The Haas Journal

#6

Haas F1™ Team
OFFICIAL MACHINE TOOL

The Haas Journal

"Done-in-one" machining solution for any shop

Newly redesigned DS-30Y turning center with standard 12-station BMT65 turret, and 4000-rpm sub-spindle with fully interpolated C-axis

6 INSIDE

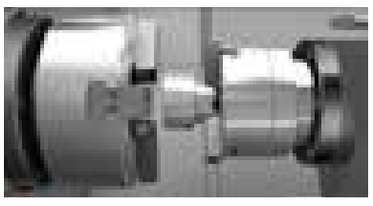
Now with fully interpolated C-axis!

All New-Design!

DS-30Y

The DS-30Y turning center combines dual-spindle turning with Y-axis, C-axis, and live tooling to create a powerful "done-in-one" machining solution for any shop. Off-center milling, drilling, and tapping operations are possible for increased machining capabilities. The DS-30Y comes standard with a 12-station BMT65 turret and synchronized C-axis for versatile 4-axis capability. The A2-5 sub-spindle features a fully interpolated C-axis with hydraulic brake, and supports fully synchronized turning, and on-the-fly part pass-off to reduce cycle times.

- Dual-spindles for done-in-one operations
- Y-axis milling, drilling, and tapping
- Fully interpolated C-Axis (main & sub)
- On-the-fly part hand-off
- Made in the USA



Optional 24-Station BMT65 Turret with up to 6000-rpm Live Tooling and C-Axis

Doubles the indexing stations for increased tooling capacity and flexibility

Get twice the number of programmed tool stations, for better use of tooling, increasing your available tool stations to 24, with 12 stations able to accept driven tools.

Plug-and-Play Automation options:

HAAS BAR FEEDER

Easy Automation

ROBOT PACKAGE

Versatile Automation

Perform milling operations on the redesigned ST-40Y

Our 12-station BMT75 turret, combined with 4000-rpm live tooling, Y-axis motion, and fully synchronized C-axis, allow you to perform secondary operations – milling, drilling, flatting, and tapping – on the face of the part and around the circumference.

- 12-station BMT75 turret
- ± 3.0" (±76 mm) Y-axis travel for off-center machining
- 4000-rpm live tooling
- Fully synchronized multi-axis interpolation
- C-axis provides precise and repeatable bidirectional motion
- C-axis hydraulic brake for powerful stationary clamping

ST-40Y

with BMT75 Turret Standard!

Smaller Footprint, Same Large Capacity Now with Y-Axis and BMT75 Turret

To create the ST-40Y, we completely redesigned our versatile large-frame ST-40 turning center, and then added Y-axis motion, C-axis interpolation, and BMT75 live tooling to provide even more performance, features, and value than ever before. We've re-engineered everything – from the ground up – and included a host of productivity-enhancing options.

- 27.5" x 44" (699 x 1118 mm) max capacity
- 35.5" (902 mm) max part swing
- 4.0" (102 mm) bar capacity
- 24-station BMT75 turret available
- Rear chuck capability available

BMT45 Turret and C-Axis
Up to 6000-rpm Live Tooling with 12-Stations

ST-10Y and ST-15Y with BMT45 Turret

The same Y-axis turning productivity and ultra-compact footprint, but now with a BMT45 turret, for increased rigidity and performance on your Y-axis milling and drilling operations.

Better clearance, more rigid tool connection, more versatile

This BMT45 turret includes live tooling up to 6000 rpm, and fully synchronized C-axis motion, allowing you to perform secondary operations – milling, drilling, flatting, and tapping – on one machine in a single setup.

- Standard on ST-10Y/LY and ST-15Y/LY
- 12-station BMT45 turret
- Better tool clearance for sub-spindle and tailstock work
- More rigid tool connection
- More tool choices and versatility
- Fully synchronized multi-axis interpolation
- C-axis provides precise and repeatable bidirectional motion
- C-axis hydraulic brake for powerful positional clamping

Optional 24-Station, half-index BMT45 Turret

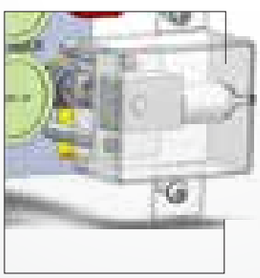
Allows for twice the number of programmed tool stations, for better use of tooling, increasing your available tool stations to 24, with 12 stations able to accept driven tools.

Adjust your chuck grip force via the part program

Programmable Chuck Pressure

Our Programmable Chuck Pressure option allows you to control the gripping force of the hydraulic chuck on new Haas ST and DS Series lathes via the part program, or directly from the Haas control.

Available on DS and ST Series Lathes



- Control chuck pressure automatically
- M-code activated via the part program, or manually from the control pendant
- Programmed directly from the Haas Control
- Main spindle chuck only

NOTE: *Increasing the pressure will increase the gripping force immediately. Decreasing the pressure will not affect the gripping force if the chuck is already clamped. The chuck must be stopped, unclamped, and then reclamped to achieve the lower gripping force.*

The perfect companion to the Desktop Mill

Introducing the **Haas Desktop Lathe**

Intended primarily as a training machine for schools and technical colleges. Also ideal for hobbyists and benchtop machinists. Specifically designed to cut plastics and machinable wax. Powered by the world-class Haas CNC Control, likely the most popular and most user-friendly control in the industry.

- Portable design for ease of sharing
- Powered by the ever-popular Haas Control
- Easily fits onto a desktop or rolling toolbox
- Ethernet and WiFi connectivity
- M130 Media Display

Capacities

- Max Cutting Diameter – 0.75" (19 mm)
- Max Cutting Length (OD) – 3.25" (83 mm)
- Max Cutting Length (ID) 1.25" (32 mm)
- Distance Between Centers – 3.4" (86 mm)
- X Travel – 3.4" (86 mm), Z Travel – 3.4" (86 mm)
- Tooling – 6-Station Turret, 8 mm (OD) & ER-11 Collet (ID)
- Tailstock Taper – MT1

Load/Unload Station

6-Axis Robot

15-Pallet Docking Station

Versatile Automation

Pallet and Receiver

End of Arm Gripper

Palletized Robot System

This versatile system is ideal for automatic, unattended machining applications across a variety of milling platforms. Allows for continuous running of a single part, or a variety of parts, with the ability to swap parts and programs using the onboard scheduling system within the Haas control. Uses the Haas Zero Point pallet clamping system for accurate, repeatable, universal pallet exchange in a compact footprint.

- High-volume production
- High-mix/low-volume machining
- All set up and operation are done through the Haas control and remote jog handle
- No need for 3rd-party integrators

UMC-350HD

40 TAPER

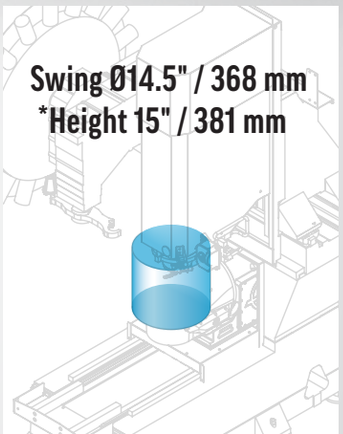
5 AXIS
10,000 RPM
18+1 TOOLS

- **5-axis simultaneous machining**
- **40-taper inline direct-drive spindle**
- **18+1 side-mount tool changer**
- **15" x 14" x 12" travels (381 x 356 x 305 mm)**
- **Includes Wireless Intuitive Probing System**
- **Dynamic Work Offsets/Tool Center Point Control (DWO/TCPC)**
- **TRT210 dual-axis rotary**

Shown with optional Chip Lift Conveyor

Ultra-compact, lean-style 5-axis machine!

The UMC-350HD combines the 40-taper performance of our DM-1 Drill/Mill Center with the versatility of our **TRT210 dual-axis rotary** to create a lean-style UMC that's perfect for 3+2 and simultaneous 5-axis machining of small parts.



**Tool Length + Workpiece*

UMC-350HD Automation, Productivity, and Workholding at their Best

The Haas Compact Automatic Parts Loader

Simple and affordable automation for small-part production.

- Compact 3.5' x 4' (1 x 1.2 m) footprint
- Interfaces directly with the Haas control
- Accommodates parts up to 2" x 2" x 2" (51 x 51 x 51 mm)
- Max part weight is 3 lb (1.4 kg)
- Includes CE-compliant safety guard fencing

Affordable Automation

Versatile Automation

The Haas Robot Package 1

Fully integrated 7 kg capacity robot system controlled entirely from the Haas control.

- Bundled Package - No 3rd party integrator needed
- All set up and operation are done through the Haas control and remote jog handle
- Single gripper included; double gripper available
- Includes CE-compliant safety guard fencing

UMC-350HD Complete - Integrated Workholding Solutions

130 mm Jergens Vise Kit - Manual Operation

INCLUDES:

- Haas by Jergens 130 mm self-centering vise
- Set of machinable aluminum and steel vise jaws
- Adapter plate for bolt-hole platter
- Mounting hardware

75 mm Air Vise Kit - Automatic Operation

INCLUDES:

- 75 mm self-centering air vise
- Pre-installed pneumatic union and hardware
- Hardened-steel jaws with serrations
- Foot pedal and M-codes
- Replacement hard and soft jaws available

Zero Point Clamping Kit - Automatic Operation

INCLUDES:

- Zero Point Chuck, and pull stud
- Pre-installed pneumatic union and hardware
- Foot pedal and M-codes
- Accurate, repeatable fixture locating

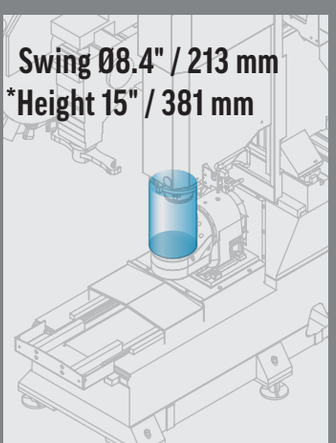
UMC-350

30 TAPER ***5 AXIS 10,000 RPM 20+1 TOOLS***

The standard UMC-350 combines the speed and performance of our DT-1 Drill/Tap Center with the high-speed indexing of our **TRT100 dual-axis rotary** to create a high-speed, lean-style UMC that's perfect for 3+2 and simultaneous 5-axis machining of small parts.

- 5-axis simultaneous machining
- 30-taper inline direct-drive spindle
- 20+1 side-mount tool changer
- Indexing speed up to 1000 deg/sec.
- Includes Wireless Intuitive Probing System
- Dynamic Work Offsets/Tool Center Point Control (DWO/TCPC)
- Upgrade to TRT210 rotary for automation capability
- Made in the USA

**Tool Length + Workpiece*



*The **ALL NEW** Mini Mill and Super Mini Mill –*

Mini in Name but Mighty in Performance

***Mini Mill** Series*

40 TAPER

3/4/5-AXIS
8000-15,000 RPM
10-31 TOOL CAPACITY

Machine performance was once paired with size and cost. The Mini Mill Series changed everything, by packing 40-taper performance into a small package at unheard of prices.

And now, we're delivering even more value with, increased travel, higher speeds, and more features than ever before.

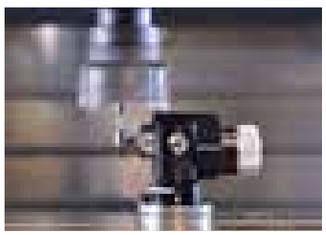
- Increased travel
- Greater tool capacity
- More power
- Faster rapids
- Higher spindle speeds
- External coolant tank

Large in Features, Mini in Size

Our Mini Mill Series machines are fully capable vertical mills, with many of the same components and options from our VF Series – but with smaller footprints.

Spindles

All Mini Mill Series spindles are designed and built by Haas at our Southern California manufacturing facility. The 40-taper spindle shafts used in the Mini Mill Series are the same as those used in our VF Series. Spindle speeds range from 8000 rpm for the standard Mini Mill to the optional 15,000-rpm spindle for the Super Mini Mill.



Probing

Machines aren't making money unless they're making chips. Set up your Mini Mill Series machine even faster with the addition of a Haas Wireless Intuitive Probing System (WIPS). Fully integrated with the Haas Control, WIPS will simplify everything from initial part set up to advanced probing routines.

Multi-Axis Machining

Increase your productivity and efficiency quickly, by adding an affordable Haas indexer, rotary table, or tilting rotary to your Mini Mill. It's as simple as dropping it onto your mill table, plugging it in, and following the simple on-screen instructions to enable 4th- or 5th-axis capability. Reduce operator handling, increase part accuracy and repeatability, and make your shop more efficient.

Tool Changers

Super Mini Mills now come standard with a high-speed 30+1 side-mount tool changer, providing more tools and faster tool changes than ever. Standard Mini Mills come with a 10-station carousel tool changer, with a 20-station version available. Every Mini Mill tool changer is designed and manufactured in-house by teams of specialists, to ensure they're built to the highest possible standards.

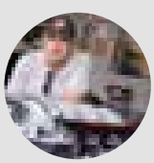
Chip & Coolant Management

The new Mini Mill and Super Mini Mill now come standard with a 40-gallon (151 L) rollaway coolant tank, and are available with a complete line of chip and coolant management solutions. Mini Mills benefit from the modular design of all Haas machines, and use many of the same systems and components found on our VF and VM Series machines. From basic flood coolant to through-spindle coolant to enclosure exhaust systems, Haas has solutions to fit your particular needs.

Mini Mills Series

Mini Mill	16" x 14" x 12" (xyz) 406 x 356 x 305 mm
Super Mini Mill	16" x 14" x 12" (xyz) 406 x 356 x 305 mm
Mini Mill-EDU For Education	16" x 14" x 12" (xyz) 406 x 356 x 305 mm

"I make custom parts myself here in my garage, and the Haas Mini Mill is extremely important to my work. I use it for all the metal parts that need to be made, from custom steering wheels to latches, door handles, and hinges. I make everything on the Mini Mill. It is easy to program, easy to set up, and easy to use. I can't get the results I want without it."



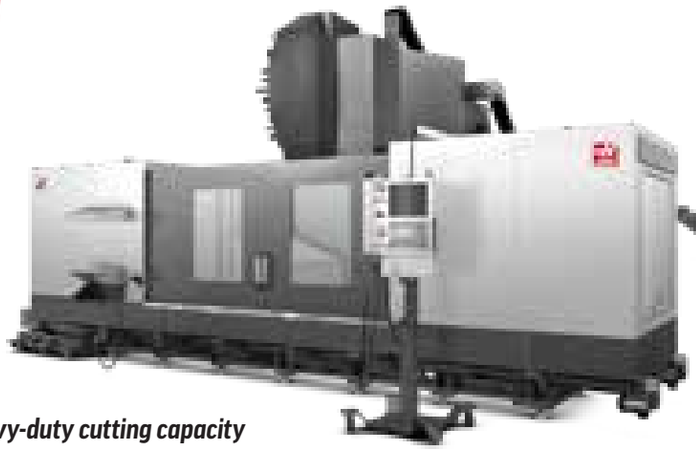
DARRIL STROECKER
OWNER
DARRIL'S HOT RODS

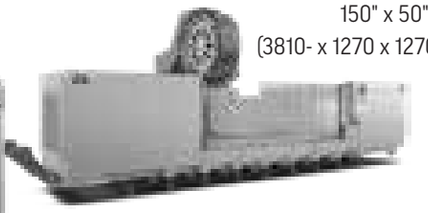
VS-1

50 TAPER

3-AXIS
7500 RPM
50+1 TOOLS

VS-1 Travels:
100" x 50" x 50"
(2540 x 1270 x 1270 mm)





VS-3 Travels:
150" x 50" x 50"
(3810- x 1270 x 1270 mm)

Large travels and heavy-duty cutting capacity in a vertical spindle format

The Haas VS-1 is a large-frame, bed-style machining center that provides large travels and heavy-duty cutting capacity in a vertical spindle format. The machine features a 50-taper, geared-head spindle and a 50+1 side-mount tool changer. The fully supported X-axis travel easily handles parts weighing up to 10,000 lb (4536 kg). The table surface consists of two blank tooling plates that are easily machined for custom fixturing. T-slot table plates are available as an option.

- Fully supported X-axis travel
- 10,000 lb (4536 kg) part capacity
- 2-speed gearbox
- 50+1 side-mount tool changer
- 50 mm ballscrews on all axes
- Fixed enclosure; does not move with the table
- 4 chip augers, with available in-tank conveyor
- Control pendant on movable stand for easy access
- Machinable blank table, 102" x 49" (2591 x 1245 mm)

VP-5 Prismatic Machine

40 TAPER

4-AXIS
8100 RPM
50+1 TOOL CAPACITY

The Haas VP-5 vertical machining center combines the rigid structure of our VF-5 vertical machining center with an articulating spindle head to create a versatile machine for processing multi-sided prismatic parts.

- Mill prismatic parts in a single setup
- 40-taper articulating spindle w/brake
- +8° to -90° B-axis spindle rotation, interpolated or positioning
- Add a rotary table for 5-side machining
- Made in the USA

Our large size HRT310 rotary table can also be mounted on the VP-5 table, to provide an additional rotary axis for machining longer, complex 5-axis parts.

Access nearly any angle on the part for complex shapes and undercuts

150"x 40" TRAVELS
(3810 X 1016 MM)

VR-14

HSK-A63 TAPER

5-AXIS
20,000 RPM
50+1 TOOLS

Haas VR-14 is the perfect solution when your 5-axis parts are too large to rotate using traditional rotary tables and trunnions. The large T-slot table easily supports large workpieces and fixtures, and a powerful 2-axis gimbaled spindle head provides access to nearly any angle on the part for complex shapes, undercuts, and 5-side machining.

The VR -14 features a 20,000-rpm HSK-A63 integral-motor spindle, which provides 50% more power and 40% more torque than the HSK-63F spindle in our GM-2-5AX. More power means more aggressive material removal is possible. This is not just a finishing machine!

Standard Features Include:

- Wireless Intuitive Probing System
- Dynamic Work Offsets/Tool Center Point Control (DWO/TCPC)
- Large Remote Jog Handle w/ Touch Screen
- Chip Auger System
- 1GB Memory

VR Series

HSK-A63 TAPER

5-AXIS
20,000 RPM
50+1 TOOLS

5-Axis Articulating Spindle Machining Centers

- Powerful integral-motor spindle
- HSK-A63 taper
- 20,000 rpm
- Dual-axis spindle head
- 50+1 tools

VR-8	64" x 40" x 42" (xyz) 1626 x 1016 x 1067 mm
VR-9	84" x 40" x 42" (xyz) 2134 x 1016 x 1067 mm
VR-11	120" x 40" x 42" (xyz) 3048 x 1016 x 1067 mm
VR-14	150" x 40" x 42" (xyz) 3810 x 1016 x 1067 mm

Can't find employees?

Meet Your New Operator!

Includes: Auto window and Remote Jog Handle with purchase of Automatic Parts Loader.

Increase your spindle uptime!

Compact Automatic Parts Loader

An affordable way to boost your overall productivity. Free yourself to focus on other tasks. Run through breaks and lunches, and pick up additional hours of runtime at the end of a shift.

Affordable Automation
Automatic Parts Loader

Automate Small-Part Loading on Small Mills

Key Features:

- Compact footprint
- Plug-and-play interface with the Haas control
- Accommodates parts up to 2" x 2" x 2" (51 x 51 x 51 mm)
- Max part weight is 3 lb (1.4 kg)
- Made in the USA

Available on these models:

- VF-2 / VF-2SS
- VF-2YT / VF-2SSYT
- VM-2
- DTs / DMs
- UMC-350HD

Run your robot unattended longer

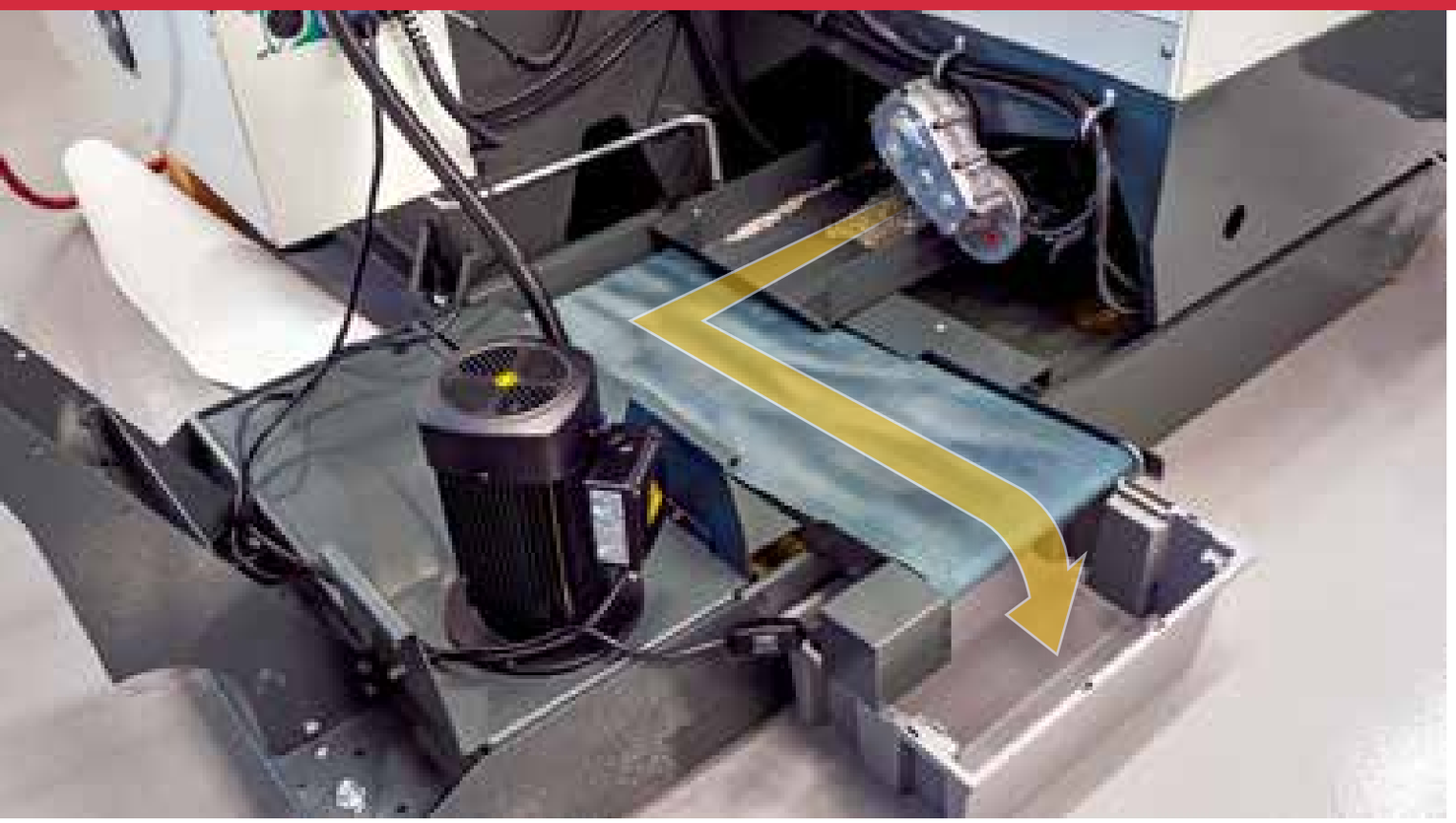
Haas Robot Package 1
Drawer Cart

Versatile Automation
Robot

Our heavy-duty Drawer Cart features multiple drawers for staging raw material and finished parts, to provide longer unattended machining time when using the Haas Robot Package-1. Load each drawer with the same part for longer part runs, or dedicate each drawer to a different part for low-volume/high-mix production.

The vertical configuration allows more parts to be staged within reach of the robot arm, without taking up additional floor space. And staging finished parts in separate drawers prevents damage from stacking. All programming for loading and unloading each drawer is handled through the use of existing VPS control templates.

- Stages more parts in less floor space
- Drawers are opened and closed by the robot
- Prevents part damage from stacking
- Extends unattended machining time
- Extended base for added stability



Minimize the chance of fine chips entering the coolant tank

The Haas Mini Chip Conveyor

While the bulk of the chips are removed through a chip auger or conveyor, this fine-mesh belt conveyor installs on top of the coolant tank under the machine's coolant discharge chute, to catch ultra-fine chips and transport them to an external bin. The mesh screen rotates beneath the discharged coolant to ensure a clear path for coolant return, and reduces the chances of fine chips entering the coolant system.

- Compact system installs easily
- Fine-mesh belt reduces chips entering the coolant tank
- Chips are transported to an external bin for easy removal.

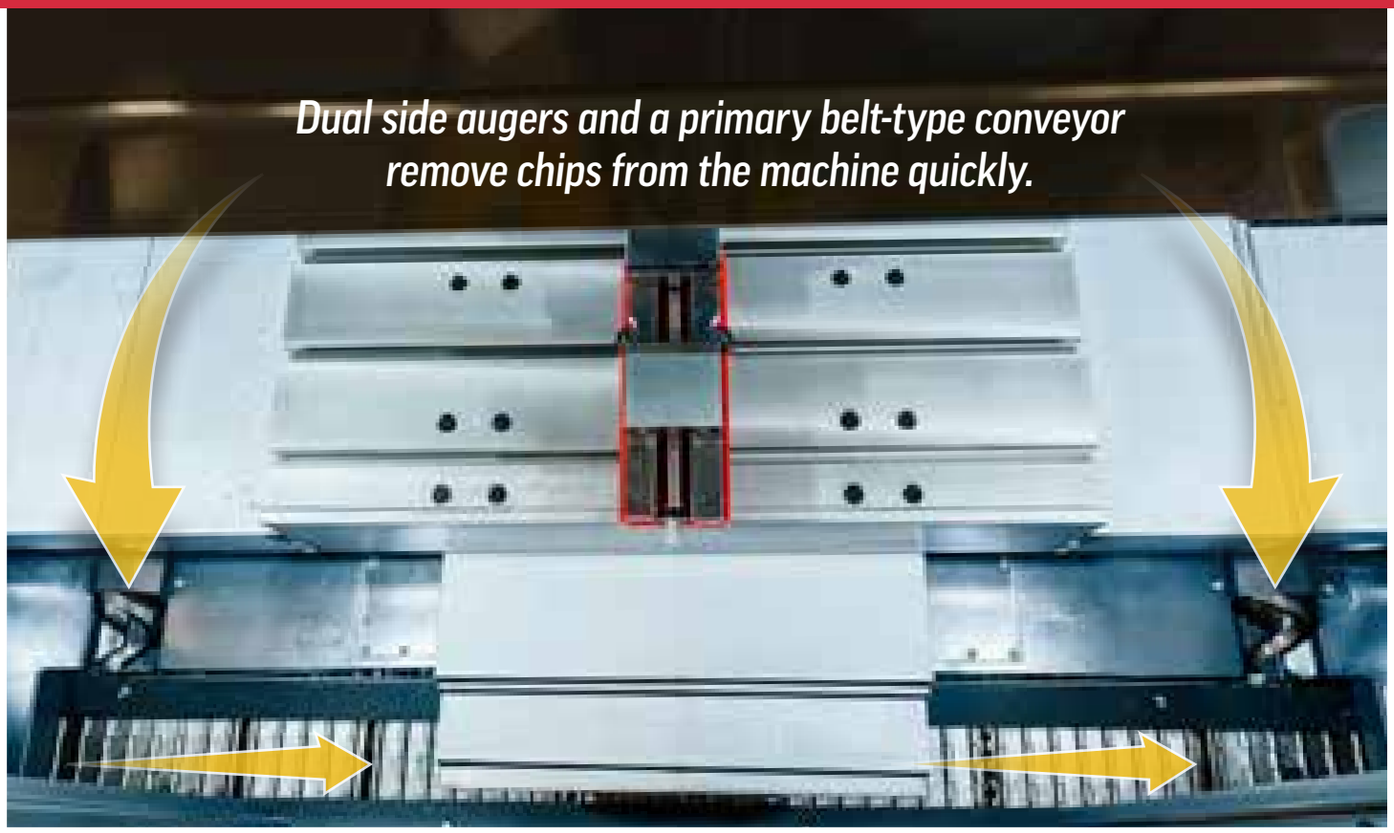
For use with automation systems

Auto Window

Automatic Window; opens and closes the machine side window automatically, allowing the use of robotic loaders and other automation systems for unattended operation.

- Fully integrated with the Haas control
- Allows the use of robotic loaders and automation systems

NOTE: *Included on any Haas UMC, DT, or DM series machine when the machine is ordered with a Pallet Pool, APL, or Robot Package.*



Dual Augers with Belt Conveyor *for Small* **VMCs**

Right- or Left-Side Discharge Flexibility

The Dual-Auger Chip Removal System with Conveyor removes chips from the machine quickly, with minimal coolant carryout. Dual side augers transport the chips to the front of the pan, where they are collected by a heavy-duty steel, belt-type chip conveyor, and discharged at standard industrial barrel height. Ideal feature for unattended operation.

