axis motion for contouring and complex parts.



Wide belt-type chip conveyor

The EC-400/500 Series machines feature a wide belt-type chip conveyor positioned in the center of the machine, directly under the spindle, for vastly improved chip management. The steep walls of the interior enclosure easily funnel chips to the conveyor.



6+1 / 400 mm
Stations Pallet Size

6-Station Pallet Pool – High-volume production, unattended operation

Our 6-station pallet pool for the EC-400 is perfect for high-volume production runs, or high-mix/low-volume machining. The pallets can be scheduled individually according to priority and sequencing requirements, allowing high-priority parts to be machined first or staged more often. Completed pallets are returned automatically to the holding location, or can be sequenced to a protected operator station for immediate unloading and re-loading.

NOTE: Currently only available for the EC-400. Requires the optional 50+1 or 100+1 side-mount tool changer. Not available for field installation. Pallets are not interchangeable with the previous generation EC-400.

IT'S EASIER – WITH PICTURES, VIDEOS, & GRAPHICS.

THE HAAS CONTROL– Designed, built, and programmed by Haas.

The Haas control – hardware and software – is designed and built in-house, and optimized specifically for Haas machine tools. If there is a problem – Haas Automation takes full responsibility for the entire machine. The Haas control is easy to learn and use, and it is the same across the entire product line. Haas machines are also used extensively in educational institutions around the world, so graduating students are already familiar with the Haas control, which makes finding new operators and programmers easier, and simplifies training.

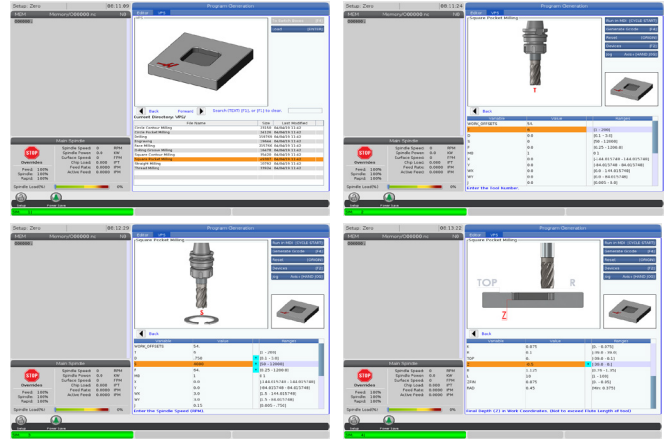


STANDARD CONTROL FEATURES:

- Dedicated Keypad
- One-Button Features
- Multi-Function Jog Handle
- 15" Color LCD Screen
- Ethernet Interface
- Control Touchscreen
- Advanced Tool Management
- HaasDrop Wireless File Transfer
- USB Port
- 1 GB Memory
- Power-Failure Detection Module
- M130 Media Player
- HaasConnect Mobile Monitoring
- WiFi Connectivity

VISUAL PROGRAMMING SYSTEM

The Haas Visual Programming System uses graphical templates and a form-like interface to help you quickly create G-code programs for not only basic part features, but also more complex operations, like Y-axis milling/drilling, probing, and more. Simply define the feature in the template, and VPS then outputs working G-code at the touch of a button. VPS also includes a custom template generator, so you can create templates for your own part features or frequently used programs.



M130 MEDIA DISPLAY

The Haas M130 Media Display M-Code is a powerful tool for communicating with machine operators and programmers directly from the Haas control. Use M130 to call up setup instructions, tool lists, part images, manufacturing information, and more. When the program reaches an M130, the specified media (image, video, or PDF) will be displayed in the upper right corner of the control screen.



- Explain difficult-to-understand secondary operations, using pictures and videos
- Avoid miscommunications with your shop peers
- Describe step-by-step part inspection processes
- Share important setup information with shop personnel



ALARM VIDEOS

When your machine alarms out, the first thing you want to know is: Why? The Haas control not only includes fully descriptive alarm text explaining the problem, but for many common alarms, it also includes short videos explaining the alarm, and providing valuable troubleshooting tips to resolve the issue.

MAKE THE CONNECTION WITH HAASCONNECT

Get your machine status notifications anywhere, on any device! The Haas Control has the ability to send you, and others you designate, email notifications about the operating status of your Haas machine. Set up is fast and easy through the MyHaas Portal and HaasCNC.com.



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Specifications subject to change without notice. Not responsible for typographical errors. Machines shown with optional equipment. Actual product appearance may differ. Pricing subject to change without notice.