

# THE HAAS JOURNAL







# WHAT'S NEW 4 Mini Max 5 Robotic Pallet Loading System 5 Pallet Pool Ready Option

- 6 New Pallet Pools
- 7 Cobot Series
- 8 DC Series Drill Centers
- 9 UMC-400/SS
- 10 ST-40 Series Short-Bed Lathes
- 11 HDC-3-5AX Double-Column
- 11 VR Dual-Support Spindle Head
- 12 LT350 Large-Through-Bore Rotary
- 12 Coolant Sanitizer
- 13 Monitor System
- 13 Coolant Maintenance Cart
- 14 Air Compressor
- 14 Bar Chamfer
- 15 Desktop Series
- 16 Precision Grinder
- 16 HMM 430
- 17 SR-3015
- 18 VP-5
- 18 VR-5
- 19 Toolroom Lathe Update
- 19 Stainless Steel Waycovers
- 20 HL50E Laser Machine
- 20 Broken Tool Detection
- 21 Tool Presetters
- 21 Bandsaw
- 22 70+1 Side Mount Tool Changers
- 26 Zero Point Kits
- 26 Air Clamps
- 27 Automatic Workholding

#### MORE THAN CNC

- 28 Legendary Service
- 30 Motorsport Focus
- 32 Haas Technical Eduction Community
- 33 Simplicity by Design
- 34 Haas Control

#### HAAS PRODUCT FOCUS

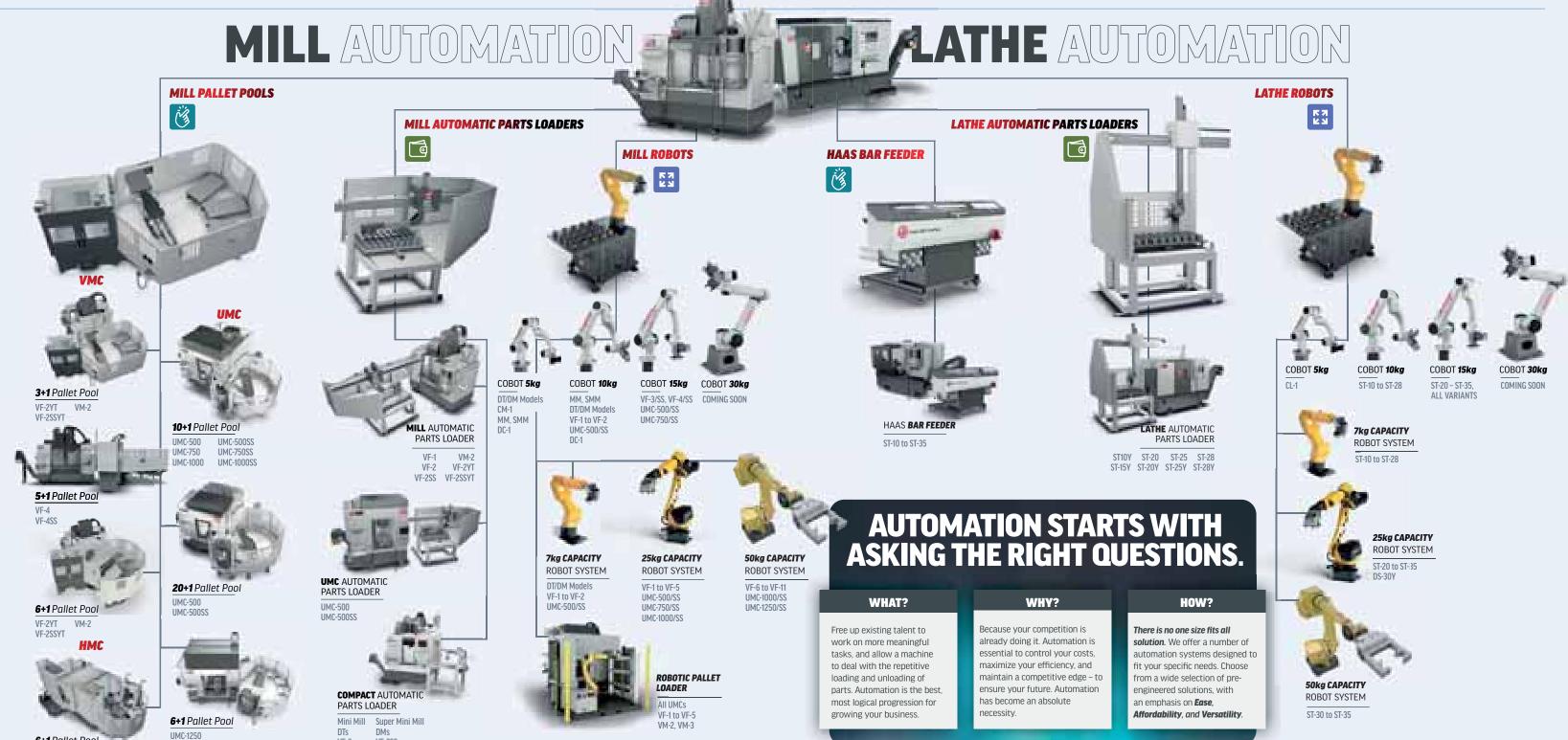
- 39 Vertical Machining Centers
- 61 Turning Centers
- 75 Horizontal Machining Centers
- 87 Rotaries & Indexers
- 98 HaasTooling.com Focus
- 103 Integrated Automation
- 110 Haas Certification