For additional flexibility, the conveyor can be installed on the left or right side of the machine. Fits Haas VF-1 and VF-2 series VMCs.

Clear chips from holes with high-flow air

Part Hole Blaster

The Haas Part Hole Blaster is a rigid air nozzle that mounts to the Programmable Coolant Nozzle to blast high-pressure air into holes and deep pockets to blow out chips and coolant. Activated by M-code, the air blast is turned on and off via the part program

- Blasts chips and coolant from holes and pockets
- Adjustable position via the Programmable Coolant Nozzle
- Controlled via M-codes in the part program

70+1 Side-Mount Tool Changers

Purpose-Built in California for Haas Machines

We've produced our own tool changers since 1988, with complete integration and functionality in mind. We use our own designs, and wouldn't have it any other way.

- Fast tool changes shorten cycle times on every tool change
- Direct-positioning carousel for super-fast tool staging
- Pocket Tool Table in the control allows complete control over the tool changer
- Identify tools as LARGE to leave adjacent pockets empty
- Identify tools as HEAVY to slow tool changer motion

40 TAPER

High-Speed 70+1 Side-Mount Tool Changer

More tools for more features

Every second counts - SS Models include even faster, Super-Speed, Tool Changes

VF Series:

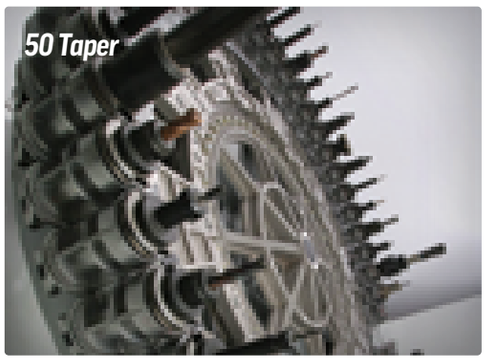
VF-2YT/SS
VF-3/SS
VF-3YT/SS
VF-4/SS
VF-5/40/SS
VF-5/40TR
VF-5/40XT

Mold Machines:

VM-2
VM-3

Universal Machines:

UMC-500/SS
UMC-750/SS
UMC-1000/SS
UMC-1000-P/SS
UMC-1250/SS
UMC-1500-DUO/SS



50 TAPER

70+1 SMTC

Optional tool changer for the EC-630

- Increased capacity for complicated jobs
- Add redundant tools for unattended operation
- Leave preset tools in the tool changer for quick changeover

INTRODUCING

HAAS TOOLING.COM

WINNER'S CIRCLE

Join the Haas Tooling Winner's Circle to get
FREE EXPRESS DELIVERY and ***5% OFF EVERY PURCHASE!***
Go to www.HaasCNC.com/WinnersEU to find out more!

SCAN FOR DETAILS!

WINNER'S CIRCLE **EXCLUSIVE** BENEFITS INCLUDE:

FREE EXPRESS
Delivery

5% OFF
Every Purchase

FREE SHIPPING
On Orders Over €49

COMBINE
With Other Promotions

ONE MEMBERSHIP
for Entire Company

ORDER 2 WAYS
Online & Through your HFO

ALL BENEFITS GOOD FOR 12-MONTHS FROM DATE OF PURCHASE.

ONLY €95/YEAR!

- INTRODUCTORY ANNUAL MEMBERSHIP -
- €195 STANDARD PRICING -

HAAS TOOLING.COM

WHAT'S NEW

*Manual & Automatic workholding systems for TRT**160** and TRT**210***

Zero Point Kits

Complete Zero Point workholding systems for the Haas TRT160 and TRT210 dual-axis rotary tables. Allows the use of our Zero Point workholding, for quick part changeovers and fast setups. Replaces the standard bolt-hole pattern table.

Not compatible with: A1-6 PLATTER or T-SLOT PLATTER-210

***ZERO POINT KIT-MANUAL** Option*

Includes the pneumatic union, manual toggle valve, and required air lines for actuating the Zero Point Chuck **manually.**

- Includes Zero Point Chuck and one Blank Fixture Plate with pull stud
- Includes pneumatic union and all necessary hardware
- Provides accurate, repeatable fixture locating
- Allows quick changeovers
- Reduces setup time
- Max allowed air pressure 250 psi (17.2 bar)

***ZERO POINT KIT-AUTO** Option*

Includes the pneumatic union, required air lines, foot pedal, and M-codes (M70, M71) for actuating the Zero Point Chuck **automatically**.

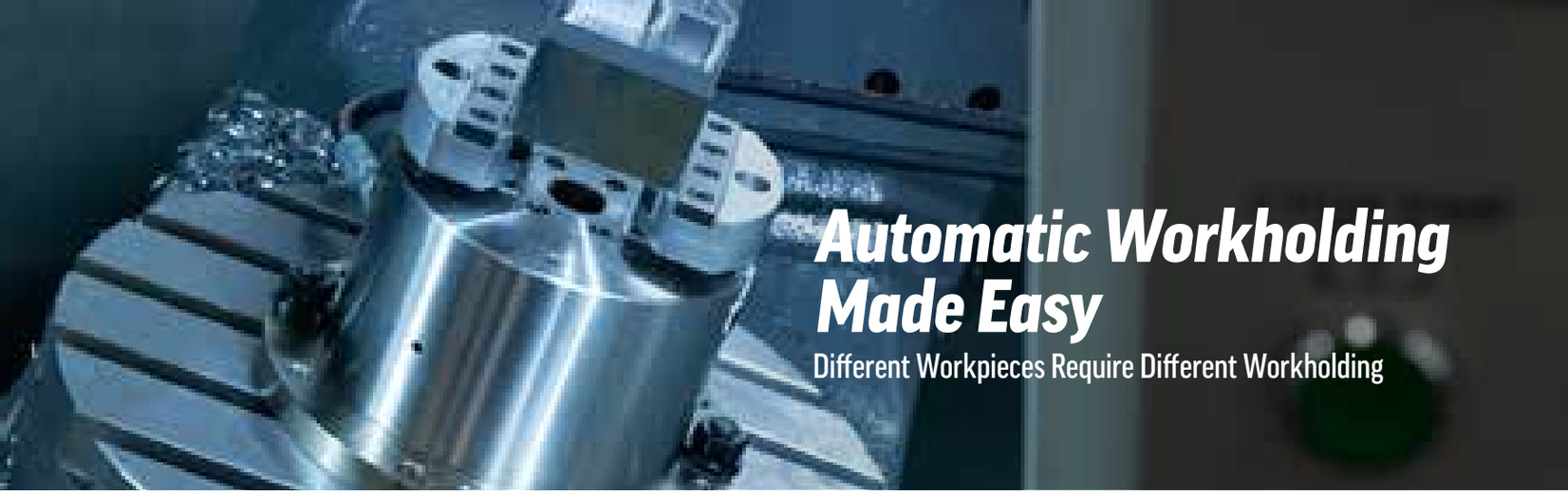
- Includes Zero Point Chuck and one Blank Fixture Plate with pull stud
- Includes pneumatic union and all necessary hardware
- Provides accurate, repeatable fixture locating
- Allows quick changeovers
- Reduces setup time
- Max allowed air pressure 250 psi (17.2 bar)

AIR CLAMP PRO-MANUAL

Includes a toggle valve and required air lines for manual clamping

AIR CLAMP PRO-AUTO

Includes a foot pedal and M-codes (M70, M71) for actuating the Zero Point Chuck automatically



Automatic Workholding Made Easy

Different Workpieces Require Different Workholding

Self-Centering Air Vise Kit

75 MM AIR VISE FOR THE TRT160 OR TRT210

Haas Automatic Air Vise

This kit includes everything you need to operate the 75 mm self-centering pneumatic vise automatically: pneumatic rotary union, external hard lines, and all internally routed air lines necessary to provide two auxiliary air ports through the center of the rotary platter. Includes foot pedal and M-codes (M70, M71) for actuating the Haas Air Vise automatically.

Haas Manual Air Vise

This kit includes everything you need to operate the 75 mm self-centering pneumatic vise manually: pneumatic rotary union, external hard lines, and all internally routed air lines necessary to provide two auxiliary air ports through the center of the rotary platter. Includes toggle valve and required air lines for actuating the Haas Air Vise manually.

Hydraulic Vises

Simplify and automate workholding on Haas 5-axis Universal Machining Centers

Our Hydraulic Vises are designed to simplify and automate workholding on Haas 5-axis Universal Machining Centers. We've fitted interchangeable vise jaws to 2-jaw stationary hydraulic chucks to create versatile self-centering vises that can be activated directly from the Haas control.

- Hardened-steel jaws with serrations
- Activated directly from the Haas control, or via foot pedal
- Replacement steel and aluminum jaws available

Hydraulic Vise Ready
Provision to accept hydraulic workholding.

Option includes the HPU, rotary union, hydraulic lines, and foot pedal.

HAAS AUTOMATIC VISE OPTIONS & CONFIGURATIONS

	AIR VISES			HYDRAULIC VISES		
Machine Model	**75 MM**	**100 MM**	**150 MM**	**6.0"**	**8.0"**	**10.0"**
UMC		●[2]	●[2]	●[3]	●[3]	●[3]
DT/DM	●[1]	●[1]	●[1]			
MM/SMM	●[1]	●[1]	●[1]			
VF-1/2	●[1]	●[1]	●[1]			
VF-3/4/5	●[1]	●[1]	●[1]			
VF-6/7/8/9	●[1]	●[1]	●[1]			
TRT160	●[4]					
TRT210	●[4]					
TRT310		●[4]				
MAX CLAMP FORCE	**2000 (lbf) 8896 (N)**	**3300 (lbf) 14,680 (N)**	**6750 (lbf) 30,030 (N)**	**4800 (lbf) 21,351 (N)**	**5750 (lbf) 25,580 (N)**	**12,500 (lbf) 55,603(N)**

1) Programmable Air REQUIRED
2) Air Vise Ready REQUIRED
3) Hydraulic Vise Ready option REQUIRED
4) Air Clamping Provision REQUIRED

Vises are only available to order with machines, but additional jaws and other vise accessories are available through HaasTooling.com.

40 years of legendary service

Online service/support resources and more!

HaasCNC.com gives you access to the service and support you need to keep your Haas making chips.

The Haas Service web page provides everything from How-To Procedures, Troubleshooting Guides, Service Updates, and Instruction Manuals, to lists of G-Codes, M-Codes, and Settings.

Our Service and Maintenance Videos for your Tool Changer, Spindle, Electronics, and Coolant Systems give you the confidence the job will be done right.

Plus, with online Haas Service you can also order OEM Haas replacement parts with prompt same-day shipping.

SEARCH

Simply use the search field, topic icons, or service quick links to find what you're looking for and any related topics, FAST.

Operator's Manuals

How-To-Procedures

Join Our Team

Haas Parts

Troubleshooting Guides

Preventive Maintenance

HaasTooling

Videos

SERVICE QUICK LINKS

1 - AIR / PNEUMATICS
2 - APPLICATIONS
3 - AUTO DOOR / AUTO WINDOW
4 - AUTOMATION SYSTEMS
5 - AXIS MOTION
6 - CAN BUS SYSTEMS
7 - COOLANT
8 - CHIP MANAGEMENT
9 - DATA TRANSFER
10 - ELECTRICAL CONTROL
11 - ELECTRICAL CONTROL PENDANT
12 - ENCLOSURE
13 - GEARBOX
14 - GEOMETRY AND ALIGNMENT
15 - HYDRAULICS
16 - INSTALLATION
17 - INTEGRATED - 4TH / 5TH AXIS
18 - LIGHTING
19 - LUBRICATION
20 - MACHINE AND OPTIONS
21 - MAINTENANCE
22 - PROBING
23 - ROTARY
24 - SENSORS / SWITCHES
25 - SERVICE TRAINING
26 - SIMULATOR
27 - SOFTWARE

ONLINE HFO SERVICE REQUEST

*If you need an extra hand to service your machine, your HFO is ready to help. Submit your online **HFO Service Request form** to expedite the care you deserve.*

Be empowered.

Visit HaasCNC.com/Service

Haas turns

There Has to be a Better Way
How solving a simple machine operation led to the creation of the largest machine tool builder in North America. Page 24

A 40-Year Trajectory
We couldn't fit it all in, but here are just some of our notable achievements, and we have you to thank. Page 28

"There Has to Be A Better Way"

It was WESTEC 1983 when Gene Haas decided to offer his fully programmable 5C collet indexer for sale to the general public, and 2023 marks the 40th anniversary of that innovative device. The idea for building such a product actually came about nearly 3 years earlier, in the summer of 1980. At that time, Gene owned a machining job shop called Pro-Turn Engineering in Sun Valley, California. It was basically h and a couple of machine operators, Tony Cortez and Abel Bugarin, who primarily ran production parts for the aerospace industry. Gene specialized in machining parts that many other shops turned away due to their complexity.

One day, Gene noticed Abel running a job that required indexing a part with a manual 5C collet head. Using the dividing head seemed like a nuisance, because Abel had to let go of the quill handle and use both hands to index the part to the next position. Gene thought to himself, "There has to be a better way," and so began the development of an automatic indexing head.

The first design incorporated a stepper motor as the driving mechanism, and a manual 5C collet head modified to accommodate a worm and gear housing. The mechanical side of the design wasn't terribly difficult, but deciding how to drive the motor and control the motion was another thing. At first, Gene entertained the idea of using someone else's control system, but high costs were a major disadvantage. He decided to call his old school buddy, Kurt Zierhut, who worked as a computer engineer at Librascope. Between the two of them, they came up with the first version of what was then called, "the black box." It took nearly 3 years of engineering in their spare time – including evenings, weekends, and vacation time – to bring the first unit to market.

Gene had many friends and acquaintances at other machine shops, so he built a few indexers for them to use. In return, he asked only for their

Left to right:

1. Sun Valley facility
2. WESTEC booth, 1985
3. HBI-5C with “Black Box”
4. U.S. Patent schematic of the Haas 5C collet indexer
5. Haas logo, 1988
6. Early ’80s rotary models

feedback. Everyone loved them. They thought they were a great way to increase productivity on a manual machine. Little did they know that this was just the beginning.

The first year, Haas sold about 20 units per month. Customers loved the concept, and began asking for something a little bigger. The next step came in 1985, with the development of an 8-inch rotary table. Gene took an old manual rotary table, pulled off the crank handle, retrofitted a stepper motor and control, and the second product was born.

By now, sales had grown to about 40 units per month. Increasing sales eventually taxed the abilities of the company supplying the manual indexers. So in 1986, Gene designed his own castings, and began manufacturing indexing heads and rotary tables of his own design. By 1988, after only 5 short years, sales reached more than 100 units per month, and the product line grew to include the 5C indexer; 7-, 9- and 11-inch rotary tables; multi-spindle units, and a two-axis tilting rotary table.

Suggestions and feedback from customers not only led to new rotary products, but to the development of a vertical machining center. So later that same year, Haas introduced the VF-1, a 20" x 16" vertical machining center priced less than $50,000 – an unheard-of price for an American-made machine tool in those days.

Today, Haas Automation is the largest machine tool builder in North America, and one of the top machine tool builders in the world, manufacturing more than 45 different models of rotary tables and indexers, as well as an extensive lineup of CNC vertical and horizontal machining centers, 5-axis machining centers, CNC lathes, and fully integrated automation systems. Not bad for a business that started in search of a better way.

***Haas Motorsports**. In Pursuit of High-Performance*

On any given weekend, thousands of parts machined on Haas CNCs make a difference in Formula One, NASCAR, NHRA, and other top racing organizations.

Here are just some of the things we've accomplished over our 40-year trek . . .

1983

1/ Haas introduces the industry's first-ever, fully programmable 5C rotary indexer.

1988

2/ Haas introduces the VF-1, the company's first vertical machining center, at IMTS 88

1993

Haas secures a new 125,000 sq. ft. facility in Chatsworth, CA

1994

3/ Haas introduces its first horizontal machining center, the HS-1.

1995

4/ Haas introduces its first CNC lathe, the HL-1.

1997

5/ A new factory is built on 86 acres. By 2006, there are four buildings, with 1 million sq. ft. under roof.

1999

6/ Establishes nationwide network of Haas Factory Outlets – locally owned facilities to provide Haas-dedicated sales, applications support, and industry-leading service. Haas ships its 20,000th CNC machine

2000

7/ Haas ships its 25,000th CNC machine, and introduces the Mini Mill.

2001

Haas introduces the TM-1 Toolroom Mill, a full CNC mill priced less than $20,000.

8/ Haas Automation Europe opens in Brussels, Belgium, to support 50 HFOs across Europe.

2002

Haas introduces the VF-2SS, the first in the company's new Super Speed VMC series.

Gene Haas establishes Haas CNC Racing, having previously been a sponsor of Hendrick Motorsports

2003

9/ Haas introduces the TL-1 Toolroom Lathe with Intuitive Programming System, a full CNC lathe priced less than $20,000 that does not require knowledge of G-code to operate and program.

Haas Automation Asia opens in Shanghai, China.

2004

Haas introduces the TM-2, a larger Toolroom Mill with Intuitive Programming System that does not require knowledge of G-code to operate or program.

10/ In 2004 Haas introduces the new EC Series of HMCs: EC-300, EC-400, and EC-1600

Haas introduces the VM-3 VMC designed for mold makers.

Haas Automation Europe moves to larger facilities to better serve the expanding European market.

2005

Haas ships its 50,000th CNC machine. Current production is more than 825 machines per month.

2006

Haas expands the Oxnard facility by 211,000 sq. ft., bringing plant size to more than 1-million sq. ft.

Haas builds 12,500 machines in one year.

Haas Asia moves to a larger facility, with extensive showroom, spares inventory, and warehouse for 200+ machines.

2007

Haas installs its 75,000th CNC machine at a second-tier automotive supplier in Germany.

Haas builds 13,757 machines in one year, with more than half (52%) going to international markets.

2008

11/ Haas introduces the Mini Mill 2 and Super Mini Mill 2, with increased xyz travels and larger tables, and the ES-5 series of HMCs with VMC-style enclosures.

2009

12/ The Haas DT-1 Drill/Tap Center with full milling capabilities makes its debut.

2010

Haas Automation India opens in Navi Mumbai.

Following on nearly 2 years of worldwide economic downturn, Haas reports its 4th-quarter 2010 revenues were up 118% over 1st-quarter 2010, and that the company more than doubled production in 2010 to meet growing demand for its products.

In 2010, Haas presents the New Generation VMCs and ST Turning Centers, with improved chip evacuation, coolant containment, ergonomics, enhanced motion control, and a bold new look.

2011

13/ Haas introduces the ST-40 and ST-40L, the largest additions to the Haas line of new generation turning centers, and the ST-10, the smallest addition.

14/ The new HRT160SS super-speed rotary table from Haas debuts, with indexing speeds up to 570°/second.

Haas Automation hosts the first HaasTec open house/machine tool show event at its Oxnard, California, factory.

15/ Stewart-Haas driver, Tony Stewart, wins the 2011 NASCAR Sprint Cup Series Championship

2012

Haas Automation produces its 125,000th CNC machine tool.

16/ 2012 Haas introduces the UMC-750 5-Axis Universal Machining Center. Haas introduces faster standard and optional spindles for VMC line.

2013

Haas hosts HaasTec Open House, draws 3000 visitors from 44 countries to the Haas factory.

Haas celebrates 30th anniversary.

2014

Haas introduces a complete line of Big-Bore turning centers.

Haas Automation produces its 150,000th Haas CNC machine tool.

Haas DT-1 gets 15,000-rpm spindle, and introduces the TRT100, a compact, dual-axis rotary with 1000 deg/sec feedrates, designed for the DT-1 and other small mills.

Stewart-Haas Racing driver Kevin Harvick wins the NASCAR Sprint Cup Championship.

2015 Haas introduces the DM-1 Drill/Mill Center with 15,000-rpm 40-taper spindle.

Haas introduces 20,000 rpm spindle for the DT-1.

17/ Gene Haas is granted a license to compete in Formula One by the FIA; the new team, named Haas F1 Team, will be sponsored by Haas Automation.

Haas introduces ST-50 and ST-55 large through-bore lathes.

Haas TL-1 and TL-2 Toolroom Lathes redesigned for higher performance, now include chip enclosure.

18/ Haas exceeds $1 Billion in sales for the first time in history.

Haas builds 14,333 CNC machines in one year.

19/ Haas launches online parts and customer resource websites: HaasParts.com and DIY.HaasCNC.com.

2015

Haas introduces UMC-750SS super-speed universal machining center.

20/ Haas introduces new Haas Bar Feeder, with innovative retractable design.

Haas redesigns the EC-1600 HMC to increase speed, reliability, and capability.

Haas installs a 1-megawatt solar power generating system at the Oxnard factory to reduce the company's carbon footprint.

Haas introduces the ST-15, a small-footprint, big-bore turning center with 2.5" bar capacity.

2016

21/ Haas introduces the CL-1 ultra-compact chucker lathe with available integrated bar feeder.

Haas introduces the CM-1, a ultra-compact VMC for precision work.

22/ Haas introduces the TRT70, an ultra-small, dual-axis rotary table for the CM-1 and other small mills.

Haas introduces the DT-2 Drill/Tap Center and DM-2 Drill/Mill center, ultra-fast, lean style machining centers with the same performance as the DT-1 and DM-1, while offering an additional 8 inches of X-axis travel and table length.

Haas introduces the ST-15Y, a small-footprint, big-bore turning center with Y-axis capability and 6000-rpm live tooling.

23/ Haas introduces the EC-1600ZT-5AX, a large-capacity, 5-axis HMC for machining large, complex parts.

Haas introduces the UMC-750P, a unique configuration of the class-leading UMC-750 designed for profiling and head porting.

24/ Haas introduces the Next Generation Control on its VMCs and HMCs.

2017

CL-1 Compact Lathe goes into full production.

25/ Haas introduces BMT65 turret with 6000-rpm live tooling on the ST-20 and ST-30 series lathes.

2018

EC-400 redesign, plus Pallet Pool, GM-2-5AX 5-axis Gantry Mill, Lathe Automatic Parts Loader redesigned

2019

U.S. Revenue exceeds $1.21 Billion, European revenues of Quarter Billion Euros U.S. market share all-time high: 55%; EUR 11%, all time high.

26/ Online Operator Certification for Haas machines released with 4000 registered.

Lathe Sub-Spindle option available on ST-10s through ST-30s.

Release of the more compact, more affordable, UMC-500.

Pallet Pools released for EC-400 and UMC-1000.

Release of GM 2-5AX, 5-axis Gantry, and re-release of APL for ST-10/20.

Launch of new extra-large rotary tables: HRT630/800/1000.

2020

27/ Haas Tooling E-Commerce launched in U.S.

Pallet Pools expanded to UMC-500/750 machines.

Haas takes advantage of COVID slowdown to launch record number of new products, including: Desktop Mill, EC-500, EC-500/50-Taper, GM-2, UMC-750 redesign, UMC-1500-DUO, VR-8/9/11, HRT210SS, TRT210, **28/** APL for VFs, VC-400, ST-30 redesign, ST-10/20/30 Long Beds, ST-28, **29/** Robot Package 1/2/3 Touchscreen Control, VS-3, VF-14, VR-14, Chip Lift, Air Vises, TR500SS, EC-630, TH240, Haas Bar Feeder V2.

2021

30/ Pallet Pool expanded to VF-2YT Series.

Launch of TM redesigns.

Development of new HDC-3 Bridge mill series.

70+1 Side Mount Tool Changer developed for greater tool capacity.

New TRT310 & TH450 Rotaries.

2022

Haas Tooling E-Commerce launched for international market.

Reached $1.3 Billion in Revenue - Best in Haas History.

Re-release of VS-1 and **31/** DS-30Y.

32/ New HRT-310SS.

33/ New UMC-350 Series.

Release of BMT45 for ST-10Y & 15Y.

2023

34/ Haas celebrates its 40-year anniversary – delivering affordable, high-performance machines; an online tool-buying experience; support by an extensive, instructional video library; and a worldwide sales, service, and educational network.

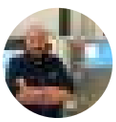
Thanks for partnering with us!

Designed to meet tomorrow's training demands, today.

Haas Technical Education Community *(HTEC)*

As a community of manufacturing technology educators – HTEC spans a global footprint of more than 4500 schools, training centers, colleges, and universities. The aim is to provide the best CNC training possible for generations to come, by leveraging the capabilities and technologies of Haas Automation, the Haas Factory Outlet (HFO) network, and leading industry partners to exploit the power of modern, advanced manufacturing equipment in an educational setting.

"The Haas Technical Education Community has been central to the success of the CNC program in my school – we attracted more students, raised the quality of our education, and connected better with the industry."



TIM AFSCHRIFT
CNC MACHINING INSTRUCTOR
AALTER SECUNDAIRE SCHOOL

Haas Technical Education Community Resources

Haas has been supporting schools for more than 30 years, and continues to offer discounts, resources, and machine configurations built just for education.

- Deep discounts on Haas machines for education
- Deep discounts on all Haas Tooling for educators; tooling kits specific to education
- Teacher training – beginner through advanced courses; hands-on CNC machine training courses for teachers; multiple locations to serve the education community
- Haas Online Learning Resources: Find manuals, training documents, videos, Tips of the Day for educators – all in one place!
- Regional and National HTEC Conferences for educator networking and instructor peer reviews

Haas CNC Certification Program

Our online CNC Certification Program provides the basic knowledge necessary to get started as a CNC machine operator or CNC machinist, including basic machine operation, proper machine safety, and fundamental machining processes.

Networking and Directories

Connect with fellow HTEC members. Find them here – HTEC is global!

Student Competitions

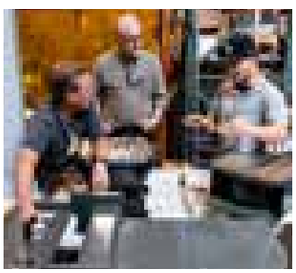
Technical education students and teams have the opportunity to prove their knowledge and skills at the regional, national, and even world level. When HTEC member schools participate, they routinely place in the top levels at these competitions.

- Haas sponsored Regional, State, and National SkillsUSA CNC Competitions
- Haas sponsored and supported WorldSkills Competitions
- FIRST California Robotics
- Project MFG

Learn more about the HTEC program. Visit us at HTEC.com

Nobody is better than Haas Automation at designing and building the machine that's right for you.

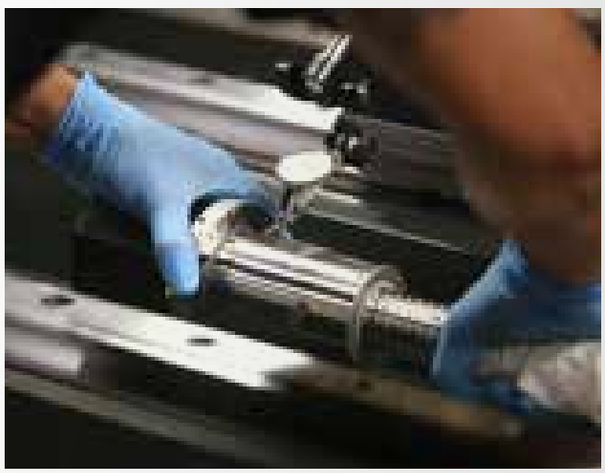
Simplicity by Design



Centralized engineering and assembly

Every Haas machine is built in our single factory in Southern California, and our engineers are literally just feet away from the production floor. When a change needs to happen, they can be on the assembly line instantly, implementing those changes.

This ensures that the building process is constantly monitored, which allows us to maintain a level of quality that other builders can't match. Machine tool builders with multiple factories spread all over the world just can't react as quickly or efficiently as we can.



How Haas builds machines

The assembly procedures at the Haas factory follow a very strict protocol, with quality checks made continuously throughout the process. Work instructions and specifications are all communicated to the production floor electronically via tablets. This also serves to create a live electronic record. Each machine, of course, has a serial number,

and as the machine is built, the hundreds of hand measurements that are taken are entered into this record, allowing us to generate a detailed report for every machine coming off our assembly lines. Indicator readings are taken, adjustments are made, and tests are performed, and the results are entered into the tablet as a permanent record of critical data.

Quality components

We build so many machines that we have a huge advantage when it comes to buying power.

This means we can use world-class components in every machine tool, while still providing great value. From linear guides and ballscrews, to spindle bearings, servomotors, and vector drives, we don't have to cut corners to provide excellent performance. Great designs and serious volume are how we do it.

Every machine is built to order, so you only pay for the options you want. And with a wide selection of spindles, tool changers, chip- and coolant-management options, you have the choices to customize your machine exactly the way you want it.

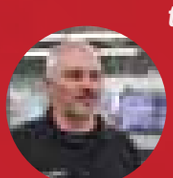
More machine for your money . . . and more reasons why your next machine should be a Haas!

Control

World-Famous CNC Control

"We decided to switch over our whole shop to Haas machines so we'd have consistency from a maintenance standpoint, and because they allow us to use a single post-processor. We use a lot of our programs year after year, and having common controllers, that all work the same, makes it easy to just download a program, go to any machine, and run the job.

We're also having a hard time finding seasoned labor in our industry, and the ease of use of the Haas control has allowed me to develop young operators out of college, and easily integrate them into the process of running the Haas machines."



TIM GATTO
President, Micelli Chocolate Molds

Simple is just one of the benefits of the Haas Control user interface

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.

Perform multiple functions with a single button push.

One-Touch TOOL OFFSET MEASURE Button

When setting tool length offsets, simply jog the tool to the surface of the part, and press the TOOL OFFSET MEASURE button to automatically store the tool's length in the offset register. Use the NEXT TOOL button to repeat the process for each tool (mill only).

NEXT TOOL Button

The NEXT TOOL button (mill), when pressed immediately after setting a tool length offset, will swap the next tool into the spindle, and put the machine into jog mode, ready to move the new tool into position to set its tool length offset.

FWD and REV Buttons

The FWD and REV buttons will start the machine spindle at the last commanded speed. The FWD button will start the spindle in the forward (M03) direction, and the REV button will start the spindle in the reverse (M04) direction.

Clearing all Offsets/Entries with a Single Button

While on the Tool Offset or Work Offset pages, pressing the Origin key opens a pop-up menu that allows you to quickly zero all offsets at once, with one button press.

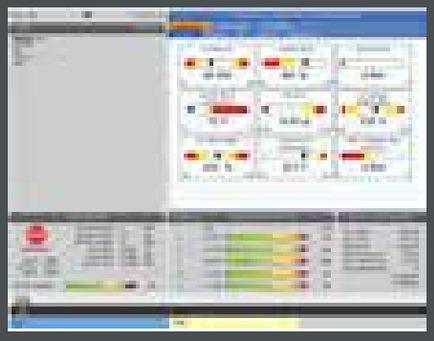
G28 HOME Button

The G28 HOME button is very useful (especially if you do not have a second home button) for quickly sending all machine axes to their Home position. On mills, the Z-axis moves Home first, and then all the other axes move. On lathes, the X-axis moves Home first, and then the others. It can also be used to send individual axes Home, by pressing the axis letter key first, and then G28 HOME.

Designed, Built & Programmed by Haas

CNC MACHINING IS COMPLEX. YOUR CONTROL SHOULDN'T BE.

POWERFUL STANDARD FEATURES:

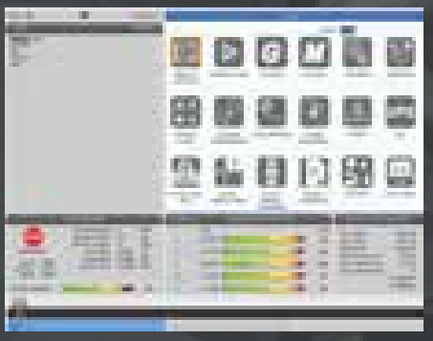


Simple Navigation

Navigation is fast and simple, with consistent functionality of the cursor keys, and intuitive icons throughout the user experience.

Touchscreen

Our Touchscreen interface speeds up programming and simplifies control navigation, by allowing window selection, data entry, and other control functions without using the standard keypad.



Accessible Icons

The enhanced operator Help interface features easy-to-understand icons that provide quick access to information about any feature or option within the control.

MORE POWERFUL STANDARD FEATURES:

MyHaas

In the shop or on the go, MyHaas puts everything you need to know about your CNC machines in one convenient place.
Download the free MyHaas app for Android and iOS devices – so you can:

- Manage your fleet of machines
- Access HaasConnect and HaasDrop
- Save and manage your machine quotes
- Browse and order Haas Tooling

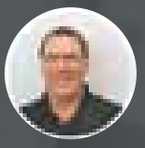
HaasDrop

HaasDrop Wireless File Transfer is a fast and convenient method for sending images, videos, and even program files from a mobile device directly to the control on a Haas CNC machine. Simply download the free MyHaas app for Android and iOS devices, and start transferring files directly to the Haas control.

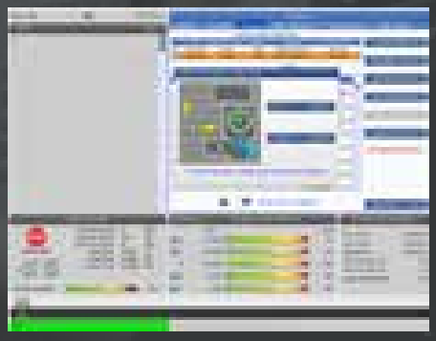
HaasConnect

HaasConnect is a machine monitoring system that provides instant alerts for machine status via email. 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 at HaasCNC, or the free MyHaas app for Android and iOS devices. HaasConnect is free with every new Haas machine.

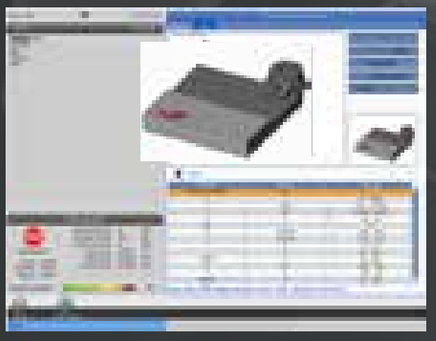
"The Haas CNC control is so user friendly; students are able to spend less time learning the control layout, and more time making parts. The layout of the Haas control allows students to go from mill to lathe and back again seamlessly."



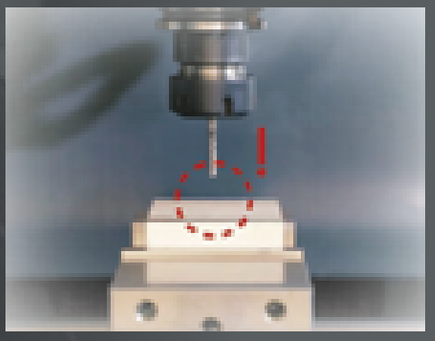
MIKE BERRY
INSTRUCTOR, MACHINE TOOL TECHNICIAN
MID-STATE TECHNICAL COLLEGE / WISCONSIN RAPIDS CAMPUS



Rotary Set Up
Set up and configure your rotary table with simple, on-screen dialogue and icons, and quickly designate rotary axes to correspond to the rotary table's orientation.

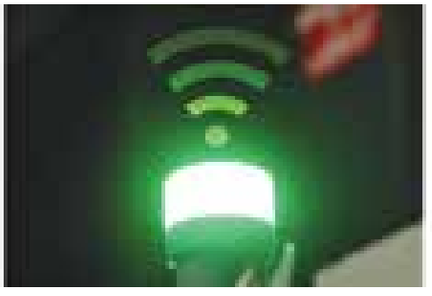


Programming
The Haas Visual Programming System (VPS) lets you quickly create G-code programs for both basic and complex part features and operations, using form-like templates to define the features.

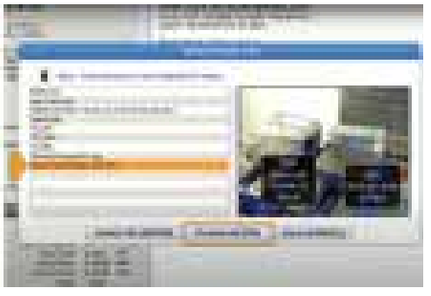


Safe Run
The Safe Run feature in the Haas control can detect unexpected contact, and instantly stop the machine to prevent significant damage.

On-Board Memory
The Haas control has 1 GB of standard program memory built in. This means you'll have the ability to store many programs in the control, eliminating the need for an external device for program backup. Large programs for complex molds, for example, can now be run from memory, doing away with the connectivity issues often experienced when running from DNC or FNC. Expandable to 64 GB.



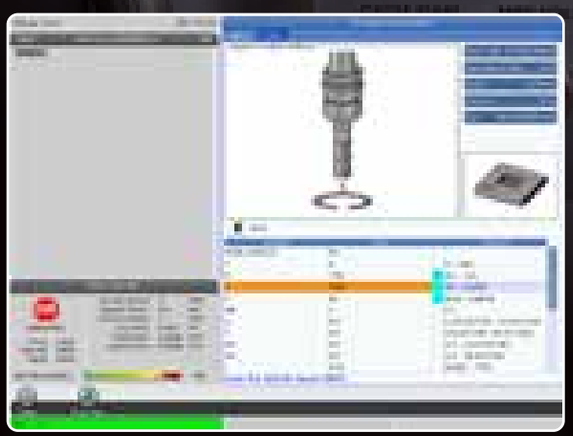
WiFi / Ethernet
All Haas machines come standard with built-in Ethernet and WiFi connectivity for fast, wired or wireless communication between the Haas control and a local area network. Use WiFi to easily share and transfer files wirelessly, and monitor your machine remotely via HaasConnect mobile machine monitoring. It is easily set up through the Haas control, and supports Netshare capabilities.

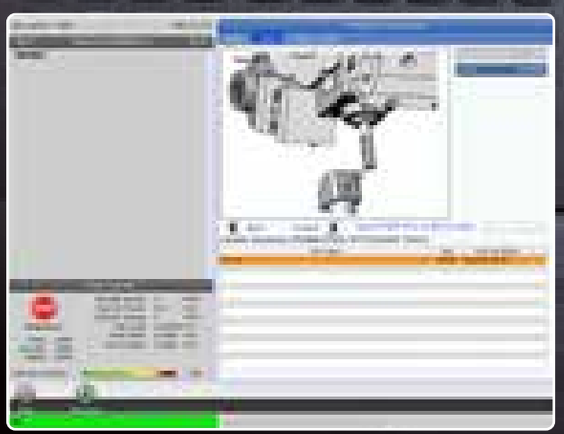


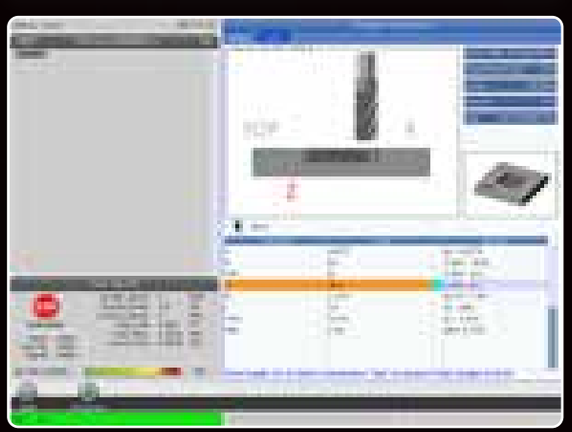
Media Display Function
Easily place pictures and videos in your program to make sure your operators have all the information they need to run the job correctly. The Haas M130 Media Display M-Code is a powerful tool for communicating with machine operators and programmers directly from the Haas control as an NC program runs.

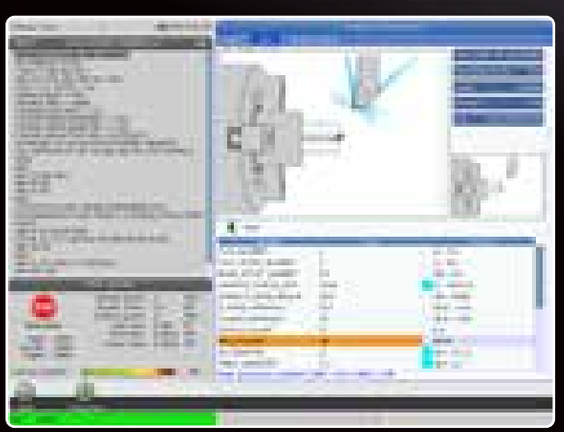
haas visual programming system

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 bolt-pattern drilling cycles that let you incorporate spot drill, drill, tap, bore, counter-bore, and ream operations on the same set of holes, all from the same template.









The Haas Visual Programming System (VPS) makes it easy to program on-the-fly, without having to know G-code. Simply follow the on-screen instructions, enter the required values, and the control will generate all the necessary G-code!

Our Visual Programming System for lathes gives you an easy way to write programs on the fly at your machine's control, using the geometry and features of your part.

Vertical Machining Centers

A Versatile Lineup of Vertical Milling Machines

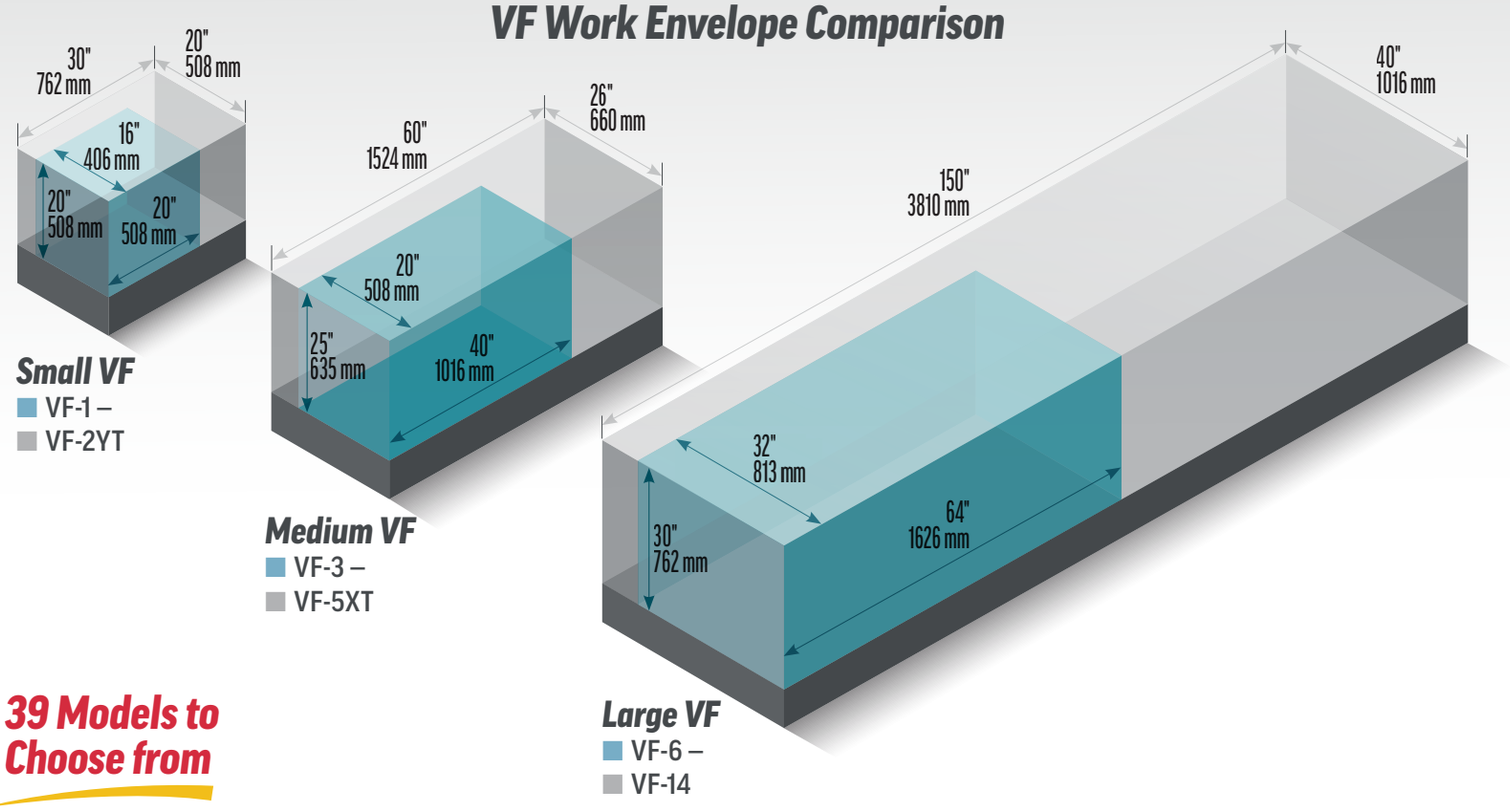
A Wide Range of Sizes and Features to Fit Any Shop's Needs

VF Series

30/40/50/HSK TAPER
3/4/5-AXIS
7500-30,000 RPM
20-71 TOOL CAPACITY

Most popular VMC sold!

VF Work Envelope Comparison



Small VF
- VF-1 –
- VF-2YT

Medium VF
- VF-3 –
- VF-5XT

Large VF
- VF-6 –
- VF-14

39 Models to Choose from

Do Even More

From the industry's most user-friendly control, to our innovative Wireless Intuitive Probing System (WIPS), to our wide selection of spindles and tool changers, we let you configure your machine so it works for you. After all, you know what you need better than anyone.

Ready to create your new Haas vertical mill?

Go to HaasCNC.com to find the right machine for your shop, and use our Build-&-Price tool to make it your own, by adding the options and features that work for you – and then get an instant price quote.

Affordable Automation
Automatic Parts Loader

Versatile Automation
Robot

VF Model Series

Small

VF-1	20" x 16" x 20" (xyz) 508 x 406 x 508 mm
VF-2	30" x 16" x 20" (xyz) 762 x 406 x 508 mm
VF-2SS Super Speed	30" x 16" x 20" (xyz) 762 x 406 x 508 mm
VF-2TR 5-Axis	30" x 16" x 20" (xyz) 762 x 406 x 508 mm
VF-2YT	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
VF-2SSYT Super Speed	30" x 20" x 20" (xyz) 762 x 508 x 508 mm

Medium

VF-3	40" x 20" x 25" (xyz) 1016 x 508 x 635 mm
VF-3SS Super Speed	40" x 20" x 25" (xyz) 1016 x 508 x 635 mm
VF-3YT	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
VF-3SSYT Super Speed	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
VF-3YT/50 50-Taper	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
VF-4	50" x 20" x 25" (xyz) 1270 x 508 x 635 mm
VF-4SS Super Speed	50" x 20" x 25" (xyz) 1270 x 508 x 635 mm
VF-5/40	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5SS Super Speed	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/40TR 5-Axis	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/40XT	60" x 26" x 25" (xyz) 1524 x 660 x 635 mm
VF-5/50	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/50TR 5-Axis	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/50XT	60" x 26" x 25" (xyz) 1524 x 660 x 635 mm

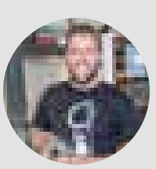
Large

VF-6	64" x 32" x 30" (xyz) 1626 x 813 x 762 mm
VF-6SS Super Speed	64" x 32" x 30" (xyz) 1626 x 813 x 762 mm
VF-6TR 5-Axis	64" x 32" x 30" (xyz) 1626 x 813 x 762 mm
VF-6/50	64" x 32" x 30" (xyz) 1626 x 813 x 762 mm
VF-6/50TR 5-Axis	64" x 32" x 30" (xyz) 1626 x 813 x 762 mm
VF-7	84" x 32" x 30" (xyz) 2134 x 813 x 762 mm
VF-7/50	84" x 32" x 30" (xyz) 2134 x 813 x 762 mm
VF-8	64" x 40" x 30" (xyz) 1626 x 1016 x 762 mm
VF-8/50	64" x 40" x 30" (xyz) 1626 x 1016 x 762 mm
VF-9	84" x 40" x 30" (xyz) 2134 x 1016 x 762 mm
VF-9/50	84" x 40" x 30" (xyz) 2134 x 1016 x 762 mm
VF-10	120" x 32" x 30" (xyz) 3048 x 813 x 762 mm
VF-10/50	120" x 32" x 30" (xyz) 3048 x 813 x 762 mm
VF-11	120" x 40" x 30" (xyz) 3048 x 1016 x 762 mm
VF-11/50	120" x 40" x 30" (xyz) 3048 x 1016 x 762 mm
VF-12/40	150" x 32" x 30" (xyz) 3810 x 813 x 762 mm
VF-12/50	150" x 32" x 30" (xyz) 3810 x 813 x 762 mm
VF-14/40	150" x 40" x 30" (xyz) 3810 x 1016 x 762 mm
VF-14/50	150" x 40" x 30" (xyz) 3810 x 1016 x 762 mm

Machine With Available Option(s):

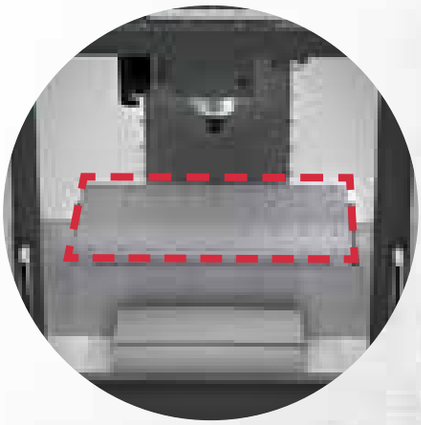
- ▲ Automatic Parts Loader
- ■ HRP-1 / Auto Door included
- ■ HRP-2 / Auto Door included
- ■ HRP-3 / Auto Door included

"We have three VF-2SS machines; the high-speed spindles help us produce an excellent finish, while cutting down run times. The ease-of-operation of Haas machines is a big plus. Our operators are familiar and comfortable with the Haas control, and that helps keep the process running smoothly. We truly are a Haas shop."



Nihilo Concepts
JOE BREWSTER
OWNER | NIHILO CONCEPTS

Up to 70+1 tools to handle a variety of parts
Room for backup and redundant tooling

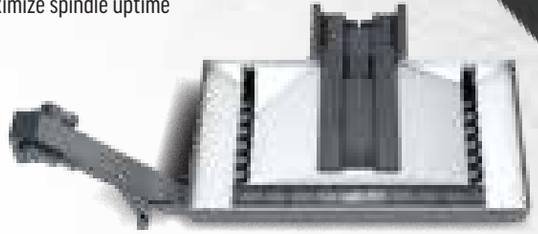


Large Part Automation
30" x 18"
762 x 457 mm
Work envelope

Haas Wireless Intuitive Probing System - (WIPS)
In-process tool and work probing, broken tool detection

Automatic Coolant Refill
Automatically maintains proper coolant level for unattended operation

Dedicated Load/Unload Station
Maximize spindle uptime



Dual-Auger with Chip Conveyor -
High-volume chip removal for unattended operation

Pallet 4

Easy Automation

Endless possibilities for High-Mix or High-Volume Production and Unattended Operation.

Our Haas Workholding by Kurt fixed-jaw, single-station vise is available in a 3-pack of 6" (150 mm) vises or a 4-pack of 4" (100 mm) vises

Pallet 1

Pallet 2

Pallet 3

Easily swap out additional pallets for more job runs

HaasConnect

- Remote Monitoring
- Machine and Tool Life Management

WiFi Camera -
Keep an eye on things while away

Lights-Out Machining

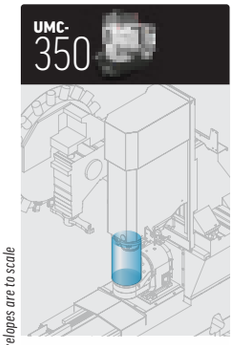
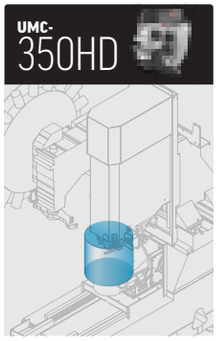
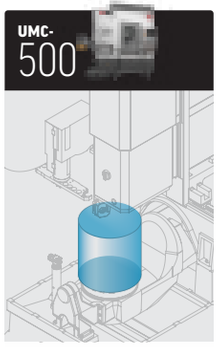
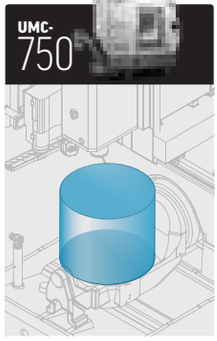
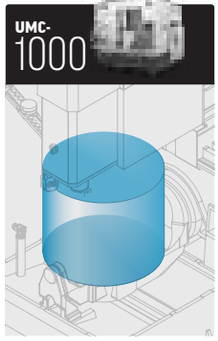
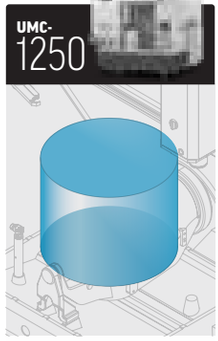
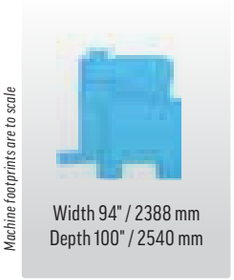
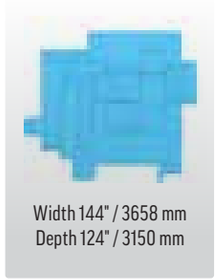
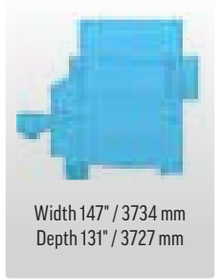
NOTE: The Pallet Pool requires a side-mount tool changer. The Pallet Pool must be anchored for proper operation. Not available for field installation.

5-Axis for Everyone

UMC Series

30/40/HSK TAPER
5-AXIS STANDARD
8100-20,000 RPM
19-71 TOOL CAPACITY

UMC Work Envelope Comparison

	UMC-350	UMC-350HD	UMC-500	UMC-750	UMC-1000	UMC-1250
WORK ENVELOPE *Work envelopes are to scale*						
	Swing Ø8.4" / 213 mm *Height 15" / 381 mm	Swing Ø14.5" / 368 mm *Height 15" / 381 mm	Swing Ø18" / 457 mm *Height 19" / 483 mm	Swing Ø27" / 686 mm *Height 23" / 584 mm	Swing Ø33" / 838 mm *Height 28" / 711 mm	Swing Ø39" / 991 mm *Height 31" / 787 mm
MACHINE FOOTPRINT *Machine footprints are to scale*						
	Width 94" / 2388 mm Depth 100" / 2540 mm	Width 94" / 2388 mm Depth 100" / 2540 mm	Width 115" / 2921 mm Depth 106" / 2692 mm	Width 144" / 3658 mm Depth 124" / 3150 mm	Width 147" / 3734 mm Depth 131" / 3727 mm	Width 162" / 4115 mm Depth 144" / 3658 mm

ATTENTION! The maximum part weight (part and workholding) should not exceed the maximum platter capacity of the machine, regardless of part size.

**Tool Length + Workpiece*

NOTE: Maximum height and swing apply to B0 orientation only. Large workpieces, including ones within the stated work envelope, may interfere with other machine components as the tilt angle increases. If your tool length + workpiece is close to or larger than the maximum work envelope, it is recommended to review your application's suitability with your local HFO Applications team.

Every Haas UMC comes standard with full 5-axis, and these essential tools for 5-axis machining:

DWO/TCPC
Standard

Simplify 5-axis machining with dynamic work offsets and tool center point control.

- Simplifies setup operations – part and fixture can be placed anywhere on the table / platter
- Saves money by eliminating costly workholding, like self-centering fixtures
- Eliminates the need to regenerate programs from the CAM system
- Makes setting up 5-axis jobs as easy as setting up a 3-axis machine

Wireless Probing
Standard

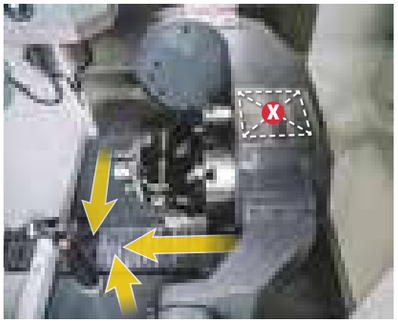
Wireless Intuitive Probing System (WIPS) – Included as a standard feature on all UMCs to simplify machine setup.

Also performs in-process work probing and tool probing.

Includes these powerful control options:
- Spindle Orientation • User-Definable Macros
- Coordinate Rotation and Scaling
- Visual Part Programming System

Spindle Options

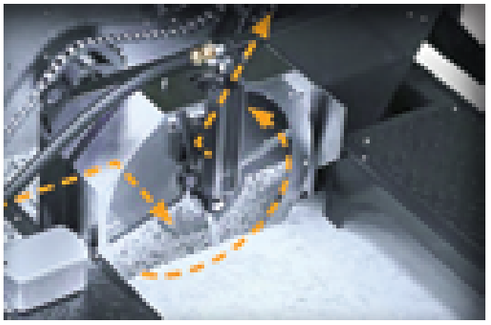
RPM	40 Taper	HSK
	8100	–
	10,000	–
	12,000	12,000
	15,000	15,000



Central Chip Evacuation Design

Central chip conveyor is directly below the cutting surface, to allow chips and coolant to be easily discharged from the machine.

X Includes additional workholding surface for more throughput and added convenience.



Chip Disc Filtration Conveyor

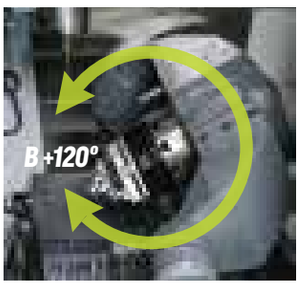
This optional conveyor features a built-in disk filtration system to reduce chip fines from entering the coolant tank, while the belt removes larger chips from the machine quickly, and discharges them at standard barrel height. Ideal for trouble-free unattended operation.