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



Haas DISCOVERING AUTOMATION OFFICIAL MACHINE TOOL







6+1 Pallet Pool

STEP-AND-REPEAT PROCESS **UTILIZE THE SAME PROGRAMS** HIGH-VOLUME/LOW-MIX & LOW-VOLUME/HIGH-MIX **PRELOAD ALL PARTS** 



**LOW INVESTMENT RUNS MULTIPLES OF THE SAME PART** SIMPLE LOAD/UNLOAD PART PROCESSING **AUTOMATED CLAMP/UNCLAMP FIXTURING** 

VF-2SS VF-2YT VF-2SSYT



ABLE TO PICK-UP/DROP-OFF AT DIFFERENT LOCATIONS **INCORPORATE PART-FLIPPING STATION RUNS MULTIPLES OF THE SAME PART AUTOMATED CLAMP/UNCLAMP FIXTURING** 





**EASY FIRST-OP AUTOMATION RUNS MULTIPLES OF THE SAME PART** INTERFACES DIRECTLY WITH THE HAAS CONTROL **AUTO-FEED MATERIAL UP TO 3" (76 MM) DIA.** 



Affordable Lathe **Automation** 

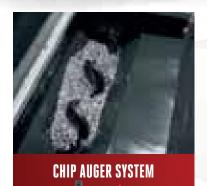
**LOW INVESTMENT** SIMPLE LOAD/UNLOAD PART PROCESSING **RUNS MULTIPLES OF THE SAME PART** SET UP AND PROGRAM THROUGH HAAS CONTROL



**MOST VERSATILE AUTOMATION CHOICE** ABLE TO PICK-UP/DROP-OFF AT DIFFERENT LOCATIONS **INCORPORATE PART FLIPPING STATION** SET UP AND PROGRAM THROUGH HAAS CONTROL



#### PACKAGED WITH ALL OF THESE AUTOMATION OPTIONS FOR LIGHTS-OUT OPERATION!









start for automating your shop. These small-footprint

combos are perfect for highvolume, lights-out operation.



#### Mini Mill Package

- Mini Mill
- Compact Automatic Parts Loader

#### INCLUDED OPTIONS:

- Wireless Intuitive Probing
- Chip Auger
- Programmable Air
- + HAAS TOOLING
- 100mm (4") Pneumatic Self-Centering Vise Kit for Haas VMC
- Five-Sided Light Curtain Kit, 1720mm (67") Protective Height



#### Super Mini Mill Package

- Super Mini Mill
- Compact Automatic Parts Loader

#### **INCLUDED OPTIONS:**

- Wireless Intuitive Probing
- Chip Auger
- Programmable Air
- Through-Spindle Coolant
- High-Speed Machining
- + HAAS TOOLING
- 100mm (4") Pneumatic Self-Centering Vise Kit for Haas VMC
- · Five-Sided Light Curtain Kit, 1720mm (67") Protective Height



curtain, pallet rack, and 3 zero point pallets.

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.