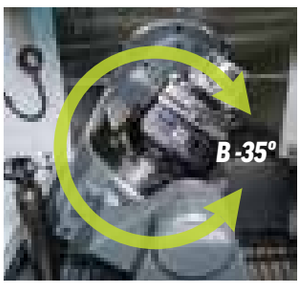
Universal Machines

	UMC-350 30 Taper	15" x 14" x 12" (xyz) 381 x 355 x 304 mm
■	UMC-350HD 40 Taper	15" x 14" x 12" (xyz) 381 x 355 x 304 mm
■ ■ ▲ ●	UMC-500	24" x 16" x 16" (xyz) 610 x 406 x 406 mm
■ ■ ▲ ●	UMC-500SS Super Speed	24" x 16" x 16" (xyz) 610 x 406 x 406 mm
■ ●	UMC-750	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
■ ●	UMC-750SS Super Speed	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
■ ●	UMC-1000	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm
■ ●	UMC-1000SS Super Speed	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm
	UMC-1000-P Profiling	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm
	UMC-1000SS-P Super Speed + Profiling	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm
●	UMC-1250 Super Speed	50" x 30" x 28" (xyz) 1270 x 762 x 711 mm
●	UMC-1250SS Super Speed	50" x 30" x 28" (xyz) 1270 x 762 x 711 mm
	UMC-1500-DUO Dual Table	60" x 20" x 20" (xyz) 1524 x 508 x 508 mm
	UMC-1500SS-DUO Dual Table + Super Speed	60" x 20" x 20" (xyz) 1524 x 508 x 508 mm

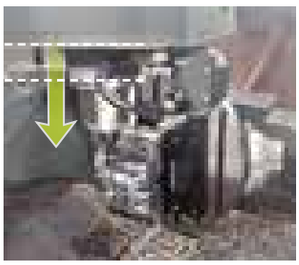
Machine With Available Option(s):

- ■ HRP-1 / Auto Window included
- ■ HRP-2 / Auto Window included
- ▲ Automatic Parts Loader
- ● Pallet Pool





Rotary Swing B-Axis & C-Axis travels, shown with Haas Self-Centering Vise and Riser



Extended-Reach Spindle Casting

Increases spindle reach to maximize platter/workpiece clearance

Easy Automation

Pallet Pool

Affordable Automation

Automatic Parts Loader

Versatile Automation

Robot

Designed Specifically for Maximum Speed and Minimal Space

Drill Tap / Drill Mill Series

30/40 TAPER
3/4/5-AXIS
10,000-20,000 RPM
19-21 TOOL CAPACITY

Affordable Automation

Compact Automatic Parts Loader
Available on these models:

- DTs / DMs
- UMC-350HD
- VF-2 / VF-2SS
- VF-2YT / VF-2SSYT
- VM-2

Spindles

High-speed spindles are the standard for the Drill/Tap/Mill machines. These spindles use an inline drive system that keeps accel/decel times to a minimum, while minimizing heat generation, compared to a belt-drive system. For applications demanding very high surface speeds, optional high-performance spindles are available.

Note: The optional high-performance spindles have higher power requirements than the standard spindle. Contact your local HFO for information.

Available High-Performance Spindles

10,000-RPM
- Standard spindle
- Inline direct-drive
- Great overall performance & value
- **Good** performance for 3D profiling

12,000-RPM
- High-performance option
- Inline direct-drive
- High accel/decel rates
- 5000-rpm rigid tapping
- 20% faster speeds and feeds
- **Better** performance for 3D profiling

15,000-RPM
- High-performance option
- Inline direct-drive
- High accel/decel rates
- 5000-rpm rigid tapping
- 50% faster speeds and feeds
- **Best** performance for 3D profiling

20,000-RPM
- High-performance option (DT only)
- Inline direct-drive
- High accel/decel rates
- 5000-rpm rigid tapping
- 100% faster speeds and feeds
- **Ultimate** performance for 3D profiling

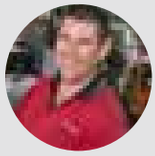
Drill Tap/Mill Centers

DT-1 30 Taper	20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm
DT-2 30 Taper	28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm
DM-1 40 Taper	20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm
DM-2 40 Taper	28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm

Machine With Available Option(s):

- HRP-1 / Auto Window included

"My first Haas was a DT-1 Drill/Tap Center. Now that I'm a Haas user, I believe all shops, wherever they are in the world, should use Haas. For what you pay, they are the best production machines in the world!"



HARDUS COETZEE
OWNER
TMPC CO., LTD.

Tool Changers

Haas Drill/Tap/Mill Series machines share an innovative tool changer design that eliminates the need for multiple switches and signals, resulting in ultra-fast tool changes. An equally important benefit is the increase in reliability due to the reduction of parts and switches.

Multi-Axis Machining

From the venerable HA5C indexer to the high-speed TRT100 tilting rotary, Haas has a 4th- or 5th-axis solution to fit your needs. Additional axis drives can also be added to any Drill/Tap/Mill Series machine in the field, along with Haas rotary tables. Features built into the Haas Control, like G107 Cylindrical Engraving, only make the move to multi-axis machining that much easier.

Probing

Machines aren't making money unless they're making chips. Set up your DT/DM even faster with the addition of a Haas Wireless Intuitive Probing System (WIPS). Fully integrated with the Haas Control, WIPS will simplify everything from initial part set up to advanced probing routines.

Choosing the Right Automation for your VF

There are many ways to automate a machining process. Haas has the right choices to ensure that your future productivity is secure. We have pre-engineered a number of automation systems to help you find the one that fits best.

VF Automation	Add Automation	Applications
Single-Sided Machining	**Easy** Pallet Pool	• Utilizes the same/existing programs • Run a variety of parts, or multiples of the same part • Larger size parts, up to 30" x 18" (762 x 457 mm) • Up to 750 lb (340 kg) payload per pallet • Irregular shape parts • Simple manual clamping • High-mix/low-volume or high-volume production • Unattended operation
VF-2YT Series	**Affordable** Automatic Parts Loader (APL)	• Simple load/unload part processing • Runs multiples of the same part • Parts up to 6" x 6" x 4" (152 x 152 x 102 mm) • Parts up to 10 lb (4.5 kg) each • Automated clamp/unclamp fixturing required • Mid- to high-volume production • Unattended operation
	Versatile Robot	• Versatile load/unload part processing • Runs multiples of the same part • Parts up to 6.75" x 6.75" x 10 lb (171 mm x 171 mm x 4.5 kg) • Automated clamp/unclamp fixturing required • Mid- to high-volume production • Unattended operation

Choosing the Right UMC Automation

When it comes to automation, there is no one-size-fits-all approach. At Haas Automation, we have a number of pre-engineered systems for you to choose from, to ensure that your investment in the world of automation is sure to pay off.

5-Axis UMC Automation	Add Automation	Applications
5-Sided Machining	***Easy*** Pallet Pool 	• Utilizes the same/existing programs • Run a variety of parts, or multiples of the same part • Larger size parts, up to 30" x 24" (762 x 610 mm) • Up to 200 lb (90 kg) payload per pallet • Irregular shape parts • Simple manual clamping • High-mix/low-volume or high-volume production • Unattended operation
 **UMC Series** **5** sizes to choose from	***Affordable*** Automatic Parts Loader (APL) 	• Simple load/unload part processing • Runs multiples of the same part • Parts up to 6" x 6" x 4" (152 x 152 x 102 mm) • Parts up to 10 lb (4.5 kg) each • Automated clamp/unclamp fixturing required • Mid- to high-volume production • Unattended operation
	Versatile Robot 	• Versatile load/unload part processing • Run a variety of parts or multiples of the same part • Parts up to 6.75" x 6.75" x 10 lb (171 mm x 171 mm x 4.5 kg) • Automated clamp/unclamp fixturing required • Mid- to high-volume production • Unattended operation

The Power of Our Online Resources

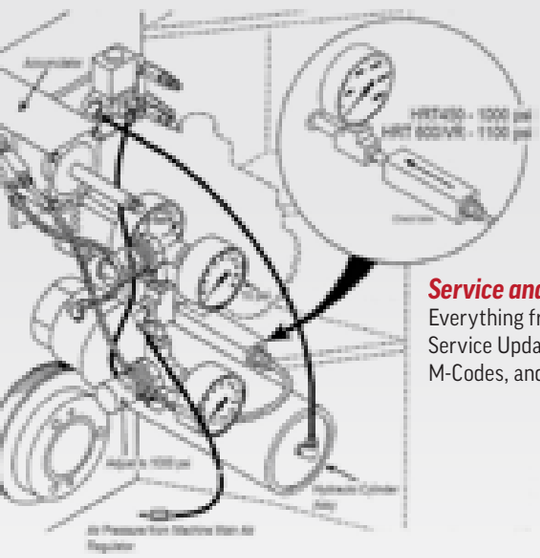
Access powerful information, so you can focus on what matters.

How-To Videos/Guides

Access the massive Haas Automation video library for all of our Tip-of-the-Day, Apps Minute, Cutting Demo, and Service & Maintenance videos.

Build-&-Price

Take a quick tour through our **Build-&-Price** feature, and discover just how easy it is to find the machine you need for the parts you're making. Simply select a machine from our myriad of choices, and then add the options that are right for you. All pricing and financing information is right there – with no waiting.



Service and Support

Everything from How-To Procedures, Troubleshooting Guides, Service Updates, and Instruction Manuals, to lists of G-Codes, M-Codes, and Settings.

Your source for genuine OEM Haas Parts

- Replacement parts
- Performance upgrades
- Maintenance upgrades

In the shop or on the go, **MyHaas** puts everything you need to know about your CNC machines in one convenient place.

Create your account today, so you can:

- Manage your fleet of machines
- Access HaasConnect
- Save and manage your machine quotes

Use the New MyHaas App for a simplified Haas Tooling shopping experience, and express checkout!

The MyHaas App now includes all the functionality of the HaasConnect App and the HaasDrop File Transfer App.

HaasConnect provides instant alerts for machine status, alarms, and overrides.

Pallet-Changing VMC – *Maximize spindle uptime*

Dual Pallet

VC-400	22" x 16" x 20" (xyz) 559 x 406 x 508 mm
VC-400SS Super Speed	22" x 16" x 20" (xyz) 559 x 406 x 508 mm

VC-400 Series

40 TAPER

3-AXIS
8100 RPM
30+1 TOOLS

Boost throughput, minimize non-cutting time

- Built-in pallet changer; 22" x 14.5" (559 x 368 mm) T-slot pallets
- Machine parts on one pallet, while setting up the other
- Standard 30+1 tool side-mount tool changer, with 50+1 available
- Available 6+1 pallet pool
- Made in the USA

The pallet-changing capability of the VC-400/SS allows you to machine parts on one pallet, while loading/unloading parts on another, boosting throughput and minimizing non-cutting time.

6+1 Pallet Pool, VC-400/SS

High-volume production, unattended operation

Our 6+1 pallet pool for the VC-400/SS 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.

- Utilizes the same/existing programs
- Work Envelope: 22" width x 16" depth (559 x 406 mm)
- 6+1 pallets (6 storage locations + 1 machining station)
- 500 lb (227 kg) max per pallet (workpiece + workholding)
- Fully integrated solution for lights-out production
- Easy-to-use scheduling interface in the Haas control
- Dedicated load/unload station
- Must be ordered with the machine

Easy Automation

Configured for Mold Making

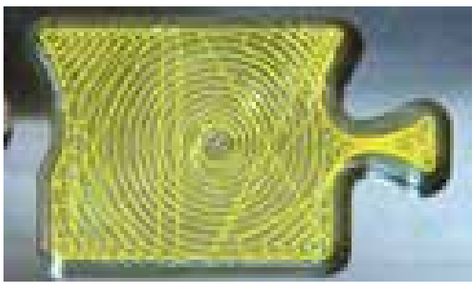
VM Series

30/40/HSK TAPER
3/4/5-AXIS
12,000-30,000 RPM
31-71 TOOLS

Making molds has never been easier than with a Haas Mold Machine. We've taken our industry-leading VF Series and created custom configurations just for mold making, tool & die work, and other high-precision industries. Mold Machines are also ideal for high-performance job shops looking to increase their versatility.

VM Multi-Fixturing Table

Our multi-fixturing table features T-slots in the X and Y directions, as well as precision dowel-pin holes, to provide plenty of options for clamping and locating a wide range of parts, fixtures, and workholding.



High-Speed Machining

High-Speed Machining allows faster feedrates and more complex toolpaths, without hesitation or starving the machine. Obtain smoother surface finishes and faster, more accurate transitions of axis motion at higher feedrates, without having to modify existing programs.

Wireless Probing

Setup reduction is critical to maximizing the productivity of any machine tool. Our Wireless Intuitive Probing System (WIPS) sets the standard for integrated probing systems. Easy, on-screen directions simplify everything from initial part set up to advanced probing routines, including in-process part inspections.

Mold Machines

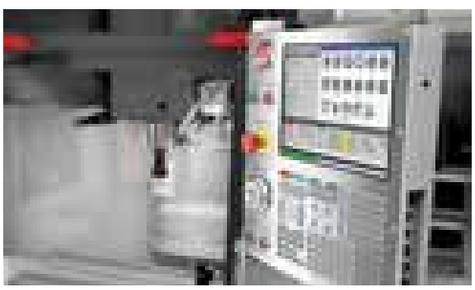
▲ ■ ■ VM-2	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
■ ■ VM-3	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
■ VM-6	64" x 32" x 30" (xyz) 1626 x 813 x 762 mm

Machine With Available Option(s):

- ▲ Automatic Parts Loader
- ■ HRP-1 / Auto Door included
- ■ HRP-2 / Auto Door included
- ■ HRP-3 / Auto Door included

Chip & Coolant Management

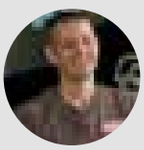
Different jobs require different approaches to chip clearing: flood coolant, through-spindle coolant, through-spindle air, minimum quantity lubrication, and more. Haas machines offer one of the widest selections of chip and coolant management options in the industry.



The Haas Control

Ease of use and simplicity are the founding principles of the Haas Control. Commonality between vertical machining centers, horizontal machining centers, and lathes ensures operators can easily move from one Haas machine to another.

"Our VM-3 has been a tremendous addition to our machine shop. The accuracy and machined surface finishes are superb. Equally important, the machine is easy to operate. We love the modern technology features, including HaasConnect and the advanced probing routines."



JOHN SAUNDERS
PRESIDENT
SAUNDERS MACHINE WORKS

Large-Platform CNC Gantry Machines for Big Jobs

***Gantry Mill* Series**

HSK-63F TAPER ***GM-2-5AX***
5-AXIS
20,000 RPM
30+1 TOOLS

HSK-A63 TAPER

40 TAPER ***GM-2***
3/4/5-AXIS
8100-15,000 RPM
30+1 TOOLS

Haas gantry mills are the ideal solution for large workpieces that are difficult to load or access in a traditional vertical milling machine. Large travels at affordable prices, multiple spindle tapers, and a variety of spindle speeds, deliver the best value and performance for large-part machining.

Rigid steel construction provides a very stable cutting platform, and a 1" (25 mm) thick aluminum table is standard. Or, upgrade to a steel table with a drilled and tapped bolt pattern. The traveling guard includes safety edge sensors, and protects the operator from chips and coolant, while keeping the workspace clean.

GM-2 3-Axis	145" x 87.5" x 22" (xyz) 3683 x 2223 x 559 mm
GM-2-5AX 5-Axis	145" x 87.5" x 39.4" (xyz) 3683 x 2223 x 1000 mm

The GM-2-5AX articulating head is able to machine all 5 sides of your part, allowing you to do all your operations in a single setup.

5-Axis Gantry GM-2-5AX

The GM-2-5AX is a 5-axis gantry mill designed for lighter-duty, complex, large-part machining, such as airframe components, layup molds, and composite structures.

- Dual-axis spindle head: ±245˚ of rotation, ±120˚of tilt
- 20,000-rpm HSK-63F spindle (HSK-A63 available)
- 30+1 side-mount tool changer
- Traveling guard for chip and coolant containment
- Safety edge sensors
- 1" (25 mm) thick aluminum table

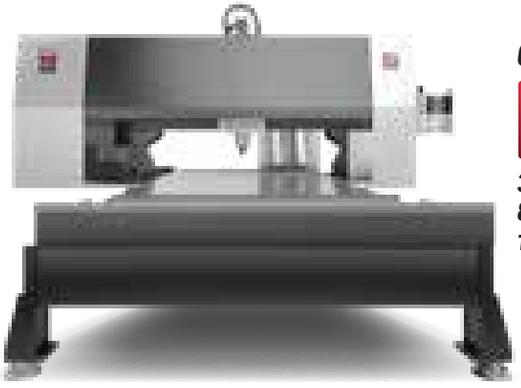
3-Axis Gantry GM-2

The GM-2 is a heavy-duty 3-axis gantry mill designed for heavier machining of large parts, such as airframe structures, large plates, and long extrusions.

- 40-taper inline direct-drive spindle
- Available 10,000-rpm and 15,000-rpm spindles
- 30+1 side-mount tool changer
- Traveling guard for chip and coolant containment
- Safety edge sensors
- 1" (25 mm) thick aluminum table

Ready for Your Large-Scale Tasks

Gantry Router Series



GR-510/712

40 TAPER

3/4/5 AXIS
8100-15,000 RPM
10-20 TOOLS

The rigid steel construction of the GR Series provides a very stable cutting platform. The machine comes standard with a 1" (25 mm) thick aluminum table, or upgrade to a steel table with a drilled and tapped bolt pattern. The traveling guard includes safety edge sensors, and protects the operator from chips and coolant, while keeping the workspace clean.

- Rigid-steel construction
- Extended Z-axis clearance or travel packages available
- Traveling guard for chip and coolant containment
- 1" (25 mm) thick aluminum table
- Made in the USA

GR-510	121" x 61" x 11" (xyz) 3073 x 1549 x 279 mm
GR-712	145" x 85" x 11" (xyz) 3683 x 2159 x 279 mm

Second Home Position Button

At Haas, we love making the operator's life easier. With the Second Home button, you can preset a second Home position for the machine's axes. This can be quite convenient when loading heavy tools, allowing you to Home the spindle right in front of the door for easy access.

Big Capabilities – Small Prices

Toolroom Mill Series

40 TAPER

3/4/5-AXIS
4000-10,000 RPM
1-20 TOOLS

The Toolroom Mill Series is the true definition of value, providing full CNC capabilities, including available 4th- and 5th-axis functionality, at affordable prices.

A Versatile Starting Point

Haas Toolroom Mills are found everywhere – from schools to high-end production shops. Their versatility is a result of our commitment to using common components across all Haas machine tools. This results in all machines, including the Toolroom Mills, benefiting from improvements in reliability and performance.

Spindles

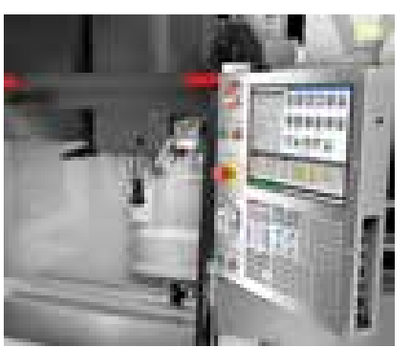
All spindles used in the Toolroom Mill Series machines are designed and built by Haas at our Southern California manufacturing facility. The 40-taper spindle shafts found in the Toolroom Mills are the same as those used in our VF Series machines. Speeds range from 4000 rpm to 10,000 rpm.

Tool Changers

The number of tools you need in your machine can vary by the job or machining process being performed. With Haas, you always have a selection of tool changers that are designed and manufactured in-house, to ensure the utmost quality and long-term reliability. Choose up to 20 tools for your Toolroom Mill.

Wireless Probing

Machines aren't making money unless they're making chips. Set up your Toolroom machine even faster with the addition of a Haas Wireless Intuitive Probing system (WIPS). Fully integrated with the Haas Control, WIPS will simplify everything from initial part setup to advanced probing routines.



The Haas Control

Designed and built exclusively by Haas since 1988, it is the industry standard for simplicity and ease of use. Commonality between all Haas machines allows for shop standardization. Today's Haas Control includes features like 1 GB of program memory, Ethernet and WiFi connectivity, media display functionality, and HaasConnect remote machine monitoring. All Toolroom Mills come standard with our powerful Visual Programming System, which makes them easy to learn and operate – even without knowing G-code.

Toolroom Mill Series

Standard Toolroom Mills

TM-0	20" x 12" x 16" (xyz) 508 x 305 x 406 mm
TM-1	30" x 16" x 16" (xyz) 762 x 406 x 406 mm
TM-2	40" x 16" x 16" (xyz) 1016 x 406 x 406 mm

Production Toolroom Mills

TM-0P Tool Changer	20" x 12" x 16" (xyz) 508 x 305 x 406 mm
TM-1P Tool Changer	30" x 16" x 16" (xyz) 762 x 406 x 406 mm
TM-2P Tool Changer	40" x 16" x 16" (xyz) 1016 x 406 x 406 mm

HRT160 rotary table

For holding medium to large parts or fixtures, the HRT Series of T-slotted rotary tables is the answer.

Add additional axis capability with an optional Haas 4th axis rotary for greater access to multiple sides of a part or various angles in between.

- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- Heavy-duty design
- Made in the USA

Eliminate costly CAM software with VPS

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 bolt-pattern drilling cycles that let you incorporate spot drill, drill, counterbore, tap, bore, and ream operations on the same set of holes, all from the same template.

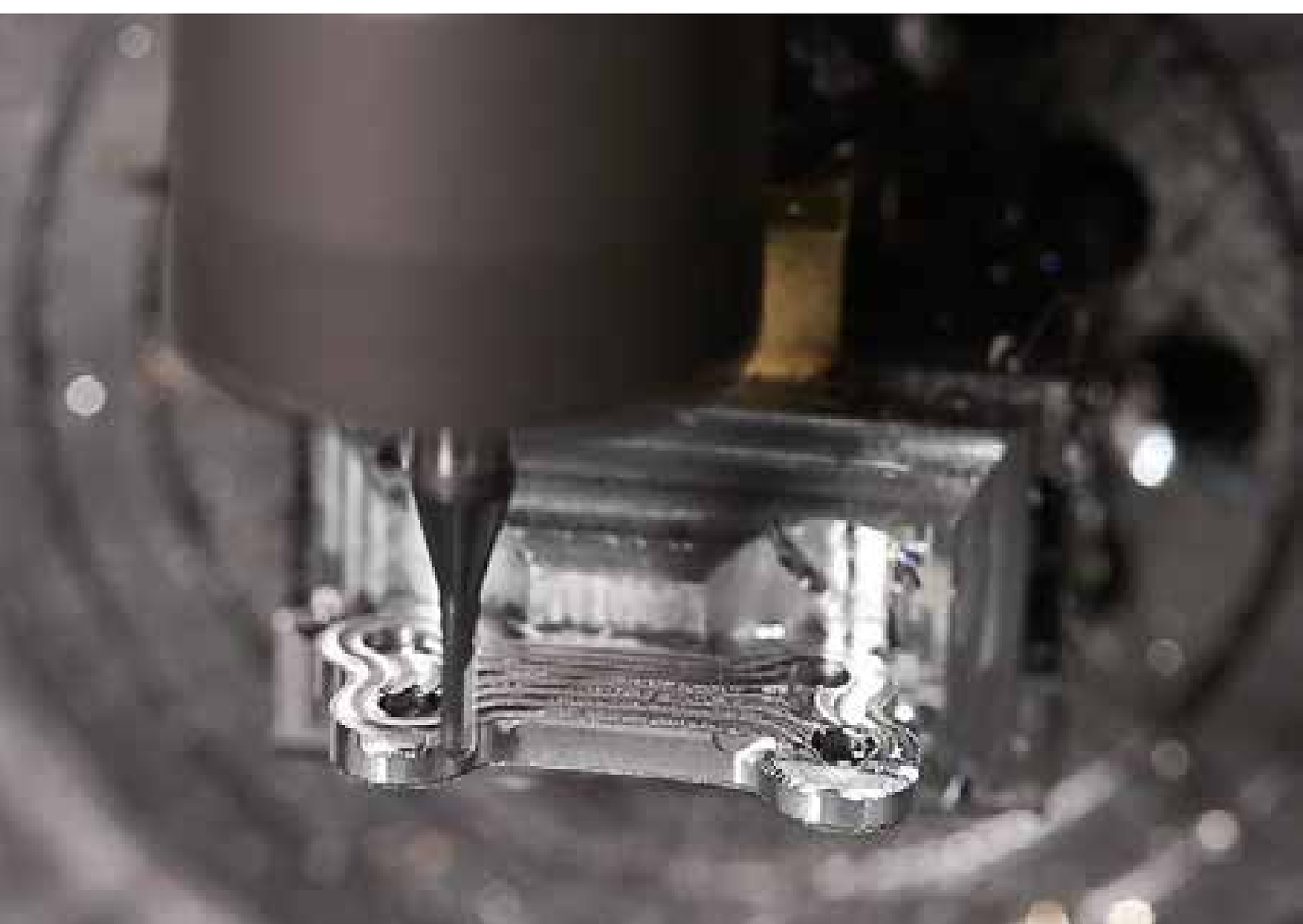
Small-Footprint, High-Performance Mill for Production and Prototyping

CM-1 Series

20 TAPER

3/4/5 AXIS
30,000-50,000 RPM
20-36 TOOLS

The Compact Mill is a small-footprint, high-accuracy solution for prototyping and producing small, high-precision, 2D and 3D parts, such as those found in the communications, aerospace, medical, and dental industries. It's small enough to fit into most freight elevators, and can easily be moved with a pallet jack or equipment dolly. The CM-1 operates on 3-phase power, or single-phase, for those times or locations where 3-phase power is not available.



Spindles

The CM-1 Compact Mill comes standard with a 30,000-rpm ISO 20 taper spindle. For applications that demand high surface speeds and very small tools, an optional 50,000-rpm spindle is available. All Haas spindles are designed and built in-house in our Southern California manufacturing facility.

Tool Changers

The CM-1 comes standard with a 20-pocket tool changer, and is available with an optional 36-pocket tool changer, which means you will always have room for all the tools you need, regardless of the job.

Chip & Coolant Management

Chip and coolant management are critical for any machine tool. The CM-1 comes standard with a flood coolant system, and features a 13-gallon (49-liter) pull-out coolant tank integrated into the machine's base.

Multi-Axis Machining

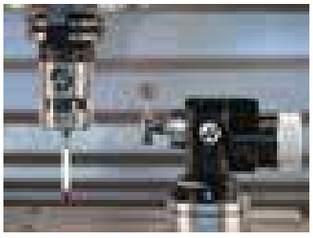
Adding a rotary axis to the Compact Mill is the fastest way to boost throughput and increase accuracy. Because Haas began as a rotary table manufacturer, we are able to provide the simplest and most cost-effective entry into 4th- and 5th-axis machining. Adding our smallest dual-axis rotary to the Compact Mill enables quick positioning of parts to nearly any angle for 5-sided (3+2) machining, or provides full simultaneous 5-axis motion for contouring and complex machining.

TRT70 dual-axis rotary

- 70 mm (2.76") Platter Size
- 60 ft-lb (81 Nm) Max Torque
- 410 °/sec Max Speed

Wireless Probing

Setup reduction is critical to maximizing the productivity of any machine tool. With the probing solutions available from Haas, any machine can be set up in minutes, with just a few button pushes. Our industry-leading Wireless Intuitive Probing System (WIPS) sets the standard for integrated probing systems.



Compact Mill

CM-1	12" x 10" x 14" (xyz) 305 x 254 x 356 mm

Desktop Mill

ER11 COLLET TAPER

3 AXIS

15,000 RPM

1 TOOL CAPACITY

Desktop Mill

Desktop Mill	6" x 10" x 3" (xyz) 152 x 254 x 76 mm

Turn any space into a CNC learning lab

The Haas Desktop Mill is the ultimate training machine for schools and technical colleges. Powered by a full-function Haas CNC control housed in our portable simulator enclosure, the Desktop Mill is perfect for teaching the basic principles of programming and operating a CNC mill. Designed to cut plastics and machinable wax, it is also perfect for hobbyists and benchtop machinists.

DESKTOP MILL | OPTIONS

CNC Pen Holder

CNC Pen Holder; converts the Desktop Mill into a CNC plotter, for drawing, proofing toolpaths, and teaching CNC programming.

- Turns the machine into a CNC plotter
- Perfect for teaching CNC programming
- Simple, easy-to-use design
- Great for novice users

Desktop Software Package

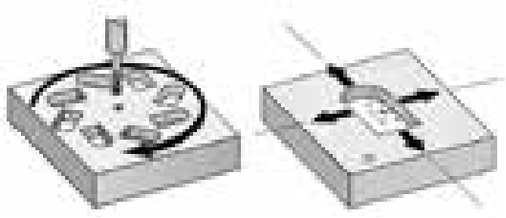
This package of powerful control options for the Haas Desktop Mil includes: High-Speed Machining, User-Definable Macros, Coordinate Rotation and Scaling, and the Haas Visual Programming System.