CUSTOMIZATION IS STANDARD

**ASSIGN PART MASS** 



PALLET SCHEDULER



TOUCHSCREEN GRID VIEW

#### **RPL** available for:

VF-1 through VF-5 (All variants except TR) UMC-500/SS through UMC-1000/SS VM-2 and VM-3

#### **System Highlights:**

- 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



# FIELD INSTALLATION AVAILABLE **PALLET POOL**

# **READY PROVISION**

Our Pallet Pool Ready provision preconfigures your machine to accept an optional Haas Pallet Pool in the field.

#### **Provision available for:**

EC-400

UMC-500/500SS/750/750SS/ 1000/1000SS/1250/1250SS

COBOT 30kg



low-volume machining.

The pallets – 52" x 20.35" (1321 x 517 mm) with bolt-hole pattern - can be scheduled individually according to priority and sequencing requirements, allowing high-priority parts to be machined first or staged more often. Completed pallets are returned automatically to the holding location, or can be sequenced to a protected operator station for immediate unloading and re-loading.

#### **System Highlights:**

- Work Envelope: 47.75" width x 20.35" depth (1213 x 517 mm)
- (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

#### **New Pallet Pools available for:**

3+1 and 6+1: VF-2YT/SSYT 5+1: VF-4/SS

#### up, program, and operate your new Cobot right from the Haas control. Each kit features a Haas Cobot, pneumatic • 5+1 pallets (5 storage locations + 1 machining station) grippers, protective barriers, a parts table, and all necessary hardware and cables. Kit details: • 750 lb (340 kg) max payload per pallet

#### **Part Flip Station:**

COBOT 5kg

A part flip station adjacent to the parts table provides a convenient location for the cobot to place parts and then regrip (flip) them for machining the other side, to simplify 2nd-op machining.

THE FAMILY IS GROWING

**COBOTS** 

The Haas Cobot series are integrated, plug-and-play, collaborative robots for Haas machines. The systems are controlled entirely by the Haas control when connected to the machine's electrical interface box. Includes:

Cobot, software interface for direct control through the Haas machine, teach pendant and cobot controller, safety light curtain, and all necessary

COBOT 10kg

electrical hardware to interface directly with the Haas control.

#### **Adjustable Pedestal:**

Easily and quickly adjust the height of the cobot for better reach, depending on your application. The kit includes a sturdy telescoping stand capable of extending from 24" to 36" (610 - 914 mm).

#### **Part Table & Templates:**

**COBOT 15kg** 

aas all-in-one cobot kits for your Haas machine! Haas Machine Ready Cobot Kits include everything you need to set

The heavy-duty parts table provides plenty of space for staging raw material and finished parts.

#### **Dual Pneumatic Grippers:**

The Dual Grippers allow the cobot to pick up raw stock with one gripper and offload a finished part with the other, decreasing machine idle time

#### **Additional Safeguarding:**

For added safety, this kit features a 2-meter-tall, 3-sided light curtain system, and all necessary mounting hardware and cables for installation



Our 3+1 and 6+1 pallet pools for the Haas VF-2YT Series VMCs are perfect for highvolume production runs, or high-mix/low-volume machining.

The pallets – 36" x 18" (914 x 457 mm) with bolt-hole pattern – can be scheduled individually according to priority and sequencing requirements, allowing high-priority parts to be machined first or staged more often. Completed pallets are returned automatically to the holding location, or can be sequenced to a protected operator station for immediate unloading and re-loading

#### **System Highlights:**

- Work Envelope: 30" width x 18" depth (762 x 457 mm)
- 3+1 or 6+1 pallets (3 or 6 storage locations + 1 machining station)
- 750 lb (340 kg) max payload 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





**HIGH-VOLUME PRODUCTION** 

Haas traditional-style drill/tap machines are well suited for both high-mix, low-volume part production with fast turnarounds, and highvolume production runs.

Haas DC Series drill centers that combine high-speed capabilities and space-saving footprints to create versatile vertical machining centers suitable for producing high-precision 2D and 3D parts, such as those found in the communications, aerospace, medical, and automotive industries. Deploy a single machine for fastturnaround high-mix work, or install multiple machines side-byside for high-volume production.