User-Definable Macros

User-Definable Macros offer the programmer the ability to create subroutines for custom canned cycles, probing routines, operator prompting, automation integration, and driving optional devices. The possibilities are endless.

Coordinate Rotation and Scaling

Coordinate rotation allows you to rotate your part program to another location or around a circumference. Scaling is perfect for working with families of parts, where you need to increase or decrease (scale) the size of a toolpath or pattern



From Toolroom to Oilfield –
A Turning Center for Every Shop

Lathes

Rigid, high-performance turning centers with a wide selection of available options for every shop

ST Series

The Haas ST Series, high-performance turning centers, are designed to provide setup flexibility, extreme rigidity, and high thermal stability. With a wide selection of productivity options to choose from, you can customize your lathe to your exact requirements. The ST Series machines offer the best performance for the money – the best value – in their class.

		BAR CAPACITY	CHUCK SIZE	0" 0mm / 10" 254mm / 20" 508mm / 30" 762mm / 40" 1016mm / 50" 1270mm / 60" 1524mm / 70" 1778mm / 80" 2032mm	Y-AXIS	APL	SUB-SPDL	ROBOT
A2-5	ST-10	1.75" 44mm	6.5" 165mm	12"Ø x 16" Ø 305 x 406mm	●	●	●	●
A2-6	ST-15	2.5" 64mm	8.3" 210mm	12"Ø x 16" Ø 305 x 406mm	●	●	●	●
	ST-20	2.5" 64mm	8.3" 210mm	13"Ø x 22.5" Ø 330 x 572mm	●	●	●	●
	ST-25	3" 76mm	10" 254mm	13"Ø x 22.5" Ø 305 x 572mm	●	●	●	●
	ST-30	3" 76mm	10" 254mm	15"Ø x 32.5" Ø 381 x 826mm	●	○	●	●
	DS-30Y	3" 76mm	10" 254mm	13.75"Ø x 32.5" Ø 349 x 826mm	●	○	●	●
A2-8	ST-28	4" 102mm	12" 305mm	13"Ø x 22.5" Ø 330 x 572mm	●	●	●	●
	ST-35	4" 102mm	12" 305mm	15"Ø x 32.5" Ø 381 x 826mm	●	○	●	●
A2-11	ST-40	4" 102mm	15" 381mm	25.5"Ø x 44" Ø 648 x 1118mm	○	○	○	●
	ST-45	7" 178mm	18" 457mm	25.5"Ø x 44" Ø 648 x 1118mm	○	○	○	●

For complete list of work envelopes, see page 68/69

● BAR CAPACITY ● CHUCK ● TURNING DIAMETER & Z-AXIS

Add a Sub-Spindle to combine operations. Also available on Y-Axis models.

Our A2-5 finishing sub-spindles will not only make you more productive, but will also provide new opportunities for finishing the 2nd-op side of your parts. Available for ST-10 through ST-35.

Turrets & Live Tooling

Customize your Haas lathe with a variety of turrets, including our BMT turrets, with live tooling up to 6000 rpm. For additional capacity, our optional half-index BMT turrets provide 24 stations – 12 with live tool capacity.

Lathe Probing

Setup reduction is critical to maximizing the productivity of any machine tool. With the probing solutions available from Haas, any machine can be set up in minutes, with just a few buttons pushes. Our Automatic Tool Presetter system features easy-to-use automated and manual modes of operation.

Rigid Tailstock Designs, with a dedicated Haas control page for quick, intuitive setups. User-adjustable, restricted-travel zones, can be used to reduce the possibility of contact between the turret and tailstock or sub-spindle. M-code or foot-pedal operated.

Tooling & Fixturing

Reduce your lathe set-up times with a Haas quick-change collet chuck

ST Series Standard

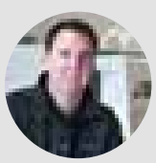
ST-10* 1.75" Bar (44 mm)	12" x 16" (max cap) 305 x 406 mm
ST-15* 2.5" Bar (63.5 mm)	12" x 16" (max cap) 305 x 406 mm
ST-20* 2.5" Bar (63.5 mm)	13" x 22.5" (max cap) 330 x 572 mm
ST-25* 3.0" Bar (76 mm)	13" x 22.5" (max cap) 330 x 572 mm
ST-28* 4.0" Bar (102 mm)	13" x 22.5" (max cap) 330 x 572 mm
ST-30* 3.0" Bar (76 mm)	15" x 32.5" (max cap) 381 x 826 mm
ST-35* 4.0" Bar (102 mm)	15" x 32.5" (max cap) 381 x 826 mm
ST-40 4.0" Bar (76 mm)	31" x 44" (max cap) 787 x 1118 mm
ST-45 7.0" Bar (178 mm)	31" x 44" (max cap) 787 x 1118 mm

Machine With Available Option(s):

- ▲ Automatic Parts Loader
- ■ HRP-1 / Auto Door included
- ■ HRP-2 / Auto Door included
- ■ HRP-3 / Auto Door included
- ◆ Haas Bar Feeder

*Finishing sub-spindle available, but not compatible with the APL.

"We discussed which machines to get for a week or more. We discussed every detail, and Haas helped with that, too. We finally decided on the ST-30 for turning. These are our first CNC machines, and we are very pleased with the machines and the service. The ST-30 does most of our parts, because we make so many round parts."



MICHAEL WEISS
PRESIDENT
WEISTEC ENGINEERING

The Best-Value Y-Axis Lathes in the Industry

***Y-Axis* Series**

Rigid, high-performance turning centers with a wide selection of available options for every shop.

BMT STANDARD ON Y-AXIS LATHES

BMT45
ST-10Y
ST-15Y

BMT65
ST-20Y
ST-25Y
ST-28Y
ST-30Y
ST-35Y

DS-30Y

BMT75
ST-40Y
ST-45Y

Off-center milling, drilling, and tapping

Accomplish more with Y-axis live tooling. Combine milling operations with your turning operations to reduce part handling and increase overall productivity.

BMT Turrets provide a more rigid connection of toolholders to turret, delivering better surface finishes and more accurate cuts.

Available in BMT45/65 & 75, depending on lathe model.

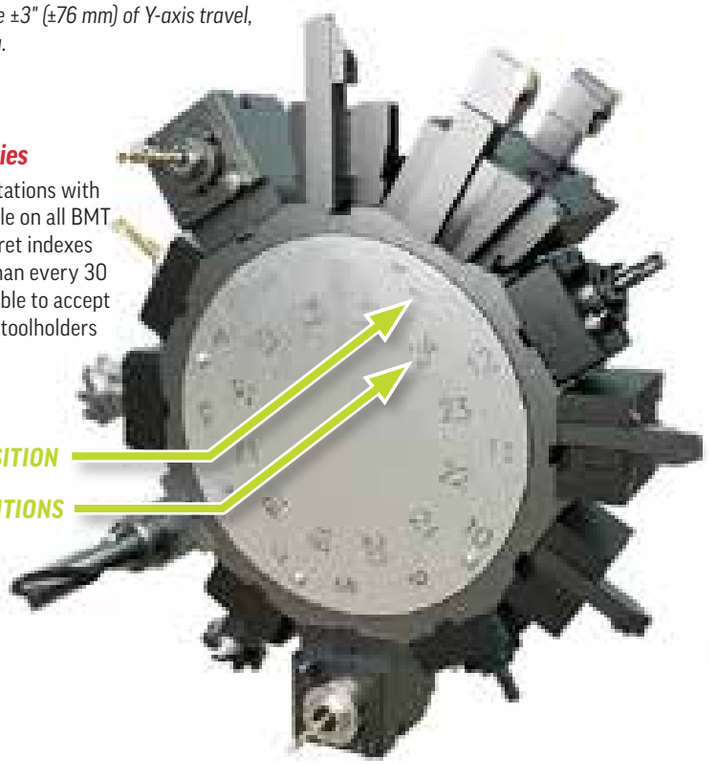
The Power of Y Axis

Haas ST Series Y-axis turning centers provide ±2" (±51 mm)* of Y-axis travel (from the centerline) for off-center milling, drilling, and tapping, and come equipped with up to 6000-rpm* live tooling and a synchronized C-axis for versatile 4-axis capability.

**ST-40Y and ST-45Y provide ±3" (±76 mm) of Y-axis travel, with 4000-rpm live tooling.*

Expand Your Possibilities

Double the available tool stations with a half-index turret. Available on all BMT turrets. The 24-station turret indexes every 15 degrees, rather than every 30 degrees, with 12 stations able to accept driven tools. Special static toolholders are included.



BMT45/65/75 – Straight and 90-Degree Driven Toolholders for Haas ST & DS Series lathes

Available on HaasTooling.com

ST Series Y-Axis

▲ ■ ◆	ST-10Y* 1.75" Bar (44 mm)	12" x 16" (max cap) 279 x 406 mm
▲ ■ ◆	ST-15Y* 2.5" Bar (63.5 mm)	12" x 16" (max cap) 279 x 406 mm
▲ ■ ■ ◆	ST-20Y* 2.5" Bar (63.5 mm)	11.75" x 22.5" (max cap) 298 x 572 mm
▲ ■ ■ ◆	ST-25Y* 3.0" Bar (76 mm)	11.75" x 22.5" (max cap) 298 x 572 mm
▲ ■ ■ ◆	ST-28Y* 4.0" Bar (102 mm)	11.75" x 22.5" (max cap) 298 x 572 mm
■ ■ ◆	ST-30Y* 3.0" Bar (76 mm)	13.75" x 32.5" (max cap) 349 x 826 mm
■ ■ ◆	ST-35Y* 4.0" Bar (102 mm)	13.75" x 32.5" (max cap) 349 x 826 mm
■	ST-40Y 4.0" Bar (102 mm)	27.5" x 44" (max cap) 699 x 1118 mm
■	ST-45Y 7.0" Bore (178 mm)	27.5" x 44" (max cap) 699 x 1118 mm

Dual-Spindle

■ ■ ◆	DS-30Y 3.0" Bar (76 mm)	13.75" x 32.5" (max cap) 349 x 826 mm

Machine With Available Automation Option(s):

- ▲ Automatic Parts Loader
- ■ HRP-1 / Auto Door included
- ■ HRP-2 / Auto Door included
- ■ HRP-3 / Auto Door included
- ◆ Haas Bar Feeder

*Finishing sub-spindle available, but not compatible with the APL.

The Haas Automatic Parts Loader

is a simple and affordable way to automate part production and boost productivity on Haas turning centers. It is designed and built exclusively for use on ST-10Y, 15Y, 20, 20Y, 25, 25Y, 28, and 28Y turning centers. Interface, set up and programming are accomplished entirely through the Haas control.

Maximize Your Investment

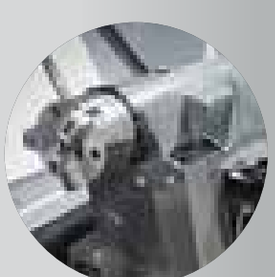
Maximizing your shop's floor space is critical in order to maintain a competitive edge. Effectively managing your existing talent is just as critical. Combining operations into a single machine allows you to get more done in the same amount of floorspace, and multiplies the effectiveness of your existing talent. Adding a half-index turret, Y-axis milling and/or a sub-spindle are all excellent ways to improve the profitability of your shop.

Do More – Same Footprint

TURNING

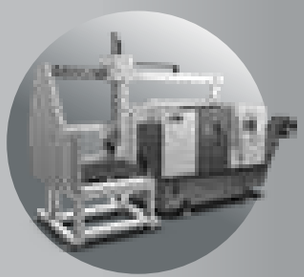
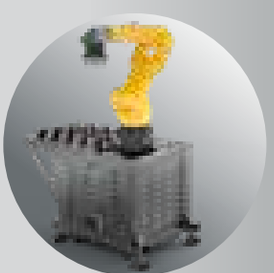
Typical 2-Axis turning

ST Series Lathes

Add Productivity	Benefits
HALF-INDEX TURRET 	• 24-station (half-index) BMT with 12 available driven stations • Turret indexes every 15 degrees, rather than every 30 degrees • Doubles the number of available tools • Combines more machining features
Y-AXIS MILLING WITH C-AXIS 	• Combine multiple operations • Done-in-one approach • Less part handling • Greater efficiency • Improved accuracy • Less scrap due to mishandling
SUB-SPINDLE 	• Combine 1st and 2nd operations • Less part handling • Greater productivity • Improved accuracy • Less scrap due to mishandling

Lathe Automation

There are many ways to automate a machining process. Haas has the right choices to ensure that your future productivity is secure. We have pre-engineered a number of solutions to help you find the one that fits best.

TURNING CHOICES	Add Automation	Benefits
 **ST Series Lathes**   	**Easy** Haas Bar Feeder 	• Easiest solution for automation • Auto-feed material up to 3" (76 mm) Diameter • Unattended operation • Interfaces directly with the Haas control • Set up & program completely through Haas Control • Mid- to high-volume production
	Affordable Automatic Parts Loader (APL) 	• Affordable automation, great alternative to robot • Load/unload slugs up to Ø5.8" x 5" x 10 lb (Ø147 mm x 127 mm x 4.5 kg) • Load/unload shafts up to Ø4.0" x 21" x 10 lb (Ø102 mm x 533 mm x 4.5 kg) • Unattended operation • Interfaces directly with the Haas control • Set up & program completely through Haas Control • Mid- to high-volume production
	Versatile Robot 	• Most versatile automation choice • Incorporate part flipping station • Able to pick up/drop off at different locations • HRP-1: Parts to Ø6.0" x 9 lb (Ø152 mm x 4.1 kg) • HRP-2: Parts to Ø8.0" x 40 lb* (Ø203 mm x 18 kg) • Unattended operation • Interfaces directly with the Haas control • Set up & program completely through Haas Control • Mid- to high-volume production *Modified gripper required

Extended Z-axis travels for machining longer parts, while maintaining superior cutting performance

Long-Bed Series

The ST Long-Beds are engineered for superior rigidity and performance. They offer a wide selection of productivity-enhancing options, and more features and value than ever. The ST long-bed Y-axis series add Y-axis and C-axis capabilities, with high-performance live tooling, allowing high-productivity, done-in-one machining operations.

The ST-40L, ST-45L, and ST-55 are large-frame, long-bed lathes with massive work envelopes, making them ideal for machining heavy pipes and fittings, large couplers, and long rollers.

The ST long-bed turning centers further expand the already large range of Haas ST series machines, providing more Z-axis travel, while maintaining superior cutting performance.

Steadyrest Provision for part-face machining or supporting extra-long parts (optional).

Extended tool pocket in the bulkhead provides clearance for long tools in the turret, when the Z axis is at maximum negative travel.

MT6 Tailstock Quill This option upgrades the standard Programmable Tailstock from MT5 Morse taper to MT6, allowing the use of larger MT6 live centers. The larger taper provides increased support and weight capacity for demanding tailstock applications.

Dual Doors for easier part loading. Improves machine ergonomics, and increases part access. Standard on ST-20L and larger models.

Improved ergonomics when loading and unloading parts, or for inspecting and measuring parts. Allows for faster automated (robot) part loading and unloading.

Long-Bed Models

ST-10L 1.75" Bar (44 mm)	12" x 32.5" (max cap) 305 x 826 mm
ST-10LY 1.75" Bar (44 mm)	12" x 32.5" (max cap) 305 x 826 mm
ST-15L 2.5" Bar (63.5 mm)	12" x 32.5" (max cap) 305 x 826 mm
ST-15LY 2.5" Bar (63.5 mm)	12" x 32.5" (max cap) 305 x 826 mm
ST-20L 2.5" Bar (51 mm)	13" x 42.5" (max cap) 330 x 1080 mm
ST-20LY 2.5" Bar (51 mm)	11.75" x 42.5" (max cap) 298 x 1080 mm
ST-25L 3.0" Bar (76 mm)	13" x 42.5" (max cap) 330 x 1080 mm
ST-25LY 3.0" Bar (76 mm)	11.75" x 42.5" (max cap) 298 x 1080 mm
ST-28L 4.0" Bar (102 mm)	13" x 42.5" (max cap) 330 x 1080 mm
ST-28LY 4.0" Bar (102 mm)	11.75" x 42.5" (max cap) 298 x 1080 mm
ST-30L 3" Bore (76 mm)	15" x 62.5" (max cap) 381 x 1588 mm
ST-30LY 3" Bore (76 mm)	13.75" x 62.5" (max cap) 349 x 1588 mm
ST-35L 4.0" Bar (102 mm)	15" x 62.5" (max cap) 381 x 1588 mm
ST-35LY 4.0" Bar (102 mm)	13.75" x 62.5" (max cap) 349 x 1588 mm

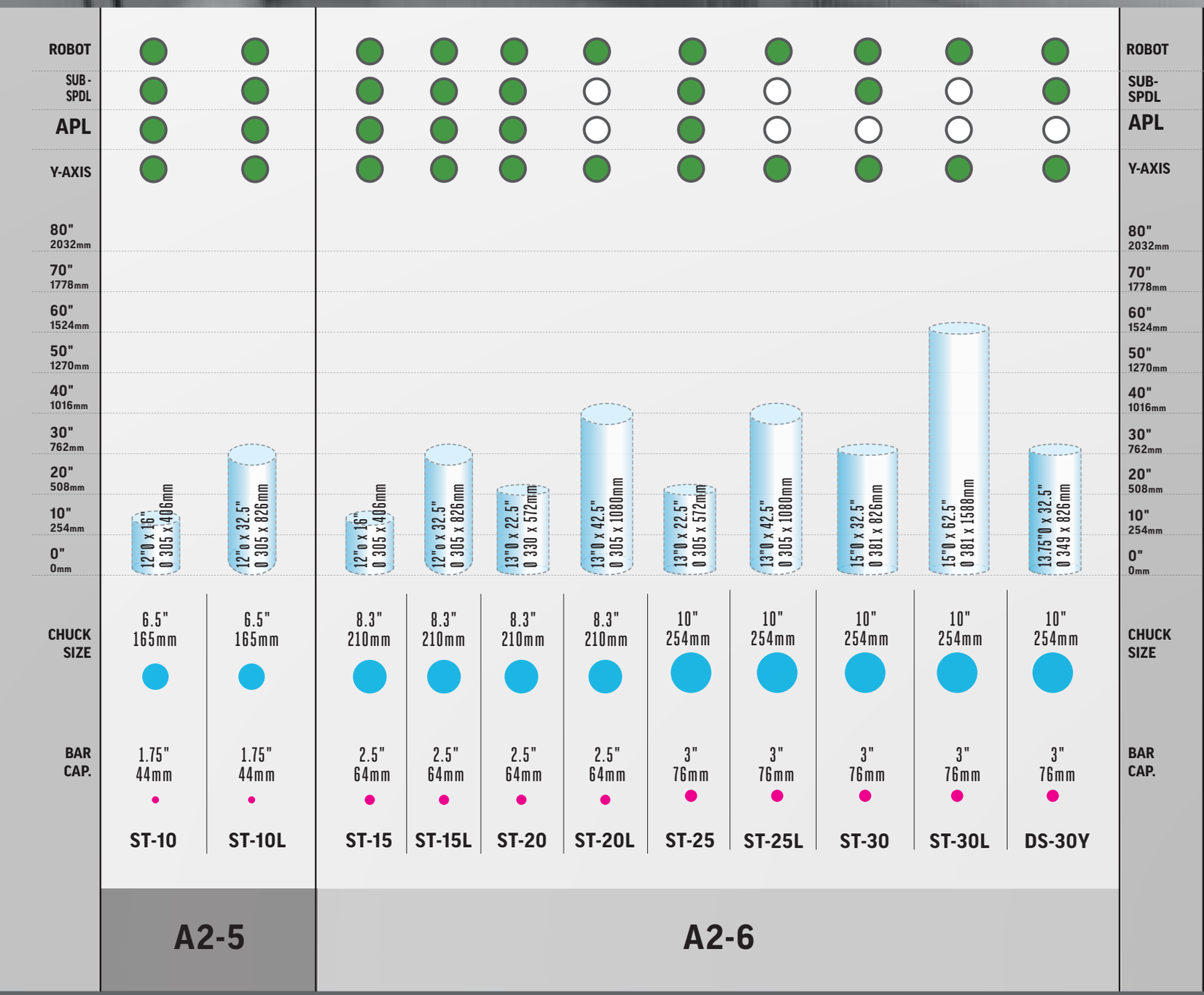
Large Through-Bore

ST-40L 4.0" Bar (102 mm)	25.5" x 80" (max cap) 648 x 2032 mm
ST-45L 7.0" Bore (178 mm)	25.5" x 80" (max cap) 648 x 2032 mm
ST-55 12.5" Bore (318 mm)	25.5" x 80" (max cap) 648 x 2032 mm

Machine With Available Automation Option(s):

- HRP-1 / Auto Door included
- HRP-2 / Auto Door included
- HRP-3 / Auto Door included
- HRP-3 / Auto Door required
- Haas Bar Feeder

LATHE
Work Envelope Comparison



Z-AXIS & TURNING DIAMETER

CHUCK

BAR CAPACITY

	ST-28	ST-28L	ST-35	ST-35L	ST-40	ST-40L	ST-45	ST-45L	ST-55
ROBOT	●	●	●	●	●	○	●	○	○
SUB-SPDL	●	○	●	○	○	○	○	○	○
APL	●	○	●	○	○	○	○	○	○
Y-AXIS	●	●	●	●	○	○	○	○	○
Envelope	13"Ø x 22.5" / Ø 330 x 572mm	13"Ø x 42.5" / Ø 330 x 1080mm	15"Ø x 32.5" / Ø 381 x 826mm	15"Ø x 62.5" / Ø 381 x 1588mm	31"Ø x 44" / Ø 787 x 1118mm	25.5"Ø x 80" / Ø 648 x 2032mm	31"Ø x 44" / Ø 787 x 1118mm	25.5"Ø x 80" / Ø 648 x 2032mm	25.5"Ø x 80" / Ø 648 x 2032mm
CHUCK SIZE	12" 305mm	12" 305mm	12" 305mm	12" 305mm	15" 381mm	15" 381mm	18" 457mm	18" 457mm	DUAL-CHUCK CAPABILITY
BAR CAP.	4" 102mm	4" 102mm	4" 102mm	4" 102mm	4" 102mm	4" 102mm	7" 178mm	7" 178mm	12.5" 318mm

80" 2032mm
70" 1778mm
60" 1524mm
50" 1270mm
40" 1016mm
30" 762mm
20" 508mm
10" 254mm
0" 0mm

A2-8 | A2-11 | A1-20

● Third-party Auto Door required

Toolroom and beyond

TL Series

1800–3000 RPM
A2-5 OR A2-6 SPINDLE NOSE

The Haas Toolroom Lathes are affordable, easy to use, and offer the precision control and flexibility of the Haas CNC system. Because they are very easy to learn and operate – even without knowing G-code – they are the perfect machines for start-up shops, standalone 2nd-op machines, educational instruction and learning, or as a first step into CNC machining.

The TL Series Toolroom Lathes are the true definition of value – full CNC capabilities without significant investment.

- Single- or three-phase power
- An affordable alternative to conventional manual lathes
- Includes conversational programming system – no G-code knowledge required
- Ideal for start-up shops, standalone 2nd-ops, or as a first step into CNC machining
- Made in the USA

The TL-1-EDU is a specially priced education-edition machine that is perfect for schools for teaching CNC machining, and for training.

- Available exclusively for educational institutions
- Operates on single- or three-phase power
- Industry-standard G-code CNC control
- Ideal for educational instruction and learning, or as a first step into CNC machining
- Built with the same high-quality components as the standard TL-1
- Made in the USA

Spindles

Haas TL Series lathes come standard with an 1800-rpm A2-5 spindle, and are available with an 8" (200 mm) or 10" (254 mm) manual chuck. An 1800-rpm A2-6 spindle is also available, and both spindles can be upgraded to 3000-rpm.

Chip & Coolant Management

Managing chips and coolant is critical for any machine tool. Haas TL Series lathes come standard with a flood coolant system and 20-gallon (76-liter) coolant tank. A belt-type chip conveyor is available, for quick, high-volume chip removal.

The Haas Control

Ease of use and simplicity are the founding principles of the Haas Control. All Toolroom Lathes come standard with our powerful Visual Programming System, which makes them easy to learn and operate – even without knowing G-code. Commonality between VMCs, HMCs, and lathes ensures that operators can easily move from one Haas machine to another.

Workholding

For additional workpiece support and long shaft work, Haas Toolroom Lathes are available with a manual tailstock, and a manual steadyrest that handles shafts up to 5" (127 mm) diameter.

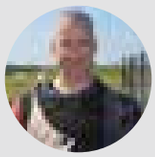
Tool Turrets

TL Series lathes come standard with a tooling-ready crossslide that accommodates a variety of manual toolposts. For automated processes, 4-station and 8-station automatic turrets are available. These tool turrets are designed and manufactured in-house by Haas.

Toolroom Lathes

TL-1	16" x 30" (max cap) 406 x 762 mm
TL-2	16" x 48" (max cap) 406 x 1219 mm
TL-1-EDU For Education	16" x 30" (max cap) 406 x 762 mm

"My Haas machines work very well. I was very surprised by the accuracy of the TL-1. I consistently hold tolerances of a few tenths."



RIC UPTAGRAFFT
OWNER
UPTAGRAFFT, LLC

Compact Chucker for Small, Precision Parts

CL-1

5C COLLET SPINDLE
6000 RPM
1" (25 mm) BAR
8-STATION TURRET

The innovative Haas CL-1 is an ultra-compact CNC Chucker lathe that comes standard with an 8-station automatic turret, making it perfect for high-volume production of small, precision parts, such as those found in the communications, aerospace, medical, and dental industries. The CL-1 can be moved easily with a pallet jack or equipment dolly, and is small enough to fit into most freight elevators.

Chucker Lathe

CL-1 1" Bar (25 mm)	1" x 8" (max cap) 25 x 203 mm


1.


2.


3.


4.

1. *CL-1 Spindle*

6000-rpm 5C collet spindle designed specifically for bar feeding operations. For larger diameter parts, a 4" (102 mm) manual 3-jaw chuck is available. Our 6000-rpm Live Tooling option features dual ER-11 spindles that accept 1/16" – 1/4" (1.6 - 6.5 mm) tools.

2. *Tool Turret*

The CL-1 comes standard with an 8-station automatic tool turret, which accommodates gang-style tooling with 1/2" (13 mm) centers.

3. *Parts Catcher*

The CL-1 Parts Catcher extends into position to catch the finished part as it is cut off, and directs it into a remote bin, allowing for unattended machining.

4. *Bar Feeder*

Boost throughput and automate small-part production on your CL-1 Chucker Lathe with our fully integrated pneumatic bar feeder. Available for 40" (1 meter) and 72" (1.8 meter) bar lengths.

Horizontal Machining Centers

Rigid and Powerful Machines for Every Application

Discover why the EC-400 is your perfect solution for production machining

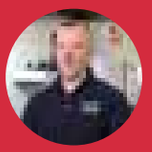
EC-400

40 TAPER

4 AXIS
8100–15,000 RPM
31–101 TOOLS

"We are primarily a job shop, but we also have our own product line, which makes us somewhat special. We had a customer that had a high demand for parts, so we purchased an EC-400. I saw the 6+1 Pallet Pool that was available, and it was a no brainer. The machine ran non-stop, with no hiccups. We had all 7 pallets loaded up at night when our workers would go home for the day, and it would run all night. Our Pallet Pool got us ahead of schedule, and let us take on more work. Our EC-400 has probably saved about 25% on our runtime. We have 15,000-rpm, faster feeds and speeds, much faster tool changes, finishes are great, accuracy is very good, and repeatability is no problem."

STEVE PHILLIPS
PRESIDENT
PHILLIPS PRECISION



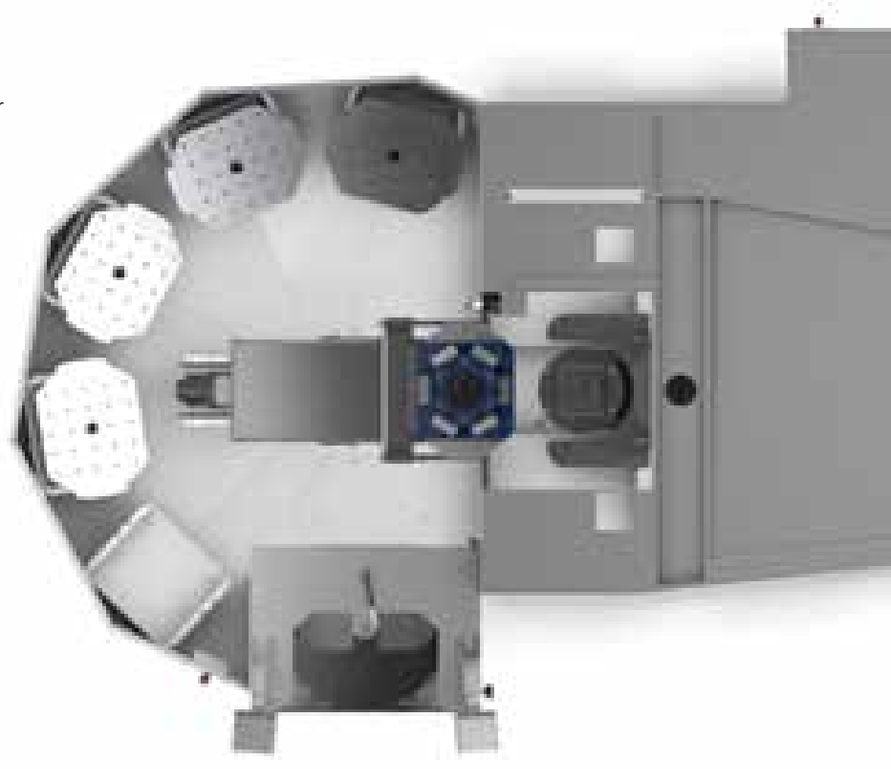
The completely redesigned EC-400 has been improved from the ground up, with all new castings for increased rigidity and better cutting performance, 5 more inches of Y-axis travel, vastly improved chip evacuation, and an available 100-pocket tool changer. See how Haas engineers have taken our latest HMC to the next level.

Pallet-Changing HMC

22" x 25" x 22" (559 x 635 x 559 mm) Travels

Standard Features:

- Built-in 4th Axis - True Interpolation
- Belt-Type Chip Conveyor
- 95-Gallon (360 L) Coolant Tank
- CNC Control Cabinet Cooler
- Control Touchscreen
- Media Display M-Code; M130
- Standard Program Memory, 1 GB (Expandable to 32 or 64 GB)
- HaasConnect: Remote monitoring
- Power-Failure Detection Module
- Ethernet and WiFi Connectivity
- HaasDrop Wireless File Transfer
- Rigid Tapping
- Second Home Position
- 4th-Axis Rotary Scales
- Window Air Blast
- Chip Tray Filter Kit
- Lifting Provision
- 1-Year Standard Warranty

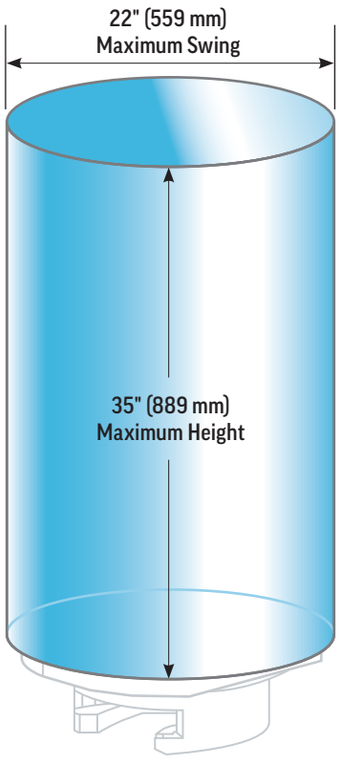


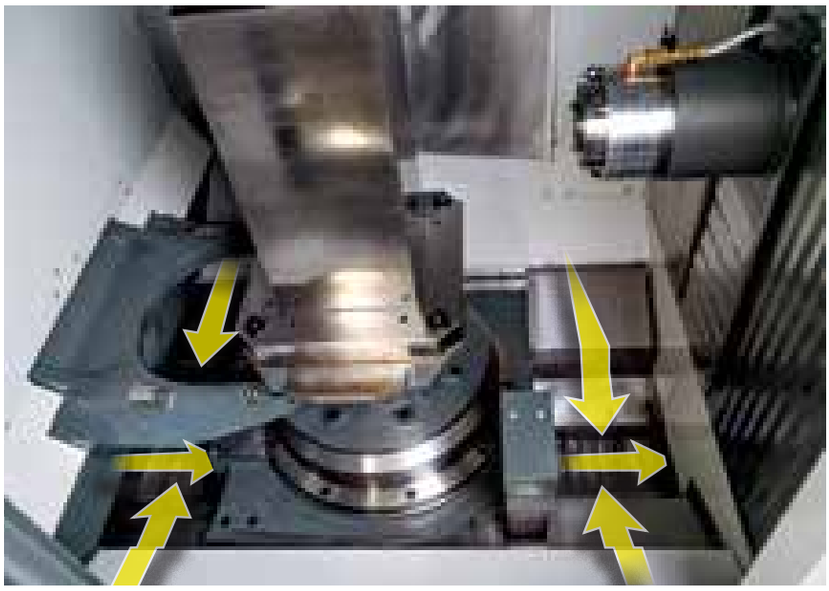
EC-400 With Pallet Pool

Recommended Options:

- Through-Spindle Coolant
- Wireless Intuitive Probing System
- 12,000-rpm Spindle
- 100+1 Side-Mount Tool Changer
- CDF Chip Conveyor
- WiFi Camera
- High-Speed Machining
- Auxiliary Coolant Filter

EC-400 and EC-400 Pallet Pool Maximum Work Envelope



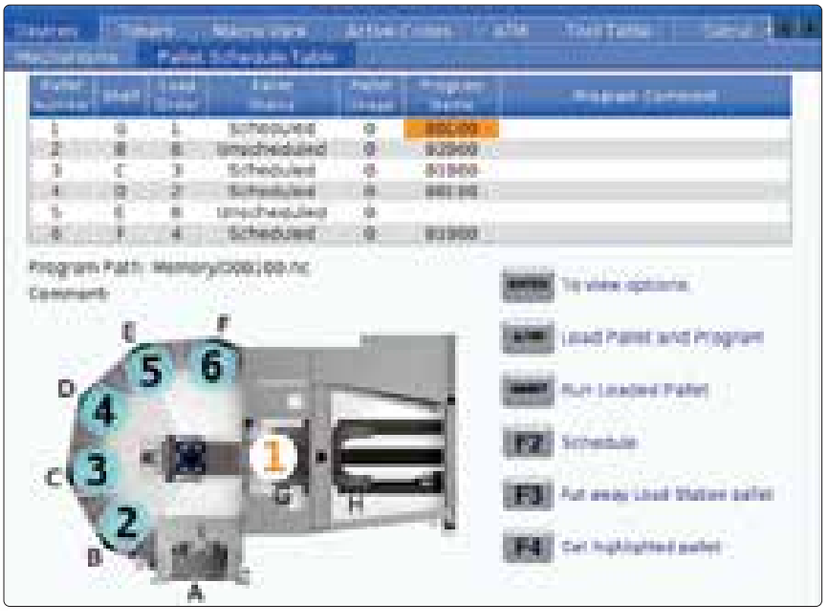


Designed for high-volume production and unattended operation

The EC-400 features a large work envelope, fast rapids, full 4th-axis interpolation, and excellent chip management. A wide belt-type chip conveyor is positioned in the center of the machine directly under the spindle. The steep walls of the interior enclosure, along with coolant wash down nozzles, direct coolant flow to areas where chips are likely to gather, to funnel them to the central conveyor.

Easy Automation

50% of all EC-400s are purchased with a Pallet Pool!



Available 6+1 pallet pool

Whether you're doing high-volume production runs, high-mix/low-volume machining, or just want to run lights-out, you can boost the productivity of your EC-400 with our fully integrated 6+1 pallet pool. No third-party scheduling software or licensing required. Must be ordered with a new EC-400, not field installable.

Making a Great Machine Tool Even Better

"TMF Center performs a lot of large cuts. The 50-taper rigidity is what made our Haas machines helpful in our shop. We were thrilled when Haas came out with the EC-500/50. It's very smooth when cutting, quiet, it has lot of options, and the twin pallets is are awesome feature. The EC-500/50 lets us stay productive. While we're changing out parts, we've got the other pallet still producing. Our Haas machines have helped us grow our sales from $5 million to over $50 million."

LORI VAN METER
President / TMF Center

EC-500 Series

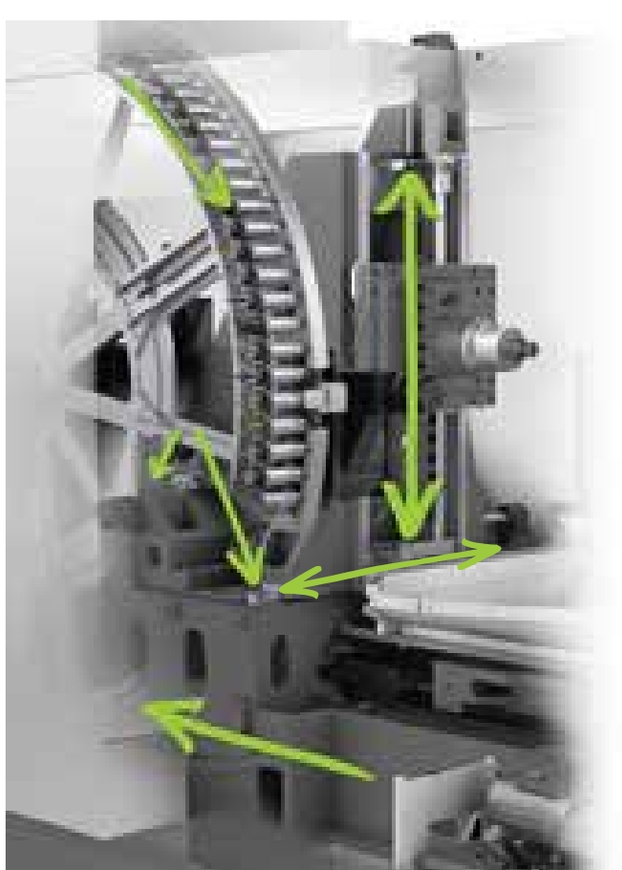
40 TAPER ***4 AXIS 8100–15,000 RPM 31-101 TOOLS***

50 TAPER ***4 AXIS 7500–10,000 RPM 50+1 TOOLS***

All Haas horizontal machining centers offer superior capabilities at affordable prices. With renowned ruggedness and reliability, you'll find Haas HMCs are the perfect job shop machines for those looking to make more money in less time than ever before.

- Available 100+1 Side-Mount Tool Changer for High-Volume Production (40-taper only)
- 10" (254 mm) More X-Travel than the EC-400
- Increased Y-Axis Travel for More Capacity
- Stepped Casting for Greater Stability
- Rear Chip Discharge Saves Valuable Shop Floor Space

EC-500 40-taper	32" x 25" x 28" (xyz) 813 x 635 x 711 mm	EC-500/50 50-taper	32" x 25" x 28" (xyz) 813 x 635 x 711 mm



The completely redesigned EC-500 has been improved from the ground up, with all new castings for increased rigidity and better cutting performance, 5 more inches (127 mm) of Y-axis travel, an available 100-pocket tool changer (40-taper only), and vastly improved chip evacuation.

Chip Management

The chip conveyor is strategically located down the center of the machine, so that chips fall directly onto the conveyor belt. The conveyor discharges chips at the height of a full-size industrial barrel at the rear of the machine.

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 the event of a crash.

Stepped Base and Column

Like that of the EC-400 and the EC-630, the stepped base and column design of the EC-500, 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, the EC-500 is more rigid than ever, all the way to the top!

Hydraulic Pallet-Clamping System

The hydraulic power unit produces high pressure clamping forces to ensure that the pallet is held rigid to the pallet receiver, with accurate and repeatable precision, along with being able to raise and lower the pallet-changer mechanism.

Get specially designed tombstones for the Haas EC-400 and EC-500 HMCs at HaasTooling.com

Designed and built for Haas HMCs

Haas tombstones, available in cast iron and aluminum, are engineered specifically for Haas machines, and are FEA-optimized to minimize weight and maximize rigidity. This perfect balance of weight and rigidity allows you to get the most out of your machine's weight capacity, without sacrificing part quality.

50-taper power and a large work envelope, with full 4th-axis interpolation

EC-630

50 TAPER

4 AXIS
7500–10,000 RPM
51 -71 TOOLS

Designed for high-volume production and unattended operation for large parts and tombstone work, the EC-630 offers 50-taper power and a large work envelope, with full 4th-axis interpolation. Equipped with a two-station pallet changer to maximize spindle uptime, and a rear-exit chip conveyor for efficient chip management.

- 40" x 37" x 40" (1016 x 940 x 1016 mm) travels
- Full 4th-axis interpolation
- Standard 50+1 side-mount tool changer
- Built-in pallet changer with 630 mm pallets
- Made in the USA

Order the EC-630 with the performance options you want.

High-power, high-speed 7500-rpm and 10,000-rpm spindles

Our high-performance 7500-rpm and 10,000-rpm spindles for 50-taper machines are driven by a 60 hp (44.7 kW) vector drive system that provides higher power throughout the rpm range than the standard spindle. A Haas-built two-speed gearbox provides a wide constant horsepower band, good low-speed torque for heavy cuts, and power throughout the range, above 500 rpm.

70+1 Side-Mount Tool Changer

- Fast tool changes shorten cycle times on every tool change
- Pocket Tool Table in the control allows complete control over the tool changer
- Identify tools as LARGE to leave adjacent pockets empty
- Identify tools as HEAVY to slow tool changer motion

4th-Axis Rotary Scales

The EC-630 features high-precision scale feedback on the integrated, full 4th-axis rotary to improve repeatability, by compensating for wear, backlash, or additional forces exerted by excessive loads.

Chip Disc Filtration Conveyor

This optional conveyor features a built-in disk filtration system to reduce chip fines from entering the coolant tank, while the belt removes larger chips from the machine quickly, and discharges them at standard barrel height. Ideal for trouble-free unattended operation.

EC-630 Spare Pallet 24.8" x 24.8 (630 x 630 mm)

Use spare pallets to reduce setup times for repeat jobs, and expand your capacity for high-mix, low-volume work. Simply leave job-specific fixtures and workholding in place on the spare pallets, and store them offline until needed. Available with either metric or inch threaded holes.

Chip Tray Filter Kit

Our optional Chip Tray Filter Kit keeps chips from entering the coolant system, preventing rust and component malfunctions. The kit includes a 200-micron filter and metal chip tray basket.

Our updated EC-1600 has received a host of improvements

EC-1600 Series

50 TAPER

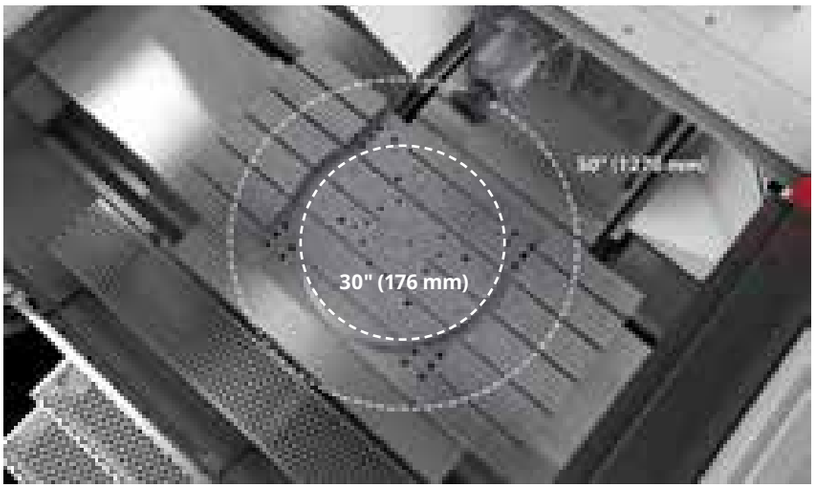
3/4/5 AXIS
7500-10,000 RPM
50+1 TOOLS

Improvements standard on the EC-1600 include:

- Standard 7500 rpm spindle
- Flood Coolant ring
- Redesigned column with 13% greater casting stiffness and reduced mass
- X and Z ballscrews 25% larger (50 mm)
- X and Z motors 50% larger
- Tool Changer 50% faster
- Enclosure Exhaust system
- Four 50-watt LED lights

The highly popular Haas EC-1600 Series HMCs, offer large work cubes and a maximum part capacity of 10,000 lb (4536 kg), making them perfect for your large-part machining requirements. Models are available with a 4th-axis rotary platter integrated into the T-slot table to provide access to four sides of a part or tombstone, and allow simultaneous 4th-axis machining.

- 64" x 50" x 32" (1626 x 1270 x 813 mm) travels
- Standard 50+1 side-mount tool changer
- 50-taper spindle with a 2-speed gearbox
- Extra-large work envelope
- 50" (1270 mm) max part swing with integrated 4th axis (optional)



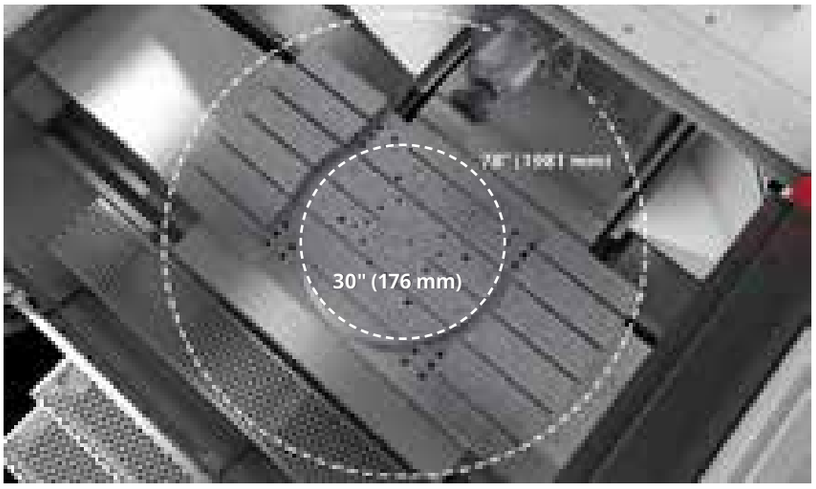
EC-1600ZT

50 TAPER

3/4/5 AXIS
7500-10,000 RPM
50+1 TOOLS

The EC-1600ZT offers more Z-axis travel than the standard EC-1600

- Extended Z-axis travel: 64" x 50" x 40" (1626 x 1270 x 1016 mm)
- Standard 50+1 side-mount tool changer
- 50-taper spindle with a 2-speed gearbox
- Extra-large work envelope
- 78" (1981 mm) max part swing with integrated 4th axis (optional)
- Made in the USA



Built-in 4th Axis Rotary Platter, with Massive 10,000 lb (4536 kg) Capacity

This optional 30" (762 mm) diameter platter is integrated into the standard table, and has a 10,000 lb (4536 kg) weight capacity. This powerful 4th axis can be programmed for fully interpolated motion, or precise indexing, with resolution to 0.001 degree. A built-in brake delivers 4000 ft-lb (5423 Nm) of holding torque, to provide superior accuracy and extreme rigidity for off-center milling, drilling, and tapping operations.

Take advantage of the increased Z-axis travel of the EC-1600ZT to gain additional part/fixture swing capacity up to 78" (1981 mm).

Also available with a 5-degree face-gear coupler design. Not field-installable.

In-Tank Chip Conveyor

This optional belt-type chip conveyor sits in the machine's coolant tank, where it collects chips as they exit the machine, and discharges them at standard industrial barrel height. It is ideal for high-production machining applications, and can be activated via M-code.

We added 4th- and 5th-axis capabilities to create an HMC capable of full 5-axis machining on large parts

EC-1600ZT-5AX

50 TAPER

5-AXIS
7500-10,000 RPM
50+1 TOOLS

The EC-1600ZT-5AX has a 4th-axis rotary platter integrated into the T-slot table that provides ±30 degrees of B-axis rotation. The 5th-axis consists of an HRT310 with an A-frame support mounted on a removable riser block, which can support a part up to 55.875" (1419 mm) long.

- Extended Z-axis travel: 64" x 50" x 40" (1626 x 1270 x 1016 mm)
- 78" (1981 mm) max swing on integrated 4th axis
- 50-taper spindle with a 2-speed gearbox
- Standard side-mount tool changer, 50+1 tools
- Includes DWO/TCPC and Wireless Intuitive Probing System


We make it easy to stay connected with your Haas community
There's a lot to love when you follow and subscribe to Haas social media channels:
• Watch our pro-tip videos on social media
• Mark your calendar exclusive Haas events
• Learn about our newest products and promotions
• See what fellow machinists are making with their Haas machines
• Give feedback to help us serve you better
• Plus, don't forget to sign up for our emails to receive the week's top videos – just for you
Join the fun with interesting makers, like you, who share successes, challenges, and insights you can't find anywhere else.
Join our community today!
HAAS

THE COMPLETE MACHINE SHOP

Less than €999

a month/per machine

From Schools to Large Toolrooms

The Haas TL-1 is affordable, easy to use, and offers the precision control and flexibility of the Haas CNC system. Because it's so easy to learn and operate – even without knowing G-code – it's perfect for start-up shops, or as a first step into CNC machining.

Our Smallest and Most-Affordable Toolroom Mill

The Haas TM-0 Toolroom Mill is affordable, easy to use, and offers the precision control of the Haas CNC system. It uses standard 40-taper tooling, and is very easy to learn and operate – even without knowing G-code. It is the perfect option for schools and companies transitioning to CNC.

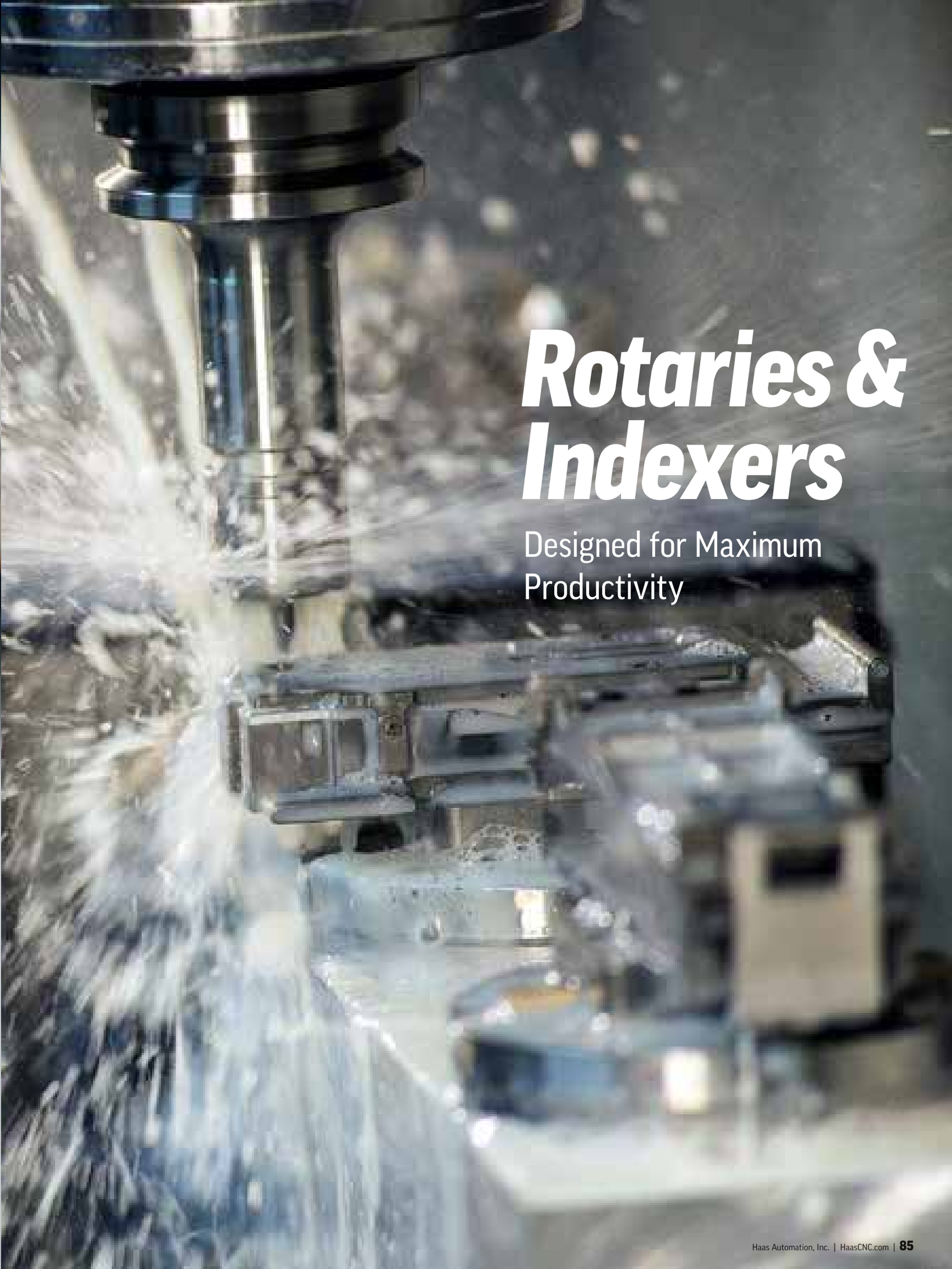
Toolroom Lathe (TL-1) €27,595

16" x 30" (406 mm x 762 mm) Travels •
Operates on single- or three-phase power •
1800-rpm spindle, 10 hp (7.5 kW) •
Visual Part Programming System •
Standard program memory, 1 GB •
User-friendly Haas control •
Affordable full CNC capabilities •
1-year standard warranty •
Made in the USA •

Toolroom Mill (TM-0) €29,595

- 20" x 12" x 16" (508 x 305 x 406 mm) travels
- Operates on single- or three-phase power
- 4000-rpm 40-taper spindle
- Visual Part Programming System
- Standard program memory, 1 GB
- User-friendly Haas control
- Affordable full CNC capabilities
- 1-year standard warranty
- Made in the USA

Contact your nearest HFO for complete details.



Rotaries & Indexers

Designed for Maximum Productivity

REDUCE SET UP TIMES, INCREASE PART ACCURACY, AND SHORTEN CYCLE TIMES.

Do More Than 3-Axis Machining

By adding a Haas rotary to your machine, you greatly increase your capabilities, and gain plug-and-play compatibility with the Haas Control. Because we not only build the machine, but also build the control and the axis drives, ***INTEGRATION IS SEAMLESS.***

Plug-and-Play Through the Haas Control

All Haas rotary products are designed to integrate seamlessly with the control on your Haas mill. This means true simultaneous 4- or 5-axis motion, synchronized with the axes of your mill. Rotary set up is a simple plug-and-play process through the Haas Control, with on-screen instructions, and diagrams that are intuitive and easy to use.

Multi-Axis Machining Simplicity

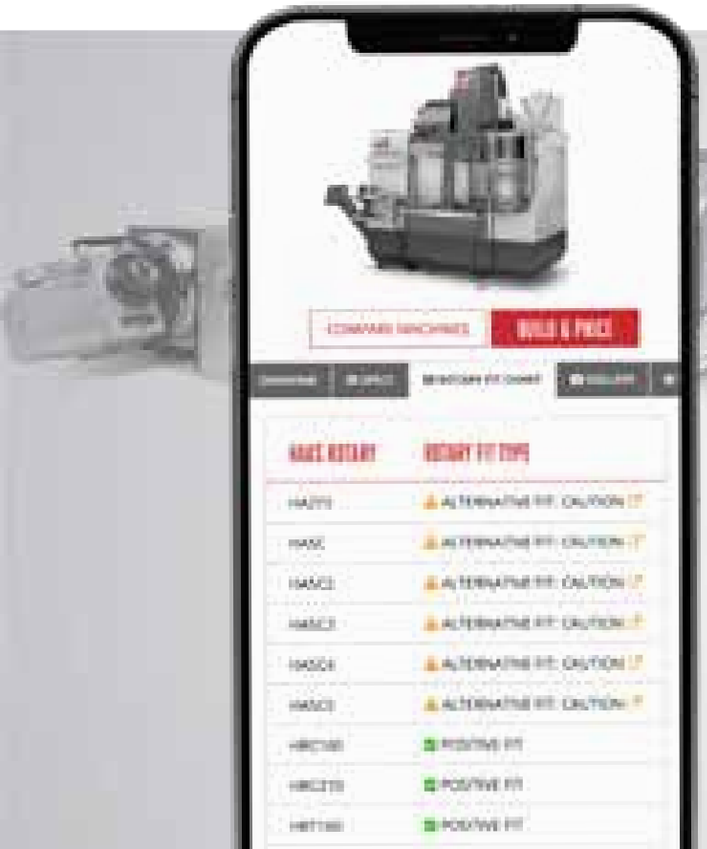
Adding a rotary axis to a VMC is the fastest way to boost throughput and increase accuracy. Because Haas began as a rotary table manufacturer, we are able to provide the simplest and most cost-effective entry into 4th- and 5th axis machining available.

Rotary Fixturing Choices

Haas offers a wide selection of workholding solutions for your 4th- and 5th-axis applications, from compact air-collet closers, to quick-change fixture plates and manual scroll chucks. Know that you're getting the correct tooling and fixtures for your Haas rotary, with our in-house designs.

4th-Axis Success

From workholding and fixturing, to tailstocks and control boxes, we let you configure your rotary table so it works for you. After all, you know what you need better than anyone. Learn more about everything Haas has to offer at www.HaasCNC.com.