DC-1

23.6" x 17.7" x 13" (xyz) 600 x 450 x 330 mm

DC-2

39.4" x 19.7" x 13" (xyz) 1000 x 500 x 330 mm



FEATURING A 21-TOOL TURRET-STYLE CHANGER



- 3/4/5-AXIS
- 10K-20K RPM
- 21-TOOL CAPACITY

#### **Features & Options:**

- 10,000-rpm BT30 spindle standard
- 15,000-rpm or 20,000-rpm optional
- · High-speed turret-style tool changer, 21 tools
- · Available auto window for easy automation
- · Rear chip discharge with front chip flush
- Compact footprint



#### **Standard Features:**

- 17" x 11" x 13" (432 x 279 x 330 mm) travels
- 40-taper spindle
- 9.1" (230 mm) Platter
- Wireless Intuitive Probing System (WIPS)
- Dynamic Work Offsets and Tool Center Point Control (DWO/TCPC)
- Extra-Large Touchscreen Remote Jog Handle

#### **UMC-400 Specifications:**

- 10,000 rpm spindle
- 30+1 side-mount tool changer
- 900 ipm (22.9 m/min) rapids

#### **UMC-400SS Specifications:**

- 12,000 rpm spindle
- High-speed 30+1 side-mount tool changer
- 1200 ipm (30.5 m/min) rapids

# WHAT'S REWY

## **SMALLER FOOTPRINT, SAME LARGE CAPACITY**

**SHORT-BED LARGE-CAPACITY TURNING** 

ST-40S +SV

CHUCK SIZE

40 hp POWER

**ST-45S+SY** 

18" 1.4**k CHUCK SIZE** 

2.4k

40 hp



### **11% SMALLER FOOTPRINT!**

Haas short-bed, large-frame turning centers provide the performance and swing capacity to turn large-diameter parts, while taking up less floor space than their standard counterparts.

The short-bed versions of our large-frame ST-40 and ST-45 lathes. provide the same shop-proven performance and reliability, with shorter Z-axis travel and a smaller footprint. The addition of Y-axis motion, C-axis interpolation, and live tooling allows milling, drilling, and tapping for increased machine capabilities

#### **Machine Highlights:**

#### **ST-40S**

- 30" x 28" (762 x 711 mm) max cap
- 15" (381 mm) chuck
- 12-station BOT turret
- A2-8 spindle nose with 4.0" (102 mm) bar cap
- · Available rear spindle nose

#### **ST-45S**

- 30" x 28" (762 x 711 mm) max cap
- 18" (457 mm) chuck (optional)
- 12-station BOT turret

(178 mm) bore

- A2-11 spindle nose with 7.0"
- Available rear spindle nose

#### ST-40SY

- 27.5" x 28" (699 x 711 mm) max capacity
- 15" (381 mm) chuck (optional)
  - 12-station BMT75 turret
  - A2-8 spindle nose with 4.0" (102 mm) bar cap
  - · Y-axis milling, drilling, and tapping
  - ± 3.0" (76 mm) Y-axis travel
  - · Fully interpolated C-axis

#### ST-45SY

- 27.5" x 28" (762 x 711 mm) max capacity
- 18" (457 mm) chuck (optional)
- 12-station BMT75 turret
- A2-11 spindle nose with 7.0" (178 mm) bore
- · Y-axis milling, drilling, and tapping
- ± 3.0" (76 mm) Y-axis travel
- Fully interpolated C-axis



- · Dual-axis spindle head provides ±245 degrees of C-axis rotation and ±120 degrees of B-axis tilt
- HSK-A100 integral-motor spindle
- 50+1 side-mount tool changer
- Control pendant on moveable stand for easy
- 153" x 49" (3886 x 1245 mm) table, with 3 blank bolt-on tooling plates for custom fixturing
- Fully supported X-axis travel
- 10,000 lb (4536 kg) part capacity

# VR DUAL-SUPPORT HSK- 20,000 RPM 50+1 TOOLS **SPINDLE HEAD**

This 20,000-rpm integral-motor spindle has been dyno-tuned and optimized to yield more torque and power than the standard spindle. It is housed in a Haas-built dual-axis articulated head that supports the spindle from both sides for added rigidity. The articulated head provides ±245 degrees of C-axis rotation and ±120 degrees of B-axis tilt, and both axes have heavy-duty brakes for rigid 3+2 machining.