The Haas Rotary Fit Chart

Haas makes it easy to select the right rotary and fixturing, with a Rotary Fit Chart for every VMC.

Each VMC and rotary product page on our website has a designated rotary fit chart. Simply select the Rotary Fit Chart tab to see the recommended Haas rotaries for that specific machine. The chart lists Haas rotaries that fit in a traditional setup, and rotaries requiring alternate fixturing.

For round parts to odd-shaped castings, these T-slotted rotary tables allow for very flexible fixturing. Speeds up to 830 deg/sec.

Rotary Tables

100–1000 mm PLATTER SIZE
35-830 °/sec MAX SPEED

When you need to hold medium to large parts for multi-side machining or complex contouring, Haas HRT Series rotary tables are the perfect solutions. These rugged, heavy-duty rotary tables can be mounted vertically or horizontally, and they feature precision T-slots and large through-holes for versatile fixturing.

- Add 4-axis capabilities to your machine
- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- Heavy-duty design
- Made in the USA

Small Rotaries

Small Models:
HRT100
HRT160
HRT160SP
HRT160-2
HRTA5

Medium Rotaries

Medium Models:
HRT210
HRT210HT
HRT210M
HRT210SP
HRT210-2
HRTA6

Through-Hole Rotaries

240–450 mm PLATTER SIZE
75-100 °/sec MAX SPEED

Our TH Series of compact through-hole rotary tables provide the same features and benefits as our standard HRT Series, but they feature compact enclosure designs and versatile mounting options that allow you to fit a lot of rotary table into a small work envelope.

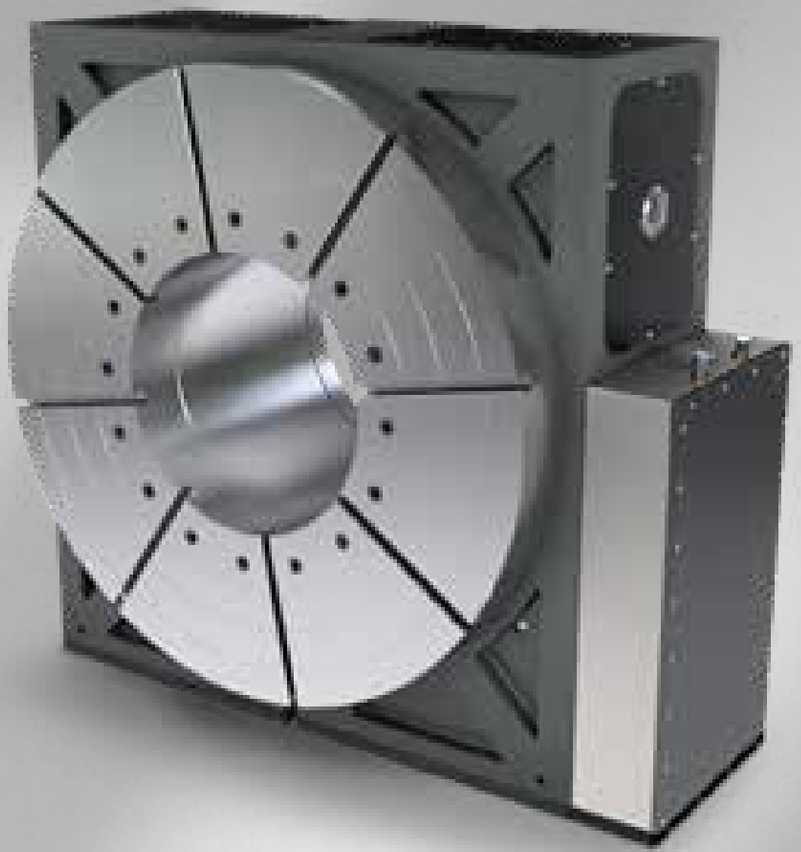
Models:
TH240
TH450

Extra-Large Rotaries

Haas rotaries just got bigger! Our extra-large rotaries offer platter sizes from 450 mm to 1000 mm. With easy plug-and-play connection, you can quickly add 4th-axis capabilities to handle even your largest parts.

Extra-Large Models:
HRT450
HRT630
HRT800
HRT1000

* Extra-large rotaries cannot be mounted horizontally



Large Rotaries

For holding medium to large parts or fixtures, the HRT310 Series is the answer. These rugged, heavy-duty tables can be mounted vertically or horizontally for added versatility.

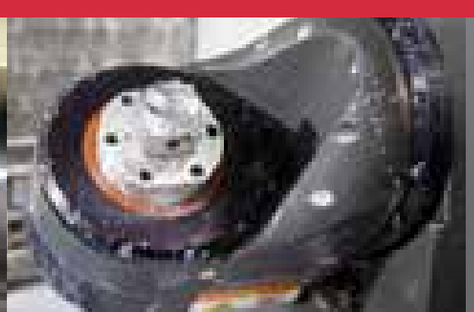
Large Models:
HRT310
HRT310SP

Super-Speed Rotaries

- Heavy-duty cycloidal drive system
- 3 to 5 times faster indexing speeds
- 75% to 80% greater brake clamping force
- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- Made in the USA

SS Models:
HRT160SS
HRT210SS
HRT310SS

YES! *Most new Haas rotary products can be used on older Haas machines!*



All new Haas rotary products are designed to integrate seamlessly with new and late model Haas machines, and are configured with the latest generation servomotors for best performance.

For use on older Haas machines, most new Haas rotary products can be configured with earlier generation servomotors, at additional cost. Please contact your local HFO for more details.

Best suited for parts that can be held in a 5C collet. Single- and multiple-head units are available, with various speed options

Indexers

1-4 SPINDLES
5C COLLET SIZE
200-725 °/sec MAX SPEED

Single Spindle

The HA5C is a single-axis rotary unit with a 5C collet nose. Clamp your parts using standard 5C collets, or chuck them by threading a 3-jaw chuck to the spindle nose. This unit comes with a manual collet closer. Optional pneumatic collet closers are also available, as well as manual and pneumatic tailstocks for workpiece support.

- Add 4-axis capabilities to your machine
- Great for clamping small parts
- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- Made in the USA

Models:
HA5C
HA5CS
HA5C-**T**

With the optional AC-25 pneumatic collet closer, collets can be clamped and unclamped with the flip of a lever.

Here are just a few of the workholding solutions available on HaasTooling.com

5C Collets

- Can be used on both an indexer and a rotary
- Available in different sizes and shapes
- Provide 360-degree support for the workpiece

Manual 3-Jaw Chuck

- Will mount to both a rotary and an indexer
- Easily clamp and unclamp workpieces
- Reversible jaws for more workholding flexibility

QuikChange Plate System

Adding a quick-change tooling plate or multi-sided fixture to your rotary allows you to get even more parts off the machine in less time.

Multiple Spindle

- Add 4-axis capabilities to your machine
- Increased productivity with multiple rotary spindles
- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- Made in the USA

The HA5C2-**T** is a single-axis rotary unit with two 5C collet noses. The "-**T**" indicates the unit has thrust bearings to handle higher axial loads. Always select the -T version when planning to use a tailstock to support long workpieces. Tailstock thrust must not exceed 800 lb (3559 N).

Models:
HA2TS
HA5C2
HA5C3
HA5C4
HA5C2-**T**
HA5C3-**T**
HA5C4-**T**

"T" indicates the unit has thrust bearings for applications with high axial loads.

For full 5-axis motion or 3+2 positioning, available as indexers or rotary tables, these units increase accuracy and reduce setups.

5-Axis Rotary Tables

5C-500 mm PLATTER SIZE
1-4 SPINDLES
50-1000 °/sec MAX SPEED

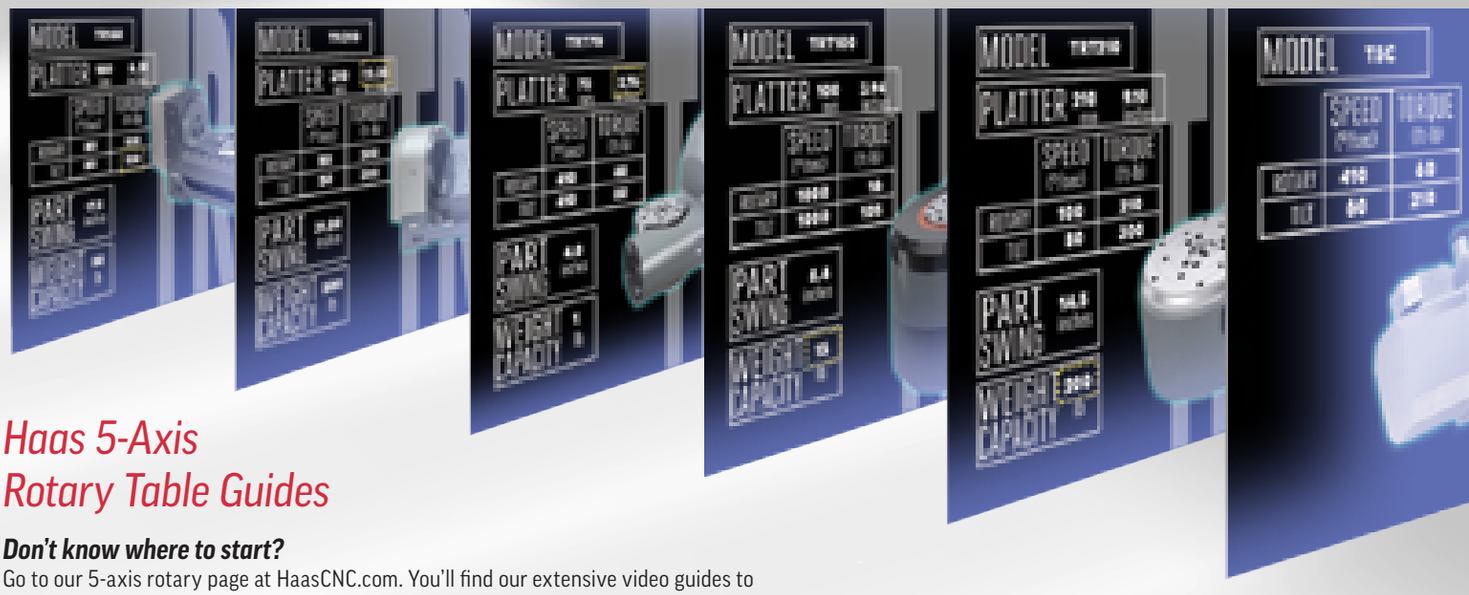
Trunnions

When you need to add 5-axis capability to your 3-axis mill, Haas dual-axis rotary tables and indexers are the perfect bolt-on solutions for machining complex parts. These dual-axis rotaries bolt directly to the mill's table to provide simultaneous 5-axis motion, or position parts to nearly any angle for 3+2 multi-side machining.

- Add 4- and 5-axis capabilities to your machine
- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- Heavy-duty design
- Made in the USA

Models:

TR160	TR210
TR160-2	TR310
TR200Y	TR500SS



Haas 5-Axis Rotary Table Guides

Don't know where to start?
Go to our 5-axis rotary page at HaasCNC.com. You'll find our extensive video guides to help you find the best 5-axis rotary to fit your needs.

Tilting Indexers

The T5Cs are dual-axis tilting rotary units with 5C collet noses. Clamp your parts using standard 5C collets, or chuck them by threading a 3-jaw chuck to the spindle nose. Requires optional collet closer or chuck.

Models:
T5C
T5C2
T5C3
T5C4

Tilting Rotaries

Five-axis machining is the fastest way to reduce setups, boost throughput, and increase accuracy on complex parts. And Haas plug-in-play dual-axis rotary tables and indexers make 5-axis machining easier than ever, allowing you to reduce or totally eliminate multiple setups, and easily handle multi-sided parts.

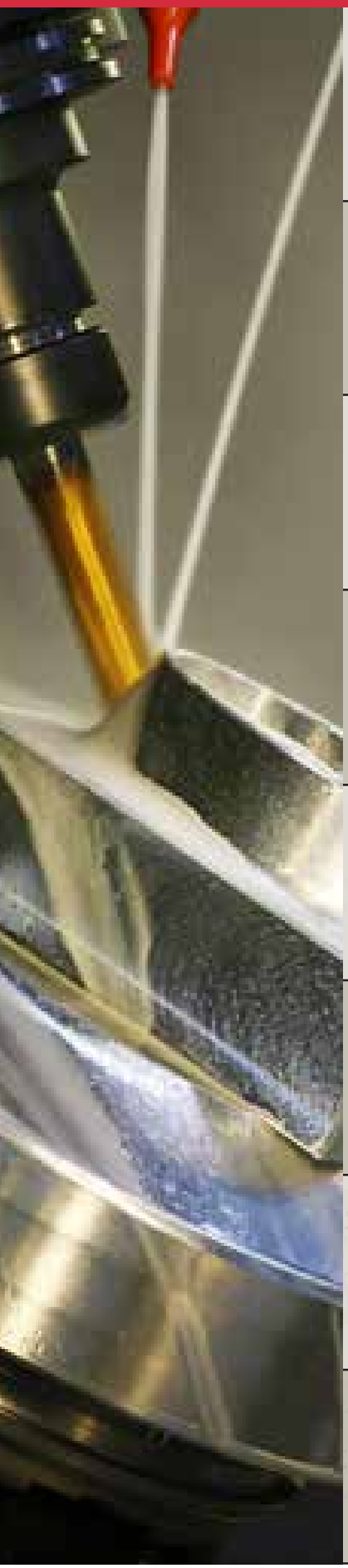
Models:

TRT70	TRT210
TRT100	TRT310
TRT160	

Details that Make a Difference

Nobody knows your machine and your business better than you do. We don't believe in selling you something you don't need.

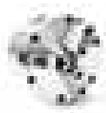
Explore these rotary accessories to find the ones you need to work as efficiently as possible.



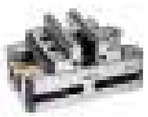
HA5C ›	AC-25 Compact Collet Closer	AC-125 High-Torque Collet Closer	AC-100 High-Torque Collet Closer	4" Pneumatic Tailstock
HRT160 ›	Tooling Block System 12"	5" Pneumatic Tailstock	5" Manual Tailstock	6" Manual 3-Jaw Chuck
HRT210 ›	QuikChange Plate System	QuikChange Cube System	Tooling Block System 12"	Tooling Block System 20"
HRTA6 ›	QuikChange Plate System	QuikChange Cube System	5C Collet Chuck with Closer	16C Collet Chuck with Closer
TRT160 ›	A5 Platter	T-Slot Platter	Zero Point Kit (Manual/Auto)	75 mm Air Vise Kit (Manual/Auto)
TRT210 ›	A1-6 Platter	T-Slot Platter	Zero Point Kit (Manual/Auto)	75 mm Air Vise Kit (Manual/Auto)
TR210 ›	8" Manual 3-Jaw Chuck	350 mm Platter	500 mm Platter	3" Vise Adapter Plate
TR310 ›	10" Manual 3-Jaw Chuck	500 mm Platter	650 mm Platter	Vise Adapter Plate

Haas Rotary Accessories


4" Manual
Tailstock


5" Manual
3-Jaw Chuck


3" Vise
Adapter Plate


3" Vise


8" Manual
3-Jaw Chuck


6" Pneumatic
Tailstock

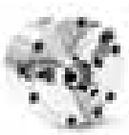

6" Manual
Tailstock


3" Vise
Adapter Plate


3" Vise


130 mm Vise
Adapter Plate


130 mm Vise

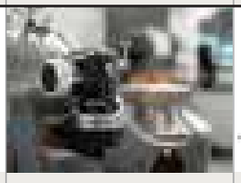

8" Manual
3-Jaw Chuck


6" Pneumatic
Tailstock

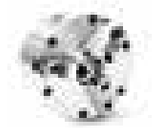

6" Manual
Tailstock


8"
Faceplate


11"
Faceplate


Probe Riser
Block


Air Clamp Provision
(Manual/Auto)


6" Manual
3-Jaw Chuck


3" Vise
Adapter Plate


3" Vise


Probe
Riser Block


Air Clamp Provision
(Manual/Auto)


8" Manual
3-Jaw Chuck


8"
Faceplate


11"
Faceplate


3" Vise
Adapter Plate


130 mm Vise
Adapter Plate


3" Vise


130 mm Vise
Adapter Plate


130 mm Vise


5" Vise


130 mm Vise

Adding Tooling To Your CNC –

HAAS MAKES TOOLING EASY

Haas tools are top-quality tools, made by top manufacturers around the world.

We aren't your typical tooling supplier. Just like we did with machine tools, we created a way to purchase high-performance, high-value tooling, while providing a better buying experience.

TOOLING.COM
HAAS
WINNER'S
CIRCLE

= FREE EXPRESS DELIVERY + 5% OFF ENTIRE ORDER

INTRODUCING THE HAAS TOOLING WINNER'S CIRCLE

Not just great pricing on Haas Tooling. When you join the Haas Tooling Winner's Circle, you'll get even better prices, and free express delivery. Only €95/Year.

HFO

ORDER 2 WAYS
Online & through your HFO

SCAN FOR DETAILS!

HaasTooling **BENEFITS**

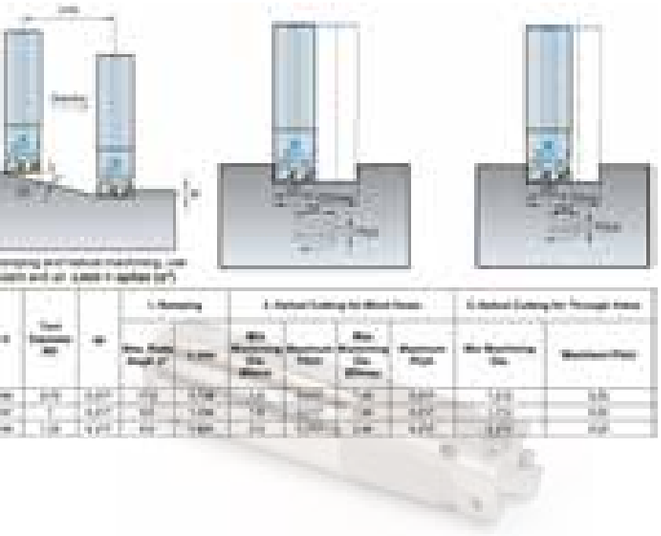
We have created a direct and easy channel for buying high-quality cutting tools and workholding at great prices. Buy directly online at HaasTooling.com, order with your new Haas machine, or purchase through your local Haas Factory Outlet. Pay by invoice terms available.

ENGINEERED FOR QUALITY

All Haas tooling is engineered to run efficiently and reliably on Haas machines. Plus, you'll have unlimited access to our extensive online resources – from troubleshooting guides to how-to procedures to applications tips – to keep your Haas tooling in tip-top shape, and running smoothly.

TESTED AND PROVEN

These are the same high-quality tools we use in our own state-of-the-art machine shop every day to produce high-precision machined castings and components. We developed the Haas tooling line so that our customers can enjoy the same quality, precision, and value in their shop.



DATA-BACKED TOOLING

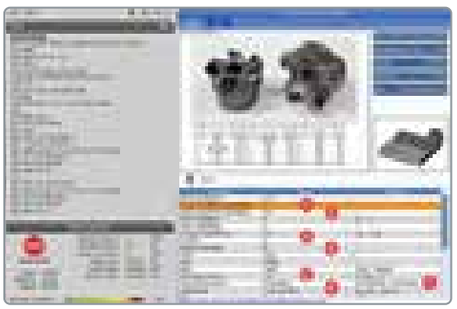
We've cut tested every one of the tools we sell, and we have the video and cutting data to prove it. Simply click on the tool you're interested in to see a video of the tool cutting, including feeds and speeds, depth of cut, and all the data you need to start using new Haas tools right away.

INSIGHTFUL VIDEOS

Access Tip-of-the-Day videos, machining demos, and more, through the Haas YouTube channel. Mark Terryberry and the rest of the Haas video team will keep you entertained, as they provide useful information to help you have the best shop possible.

NEW TECHNOLOGY

We've created powerful new control technology to simplify your part programming and speed up your setup process. All the cutting data from our extensive tool testing is in the Haas control. Simply enter the requested information into our easy-to-use VPS templates to automatically populate the recommended speeds and feeds for your program, based on material type.



BUY DIRECT • FREE SHIPPING ON ALL ORDERS OVER €99

Every week, there are new savings and products added to make HaasTooling.com your one-stop shopping resource.

MANUAL CHUCKS
5C Indexer Chucks, 3-Jaw Chucks & Mounts for Mills

MILL TOOLHOLDING
End Mill Holders, Shell Mill Holders, Shrink Fit Holders, ER Collet Chucks, Milling Chucks, Collets & Kits, Drill Chucks, Pull Studs, Mill Toolholding Kits

MILL WORKHOLDING
Fixed-Jaw & Self-Centering Vises, Vise Jaws, Adapter Plates, Clamp Kits, Accessories, and more. Haas Workholding by Kurt and Jergens.

MILLING
Shell Mill Bodies, Milling Inserts, End Mill Kits, Chamfer Mills & Inserts, Indexable End Mill Bodies, Ball End Mills, Chamfer End Mills, Roughing End Mills, Indexable Ball End Mills & Inserts

HSK TOOLHOLDERS
HSK Style End Mill Holders, Shell Mill Holders, Shrink Fit Holders, ER Collet Chucks, Toolholding Kits

TOOL MANAGEMENT
Tool Presetters & Shrink Fit Machines

THREADING/TAPPING
Threading Toolholders, Thread Mils, Threading inserts, Taps, Pipe Taps, Drill/Tap Kits

LATHE TOOLING
OD Toolholders, Boring Bars, Cut-Off Tools, Grooving Tools, Threading Toolholders, Turning Inserts, Threading Inserts, Tooling Kits

ER COLLETS & ACCESSORIES
ER Collet Kits, ER Collet Chucks, and Straight Shank ER Collet Chucks

HOLEMAKING
Carbide Drills, Indexable Drill Bodies, Indexable Drill Inserts, Indexable Drilling Kits, Modular Drill Bodies, Modular Drill Heads, Cobalt Drills & Sets, Center Drills, Reamers, Spot Drills

LATHE TOOLHOLDING
BOT/BMT/VDI Toolholders - ID & OD, Live Tooling - Straight & 90 Degree, Reduction Sleeves, Toolholding Kits

TOOL KITS
End Mill Kits, Indexable Drilling Kits, Indexable Milling Kits, Mill Toolholding Kits

TOOLING ACCESSORIES
Chip Clearing Fans, Spindle Taper Cleaners, Spindle Test Bars, Haas Shop Lift, Toolholder Fixtures

BROACHING
Broaching Toolholders, Broaching Inserts

DEBURRING & ABRASIVES
Abrasive Pads, Deburr Tools, Deburr Wheels

MEASURING & INSPECTION
Haas Precision Measuring Tool Kit, 3D Sensor Kits, Test Bar for ISO40 Taper Spindles, Coolant Refractometer, Clamp Force Gauge, Haas Probe Tips, Precision Machinist's Level

CUTTING TOOL KITS
Complete Indexable End Mill Kits, Chip Fan Kits, Cut-Off Tooling Kits, Drill/Tap Kits, Indexable Drilling Kits, Indexable Milling Kits, Chamfer Mill Kits

TOOLHOLDING KITS
20-Piece SK/DIN40 Toolholder Kits, ER Collet Master Packs, ER16/25/32 CT40 6-Packs, Pull Stud Refresh Kits, ER16/25/32 BT40 6-Packs, ER25/32 HSK 6-Packs, BT40 Toolholder Kits

WORKHOLDING KITS
6" Haas Vise by Kurt Mill Workholding Kit, Self-Centering Vise and Riser Kit, 130 mm Haas Vise by Jergens Kit with Riser

LATHE COLLET CHUCKS
Haas Collet Chucks for A2-5 and A2-6 spindle noses, Manual Collet Changing Tools

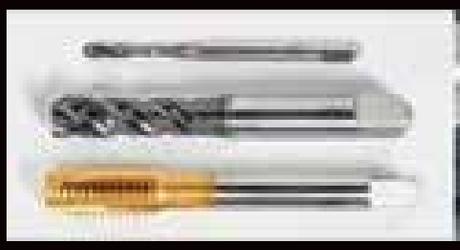
QUICK-CHANGE COLLETS
Smooth, Round-Bore, Quick-Change Collets

HAAS INSERTS
Cermets, CBNs, Notch Groove, Threading, and Grooving Inserts

PULL STUDS
Haas SK/DIN40, BT40, and CT50 Solid Pull Stud packs, Through-Spindle Coolant Pull Stud packs, and individual units

MODULAR DRILL HEADS
Many sizes to chose from

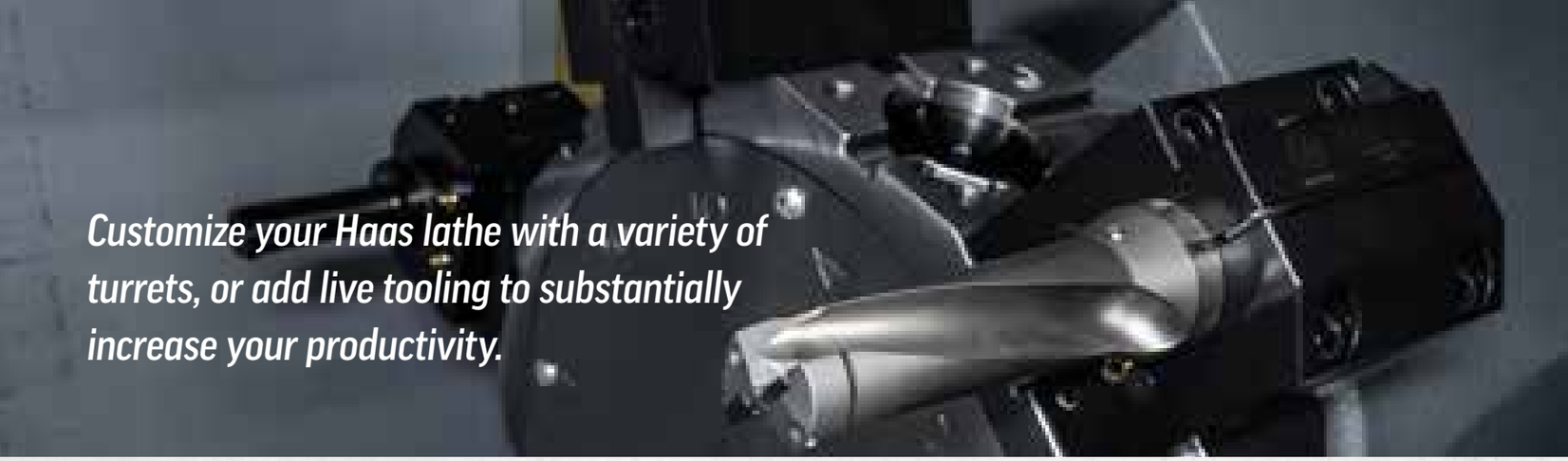
INDEXABLE DRILLING KITS
Indexable Drilling Kits for Cast Iron, Stainless Steels, Non-Ferrous, and Steel



TAPS
Straight Flute, Spiral Flute, Spiral Point, Through-Spindle Coolant Taps, and every coating type

STORAGE & HANDLING
Haas 30/40/50 & HSK63A-Taper Tool Carts

APPAREL & ACCESSORIES
Haas-Branded Pocket Scale, Wall Clock, Tumblers, Water Bottles, T-Shirts, and Caps



Customize your Haas lathe with a variety of turrets, or add live tooling to substantially increase your productivity.