- · Haas-built dual-axis head supports the spindle on both sides for added rigidity
- Provides ±245 degrees of C-axis rotation and ±120 degrees of B-axis tilt
- Powerful brakes on the B and C axes for accurate 3+2 machining

#### Spindle Specifications

S.A.E	METRIC
120 ° to 120-°	120° to 120
112 °/sec	112 °/sec
472 ft-lbf	640 Nm
454 ft-lbf	616 Nm
	120 ° to 120-° 112 °/sec 472 ft-lbf

#### **CAXIS - ROTATION**

Brake Torque

Travel ± Max Speed Max Torque

#### S.A.E 245° to 245-° 208 °/sec 264 ft-lbf

442 ft-lbf

245° to 245-208 °/sec 358 Nm 600 Nm



#### **Featured Highlights:**

- · Powerful integral-motor spindle
- HSK-A63 taper
- 20.000 rpm
- · Dual-axis spindle head
- 50+1 tools

#### 5-Axis Articulating Spindle **Machining Centers**

64" x 40" x 42" (xyz) 1626 x 1016 x 1067 mm 120" x 40" x 42" (xyz)

150" x 40" x 42" (xyz)

# WGAT<sup>9</sup>S REW

#### LARGE THROUGH-HOLE ROTARY



SPINDLES

350 mm

348 ft-lb 156°/sec

MAX SPEED



Our LT Series of rotary tables provide the same features and benefits as our standard HRT Series, but offer large through-bores and a variety of platter and chuck options to handle large shafts, drill pipe, and other large-bore work.

- 7.87" (200 mm) diameter through-hole
- · Optional platters and chucks available
- · Add large-bore 4-axis capabilities to your machine

#### **Product Highlights:**

- · Easy plug-and-play connection to Haas machines

# **COOLANT SANITIZER**

Reduces coolant tank bacteria and odor



The Haas Coolant Sanitizer combines an ozone generator with a submersible pump to diffuse ozone through the coolant to reduce bacterial growth and odor, extending the life of the coolant. A built-in timer allows the user to set dates and times for the system to be active. The control unit and pump mount to the enclosure and inside the tank, respectively, with heavy-duty magnets. Requires a 125VAC power source.

#### **Product Highlights:**

- · Reduces bacterial growth in the coolant
- · Reduces foul odors from old coolant
- · Integrated timer for on/off time
- Heavy-duty magnetic mounts for placement
- Operates on 125VAC

#### **ANOTHER SET OF EYES**

# **MONITOR SYSTEM**





Our Camera Monitor System allows you to view your workpiece and machining processes – from outside the machine. The system includes a fullyenclosed camera that mounts inside the machine enclosure, and an LCD monitor mounted outside near the control that displays the camera feed. A magnetic base simplifies camera placement, and allows mounting nearly anywhere inside the enclosure.

#### **Product Features:**

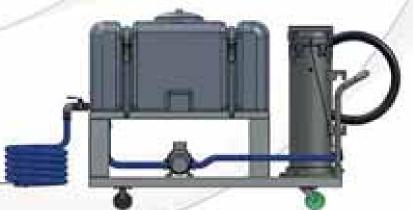
- View machining processes from outside the machine
- · Fully sealed camera with magnetic mount
- · LCD monitor displays the camera feed

#### **EASY AND CONVENIENT**

# **COOLANT MAINTENANCE CART**

The Haas Coolant Maintenance Cart provides a convenient way to remove coolant from your machine's coolant tank when it's time to clean the tank, and then return the coolant to the tank when cleaning is done. The system consists of a 50-gallon (190 liter) storage tank, a gear pump to convey the coolant, and an auxiliary coolant filter tank to remove

> chips and fines - all mounted on a heavy steel cart with industrial casters for mobility.



Simply pump the coolant from the coolant tank into the storage tank and roll the cart out of the way to clean the machine's coolant tank. The auxiliary filter tank holds an additional 10 gallons (38 liters) of coolant, boosting capacity to 60-gallons (227 liters), and the filter removes chips and fines from the coolant as it's pumped into the storage tank. Once tank maintenance is complete, simply roll the Coolant Maintenance Cart up to the machine and open the ball valve to discharge the coolant back into the machine's tank.