Haas **Turrets**

Bolt-On
12-Station

VDI
12-Station

VB Hybrid
12-Station

VB Hybrid
24-Station

BMT45
12-Station

BMT45 Half Index
24-Station

BMT65
12-Station

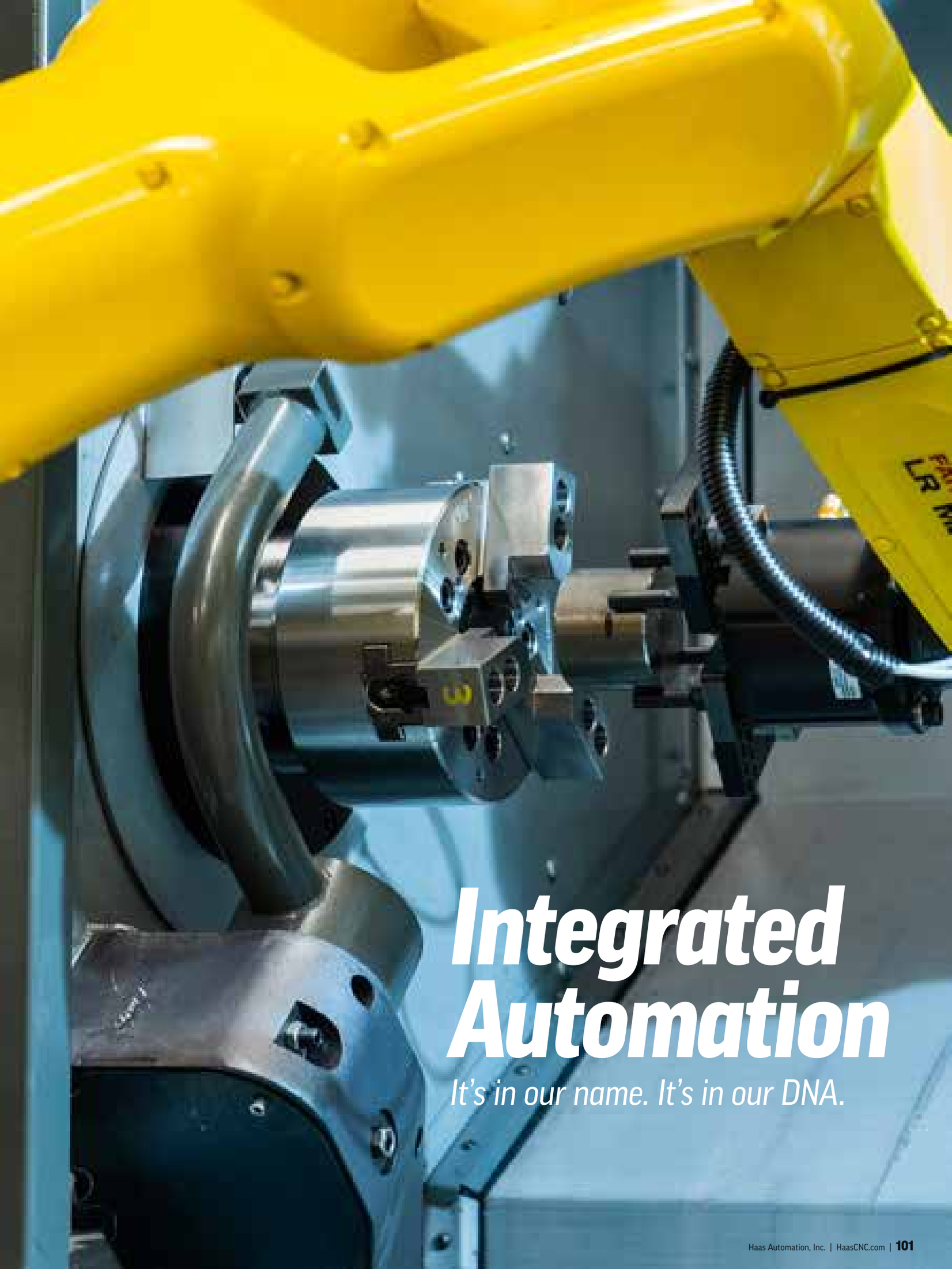
BMT65 Half Index
24-Station

BMT75
12-Station

BMT75 Half Index
24-Station

Lathe **Toolholding**

			LIVE TOOLS		HALF-INDEX	
	ID	OD	STRAIGHT	90 DEGREES	ID	OD
BOT			---	---	---	---
BMT						
VDI			---	---	---	---



Integrated Automation

It's in our name. It's in our DNA.

Haas Robot Packages

Versatile Automation

No complex connections
No third-party integration
No additional costs
Direct Haas control

HRP-1

7 kg | 911 mm
Load Cap. Reach

HRP-2

25 kg | 1831 mm
Load Cap. Reach

VMC HRP-1

DT-1	20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm
DT-2	28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm
DM-1	20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm
DM-2	28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm
VF-1	20" x 16" x 20" (xyz) 508 x 406 x 508 mm
VF-2	30" x 16" x 20" (xyz) 762 x 406 x 508 mm
VF-2SS Super Speed	30" x 16" x 20" (xyz) 762 x 406 x 508 mm
VF-2TR 5-Axis Trunnion	30" x 16" x 20" (xyz) 762 x 406 x 508 mm
UMC-350HD	15" x 14" x 12" (xyz) 381 x 356 x 305 mm

LATHE HRP-1

ST-10 1.75" Bar (44 mm)	12" x 16" (max cap) 305 x 406 mm
ST-10L 1.75" Bar (44 mm)	12" x 32.5" (max cap) 305 x 826 mm
ST-10Y 1.75" Bar (44 mm)	11" x 16" (max cap) 279 x 406 mm
ST-10LY 1.75" Bar (44 mm)	11" x 32.5" (max cap) 279 x 826 mm
ST-15 2.5" Bar (63.5 mm)	12" x 16" (max cap) 305 x 406 mm
ST-15L 1.75" Bar (44 mm)	12" x 32.5" (max cap) 305 x 826 mm
ST-15Y 2.5" Bar (63.5 mm)	11" x 32.5" (max cap) 305 x 406 mm
ST-15LY 1.75" Bar (44 mm)	11" x 32.5" (max cap) 279 x 826 mm

VMC HRP-2

VF-2YT	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
VF-2SSYT Super Speed	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
VF-3	40" x 20" x 25" (xyz) 1016 x 508 x 635 mm
VF-3YT	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
VF-3SS Super Speed	40" x 20" x 25" (xyz) 1016 x 805 x 635 mm
VF-3SSYT Super Speed	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
VF-3YT/50	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
VF-4	50" x 20" x 25" (xyz) 1270 x 508 x 635 mm
VF-4SS Super Speed	50" x 20" x 25" (xyz) 1270 x 805 x 635 mm
VF-5/40	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/40XT	60" x 26" x 25" (xyz) 1524 x 660 x 635 mm
VF-5SS Super Speed	50" x 26" x 25" ((xyz) 1270 x 660 x 635 mm
VF-5/40TR 5-Axis Trunnion	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/50TR 5-Axis Trunnion	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm
VF-5/50XT	60" x 26" x 25" (xyz) 1524 x 660 x 635 mm
VM-2	30" x 20" x 20" (xyz) 762 x 805 x 805 mm
VM-3	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm
UMC-500	24" x 16" x 16" (xyz) 610 x 406 x 406 mm
UMC-500SS Super Speed	24" x 16" x 16" (xyz) 610 x 406 x 406 mm
UMC-750	30" x 20" x 20" (xyz) 762 x 805 x 805 mm
UMC-750SS Super Speed	30" x 20" x 20" (xyz) 762 x 805 x 805 mm
UMC-1000	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm
UMC-1000SS Super Speed	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm

LATHE HRP-2

ST-20 2.5" Bar (63.5 mm)	13" x 22.5" (max cap) 330 x 572 mm
ST-20L 2.5" Bar (63.5 mm)	13" x 42.5" (max cap) 330 x 1080 mm
ST-20Y 2.5" Bar (63.5 mm)	11.75" x 22.5" (max cap) 298 x 572 mm
ST-20LY 2.5" Bar (63.5 mm)	11.75" x 42.5" (max cap) 298 x 1080 mm
ST-25 3.0" Bar (76 mm)	13" x 22.5" (max cap) 330 x 572 mm
ST-25L 3.0" Bar (76 mm)	13" x 42.5" (max cap) 330 x 1080 mm
ST-25Y 3.0" Bar (76 mm)	11.75" x 22.5" (max cap) 298 x 572 mm
ST-25LY 3.0" Bar (76 mm)	11.75" x 42.5" (max cap) 298 x 1080 mm
ST-28 4.0" Bar (102 mm)	13" x 22.5" (max cap) 330 x 572 mm
ST-28L 4.0" Bar (102 mm)	13" x 42.5" (max cap) 330 x 1080 mm
ST-28Y 4.0" Bar (102 mm)	11.75" x 22.5" (max cap) 298 x 572 mm
ST-28LY 4.0" Bar (102 mm)	11.75" x 42.5" (max cap) 298 x 1080 mm
ST-30 3.0" Bar (76 mm)	15" x 32.5" (max cap) 381 x 826 mm
ST-30L 3.0" Bar (76 mm)	15" x 62.5" (max cap) 381 x 1588 mm
ST-30Y 3.0" Bar (76 mm)	13.75" x 32.5" (max cap) 349 x 826 mm
ST-30LY 3.0" Bar (76 mm)	13.75" x 62.5" (max cap) 349 x 1588 mm
ST-35 4.0" Bar (102 mm)	15" x 62.5" (max cap) 381 x 1588 mm
ST-35L 4.0" Bar (102 mm)	15" x 62.5" (max cap) 381 x 1588 mm
ST-35Y 4.0" Bar (102 mm)	13.75" x 32.5" (max cap) 349 x 826 mm
ST-35LY 4.0" Bar (102 mm)	13.75" x 62.5" (max cap) 349 x 1588 mm
DS-30Y 3.0" Bar (76 mm)	13.75" x 32.5" (max cap) 349 x 826 mm

Recommended Haas robot fitment for each machine. Other Haas robot packages may fit, depending on application.

Includes:
6-axis robot, software interface for direct control through the Haas machine, electrical interface box, safety guarding, and all necessary solenoids, hardware, and cables.

HRP-3
50 kg | 2050 mm
Load Cap. Reach

VMC HRP-3

VF-6/40	64" x 32" x 30"	(xyz)
	1626 x 813 x 762	mm
VF-6/40TR 5-Axis Trunnion	64" x 32" x 30"	(xyz)
	1626 x 813 x 762	mm
VF-6/50	64" x 32" x 30"	(xyz)
	1626 x 813 x 762	mm
VF-6/50TR 5-Axis Trunnion	64" x 32" x 30"	(xyz)
	1626 x 813 x 762	mm
VF-6SS Super Speed	64" x 32" x 30"	(xyz)
	1626 x 813 x 762	mm
VF-7/40	84" x 32" x 30"	(xyz)
	2134 x 813 x 762	mm
VF-7/50	84" x 32" x 30"	(xyz)
	2134 x 813 x 762	mm
VF-8/40	64" x 40" x 30"	(xyz)
	1626 x 1016 x 762	mm
VF-8/50	64" x 40" x 30"	(xyz)
	1626 x 1016 x 762	mm
VF-9/40	84" x 40" x 30"	(xyz)
	2134 x 1016 x 762	mm
VF-9/50	84" x 40" x 30"	(xyz)
	2134 x 1016 x 762	mm
VF-10/40	120" x 32" x 30"	(xyz)
	3048 x 813 x 762	mm
VF-10/50	120" x 32" x 30"	(xyz)
	3048 x 813 x 762	mm
VF-11/40	120" x 40" x 30"	(xyz)
	3048 x 1016 x 762	mm
VF-11/50	120" x 40" x 30"	(xyz)
	3048 x 1016 x 762	mm
VF-12/40	150" x 32" x 30"	(xyz)
	3810 x 813 x 762	mm
VF-12/50	150" x 32" x 30"	(xyz)
	3810 x 813 x 762	mm
VF-14/40	150" x 40" x 30"	(xyz)
	3810 x 1016 x 762	mm
VF-14/50	150" x 40" x 30"	(xyz)
	3810 x 1016 x 762	mm
VM-6	64" x 32" x 30"	(xyz)
	1626 x 813 x 762	mm
VR-8	84" x 40" x 42"	(xyz)
	2134 x 1016 x 1067	mm
VR-9	84" x 40" x 42"	(xyz)
	2134 x 1016 x 1067	mm
VR-11	120" x 40" x 42"	(xyz)
	3048 x 1016 x 1067	mm
◪ VR-14	150" x 40" x 42"	(xyz)
	3810 x 1016 x 1067	mm
◪ UMC-1500-DUO	60 x 20" x 20"	(xyz)
	1524 x 508 x 508	mm
◪ UMC-1500SS-DUO Super Speed	60 x 20" x 20"	(xyz)
	1524 x 508 x 508	mm

LATHE HRP-3

ST-40 4.0" Bar (102 mm)	25.5" x 44" (max cap) 648 x 1118 mm
◪ ST-40L 4.0" Bar (102 mm)	25.5" x 80" (max cap) 648 x 2032 mm
ST-45 7.0" Bore (178 mm)	25.5" x 44" (max cap) 648 x 1118 mm
◪ ST-45L 7.0" Bore (178 mm)	25.5" x 80" (max cap) 648 x 2032 mm
◪ ST-55 12.5" Bore (318 mm)	25.5" x 80" (max cap) 648 x 2032 mm

◪ Requires third-party Auto Door/Window

Easily adapt the Haas robot systems to meet your needs

The APL sequence in the Haas Control has been expanded to accommodate additional capabilities for the robot that our standard APLs don't have. Expanded robot capabilities include:

- **Part flipping**
- **Pick up and drop off from multiple locations (allowing for conveyor feeds, etc.)**
- **Load and unload from multiple locations (main or sub-spindle, multiple vises)**

Part Flipping

Expanded Parts Table

Magazine Loader

How to automate

A guide to selecting the right automation for your shop

Where to Start :
Consider which parts are most suitable for automation. Start by processing simple, high-volume parts for steady, uninterrupted production.

Part Types Perfect for Haas Robot Packages

PART CAPACITY	HRP-1		HRP-2		HRP-3	
SINGLE GRIPPER						
Max Part Size	6"	152 mm	8"	203 mm	12"	305 mm
Max Part Weight	9 lb	4 kg	*44 lb	*20 kg	40 lb	18 kg
DOUBLE GRIPPER						
Max Part Size	6"	152 mm	8"	203 mm	N/A	N/A
Max Part Weight	4 lb	1.8 kg	*20 lb	*9 kg	N/A	N/A

Versatile Automation

- All-inclusive design, with plug-and-play capabilities
- Interfaces directly with the Haas control
- All set up and operation are done through the Haas control and remote jog handle
- Includes CE-compliant safety guard fencing
- No need for 3rd-party integrators
- Single gripper included

**May require modified gripper*

Haas Robot Package 1

- 7 kg capacity at wrist (parts + gripper)
- One parts table included
- Double gripper available
- Haas VMCs: VF-1/2, DT/DM, UMC-350HD, UMC-500
- Haas Lathes: ST-10 through ST-28

Haas Robot Package 2

- 25 kg capacity at wrist (parts + gripper)
- One parts table included; additional parts table available
- Double gripper available
- Requires a separate 200-230V 3-Phase, 50/60 Hz, 3.0 kVA power supply
- Haas VMCs: VF-1 through VF-5, UMCs
- Haas Lathes: ST-20 through ST-35

Haas Robot Package 3

- 50 kg capacity at wrist (parts + gripper)
- Requires a separate 200-230V 3-Phase, 50/60 Hz, 7.5 kVA power supply
- Larger Haas vertical machining centers and turning centers

Part Types Perfect for Processing on Pallet Pool Systems

Easy Automation

Haas Pallet Pools are the easiest of all automation solutions to choose from, as they are literally a step-and-repeat process. Fully integrated to the Haas control for lights-out production, with a built-in easy-to-use pallet scheduling interface. A dedicated load/unload station maximizes spindle uptime to ensure increased production.

Manually clamping the parts to the pallets simplifies loading and unloading of the machine for trouble-free, unattended operation.

Flexibility – Dedicate each pallet to a specific job, or run full production on multiple pallets. Load a single part per pallet, or nest dozens. Run one part program or multiples – completely unattended.

- **Step-and-repeat process**
- **Fully integrated to Haas control**
- **Easy-to-use pallet scheduling**
- **Dedicated load/unload station**
- **Maximize spindle uptime**

Haas Pallet Pools for Verticals

Part Type:
Ideal for small, medium, and larger size parts, or irregular-shaped parts that require specialized clamping

3+1 Pallet Pool VF-2YT / VF-2SSYT:

- 3+1 pallets (3 storage + 1 machining station)
- Work Envelope: 30" width x 18" depth (762 x 457 mm)
- 750 lb (340 kg) max payload per pallet (workpiece + workholding)

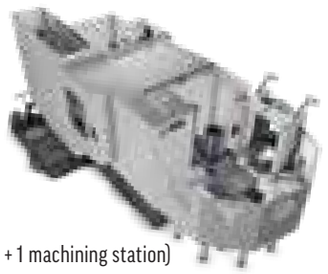
6+1 Pallet Pool VC-400:

- 6+1 pallets (6 storage + 1 machining station)
- Work Envelope: 22" width x 16" depth (558 x 406 mm)
- 500 lb (227 kg) max payload per pallet (workpiece + workholding)

Horizontal Pallet Pool

Part Type:
Ideal for larger production runs. Load a single part, or nest dozens on a tombstone to gain access to multiple sides of a part, and reduce the number of operations

Great for small- to mid-size parts, or irregular-shaped parts that require specialized clamping. Utilize 400 mm tombstones for multiple parts, or load individual parts for full 360 degree access to the workpiece.



6+1 Pallet Pool EC-400

- 6+1 pallets (6 storage + 1 machining station)
- Work Envelope: 22" dia. x 25" tall (558 x 635 mm)
- 500 lb (227 kg) max payload per pallet (workpiece + workholding)

Haas Pallet Pools for UMC 5-Axis

Part Type:
Ideal for gaining access to multiple sides of a part (3+2), or for true interpolated 5-axis machining of a workpiece.

20+1 Pallet Pool UMC-500/SS

- 20+1 pallets (20 storage + 1 machining station)
- Work Envelope: 8" dia. x 16.5" tall (203 x 420 mm)
- 200 lb (90 kg) max payload per pallet (workpiece + workholding)

10+1 Pallet Pool UMC-500/SS | 750/SS | 1000/SS

- 10+1 pallets: 10 storage + 1 machining station
- Work Envelope: 16" dia. x 16" – 21" tall* (406 x 406 – 533 mm)
- 200 lb (90 kg) max payload per pallet (workpiece + workholding)

6+1 Pallet Pool UMC-1250/SS

- 6+1 pallets (6 storage + 1 machining station)
- Work Envelope: 30" dia. x 24" tall (762 x 610 mm)
- 500 lb (227 kg) max payload per pallet (workpiece + workholding)

**Max part height varies by machine model.*

NOTE: Pallet Pool systems must be ordered with the machine.

Part Types Perfect for Automatic Parts Loaders (APLs)

Haas Automatic Parts Loader (APL)

Affordable Automation

- Fully integrated to Haas control
- All set up and operation are done through the Haas control and remote jog handle
- Double gripper Included
- Includes light curtain for safe operation (non-CE)
- CE compliance requires the optional safety guard fencing

Haas APL for Lathes

- Slugs from Ø 1.0" - 5.8" x 5" (25 – 147 x 127 mm)
- Shafts from Ø 0.86"- 4" x 21" (22 – 100 x 533 mm)
- Individual part weight up to 10 lb (4.5 kg) each
- Haas Lathes: ST-10Y, ST-15Y, ST-20/Y through ST-28/Y

Haas APL for Mills

- Part size up to 6" x 6" x 4" (150 x 150 x 100 mm)
- Individual part weight up to 10 lb (4.5 kg) each
- Haas VMCs: VF-1, VF-2/SS, VF-2YT/SS, VM-2

Haas APL for UMC-500/SS – 5-Axis (5-Sided)

- Part size up to 6" x 6" x 4" (150 x 150 x 100 mm)
- Individual part weight up to 10 lb (4.5 kg) each
- Access 5 sides of a part
- Haas UMCs: UMC-500/SS

Haas Compact APL for Mills

- Part size up to 2" x 2" x 2" (51 x 51 x 51 mm)
- Individual part weight up to 3 lb (1.4 kg) each
- Haas VMCs: VF-2/SS, VF-2YT/SS, VM-2, DTs, DMs, UMC-350HD

Part Types Perfect for the Haas Bar Feeder

Haas Bar Feeder

Easy Automation

Affordable Automation

Type of Parts:

Ideal for unattended bar work ranging from 3/8" to 3" (10 mm – 76 mm) diameter, depending on the size of machine. Automatic parts catcher is able to catch parts up to 3" (76 mm) dia. by 4" (102 mm) length.

Haas Bar Feeder

Roll-away design provides easy access for quick liner changes

- High push-rod speeds for shorter part-to-part cycle times
- Ability to use the pushrod as a stop
- Easy bar diameter changeover (height adjustment)
- Quick-change pushrod design, with no tools needed
- Storage for both pushrods, 3/8" (9.5 mm) and 3/4" (20 mm)
- Easily accessible storage for all extruded liners
- Interfaces directly with the Haas control
- All set up and operation are done through the Haas control
- Includes patented Haas spindle liners

Which automation system is right for you?

Haas offers many different options for automating your shop, from Automatic Part Loaders and Pallet Pools, to fully integrated Robot Systems. Depending on your shop's needs, there's an automation system that's right for you.

To learn more visit HaasCNC.com/automation

It's never been easier, or made more sense, to get automated

Labor Shortages

Labor shortages are everywhere, and the job market is more competitive than ever. Need a night shift, but can't find a person to work it? Add a Haas Robot, APL, or Pallet Pool for lights-out operation.

ROI on Automation

All Haas automation systems come with everything you need, at affordable prices. We made the barrier to entry for automation low, so it would make sense for all shops, big or small.

Easy Integration

There's no need for a third-party integrator with any of our automation systems – from the APL to the Robot Packages. Everything can be set up by the HFO/customer, and is controlled directly through the Haas control.

Increase Productivity

Adding automation to your shop will increase your productivity, and free up time for you and your operators to work on other projects.

Automation Options and Configurations

MACHINE MODEL	Robot Solutions			Compact AUTOMATIC PARTS LOADER	Automatic Parts Loader	Pallet Pool	Bar Feeder
	Package 1 7 KG Capacity	Package 2 25 KG Capacity	Package 3 50 KG Capacity				
DT/DM	✓			✓			
VF-1/VF-2	✓	✓		✓††	✓	✓††	
VF-3 – VF-5		✓	✓				
VF-6+			✓				
VC-400						✓	
UMC-350HD	✓			✓**			
UMC-500/SS	✓	✓			✓	✓	
UMC-750/SS		✓				✓	
UMC-1000/SS		✓				✓	
UMC-1250/SS						✓	
ST-10 – ST-15	✓*				✓†		✓
ST-20 – ST-28	✓*	✓*			✓		✓
ST-30 – ST-35		✓*	✓*				✓
DS-30Y		✓					✓
EC-400						✓	

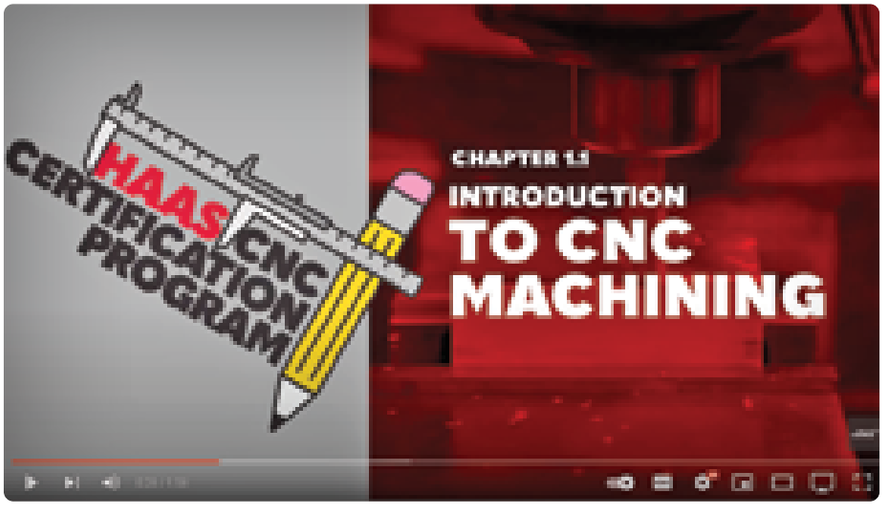
Configurations subject to change without notice. Availability may vary by region. *Including long-bed models. **HD model, or UMC-350 w/HD rotary upgrade. †Y-axis models only. ††VF-2YT models only.

Become a CERTIFIED Mill & Lathe Operator

Stand out in the industry as a qualified CNC operator, or ensure your team has the skills they need to properly and safely operate a CNC machine – by becoming Haas Certified. Our online CNC Certification Program provides you – or your employees – with the knowledge and skills necessary for basic CNC machine operation.

Haas Certification in Four Easy Steps

1. **Create an account**
   Visit https://learn.haascnc.com to create a free MyHaas account.
2. **Watch chapter lessons**
   Log in to your account and watch the videos that accompany the chapters.
3. **Pass online quizzes**
   Take the quizzes that are associated with each video to show you understand the concepts.
4. **In-person, hands-on final exam at your local HFO**
   When you've completed all the lessons, and spent some time in front of an actual CNC machine, you're ready to set up your "Hands-on Test" at your local HFO. Pass this straightforward test and you'll receive a certificate showing that you successfully completed the Certification program.



All students who pass the final HFO exam will receive a Haas Certificate of Completion.

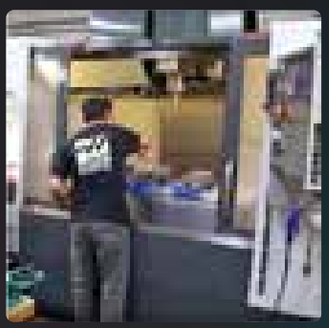
- Stand Out in the Industry
- Prove Your CNC Knowledge
- Professional Credibility
- Easily Accessible
- Standardized Training
- Up-To-Date Information

"Since the beginning of the pandemic, educators across the United States have scrambled to deliver quality, up-to-date machining classes online. For my program, the Haas Certification material has proved to be an essential tool that can integrate into curriculums at any level."

MIKE BERRY
INSTRUCTOR, MACHINE TOOL TECHNICIAN
MID-STATE TECHNICAL COLLEGE
WISCONSIN RAPIDS CAMPUS

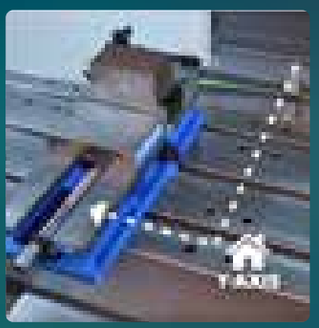
Haas CNC Certification Coursework

Mill certification available in multiple languages - English, French, German, Italian, and Spanish.



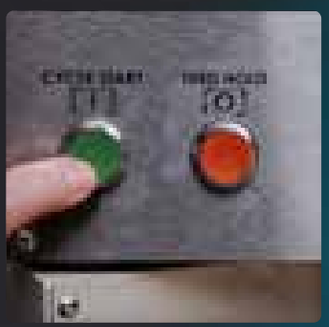
Introduction to CNC

Basic Machine Safety



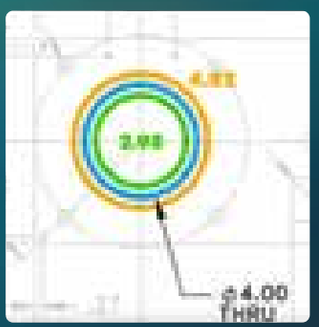
Basic Machine Start Up

Load and Unload a Part

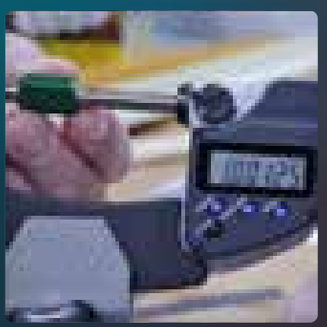


Run a Program

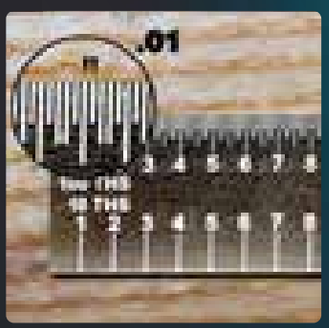
Haas Control Functions



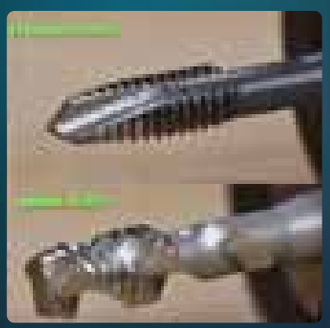
Basic Print Reading



Measuring Tools

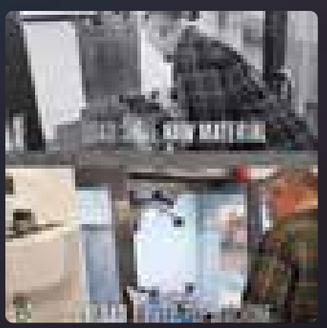


Basic Shop Math

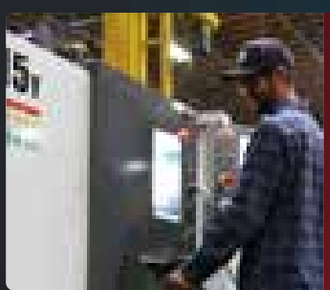


Intro to Cutting Tools and Workpiece Materials

Basic Machine Maintenance



Hands-On Test



Create a free account. Watch lessons. Pass online quizzes. Take the hands-on final exam. It's that simple!

Start your journey to becoming Haas certified today at
HaasCNC.com/myhaas/haas_certification

PICKING UP YOUR NEXT HAAS IS A LOT EASIER THAN YOU THINK.

UNBEATABLE FINANCING

CONTACT YOUR LOCAL HFO FOR ACCESS TO THE BEST FINANCING OFFERS IN THE INDUSTRY.

HAAS

Haas F1 Team
OFFICIAL MACHINE TOOL