If the old coolant is not being reused, the Coolant Maintenance Cart is perfect for transporting the old coolant to a designated area for proper disposal. The cart is also well suited for mixing up a fresh batch of coolant and transporting it to the machine.

#### **NEW ROTARY SCREW COMPRESSOR**

# 3-IN-ONE AIR **COMPRESSOR**



The 15 hp (11 kW), direct-drive motor and compressor can produce up to 52.8 cfm (1.5 m3/min) of air at 145 psi (10 bar). This is the perfect solution for small- to medium-size shops. It's typically enough to run 10 Haas machines and still have extra capacity for several small pneumatic hand

#### **Fixed-speed compressors**

- · Constant motor speed, regardless of demand
- Most efficient when running continuously
- Compressor rating should closely match system load
- Less complex and expensive than variable-speed compressor

#### **Variable-speed drive**

- Variable motor speed based on demand
- Speed varies to maintain constant pressure
- Good choice for fluctuating/intermittent air draw
- Consistent pressure throughout the system
- More energy efficient



Rotary-Screw Air Compressor

All Haas air compressors are rotary-screw type, and are designed to run continuously. They are much quieter than typical reciprocating air compressors



Refrigerated Air Dryer

The air dryer utilizes R410A refrigerant for superior reliability and high energy efficiency



Digital Control Panel

Our user-friendly digital interface makes it easy to adjust settings, and view operational data at a glance.

HUCK

# PREPARE YOUR STOCK FOR LOADING **BAR CHAMFER**

Our Bar Chamfer Device is mounted directly to the charging tray of the Haas Bar Feeder, allowing you to chamfer the ends of bar stock before you load it into the tray. No need to chamfer bars by hand with a die grinder, simply activate the bar chamfer device with the included foot pedal and insert the bar into the chamfer hub. A hardened-steel serrated cutter quickly deburrs the bar and adds a chamfer.

- · Chamfer bars right at the bar feeder
- · Powered directly from the Haas lathe
- · Hardened-steel serrated cutter for long life
- Chamfers bars up to 2" (51 mm) diameter
- Includes foot pedal to activate











# Turn any space into a CNC learning lab.

Haas Desktop Machines are the perfect teaching and hobbyist machines. Though small in size, they have full-sized features, including a full-function Haas control. Their compact size and ease of use can turn any classroom or office into a hands-on CNC training center!

Intended primarily as training machines for schools and technical colleges. They're 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.



#### **Desktop Mill Capacities**

- 6" x 10" x 3" (152 x 254 x 76 mm) Travels
- 15,000-rpm Integral Motor Spindle
- ER11 Collet Taper
- 18.1" x 10.6" (460 x 270 mm) T-Slot Table



#### **Desktop Lathe Capacities**

- Chuck Size -2.5 in (63 mm)
- Max Cutting Diameter 0.75 in (19 mm)
- Z Axis: 2.70 in (69 mm)
- X Axis: 2.75 in (70 mm)
- Max Spindle Speed: 3000 rpm
- Tooling 6-Station Turret, 8 mm (OD) & ER-11 Collet (ID)

#### **Portable Haas Machines** for Education and Training

Haas Desktop Machines easily fit onto a desktop or rolling toolbox, making them perfect for the CNC classroom.

#### **Product Highlights:**

- · Portable design for ease of sharing
- · Easily fit onto a desktop or rolling toolbox
- · Ethernet and WiFi connectivity
- M130 Media Display
- · Do not need compressed air
- · Do not need coolant
- · No dedicated space required
- · No dedicated power drop needed
- Run on single-phase power (specify 120V or 220V)
- · Just plug them into the wall outlet

WHAT'S NEW

# What's NEW

#### PREPARE YOUR STOCK FOR LOADING

# **PRECISION GRINDER**



he HSG2550 Automatic Surface Grinder provides precision ground surfaces to critical sizes and finishes. Includes a 200mm diameter x 20mm wide grinding wheel and a 500mm x 250mm electromagnetic chuck.

#### **Standard Features:**

- · Coolant tank with filter
- Hydraulic pump
- · Fine pole electro magnetic chuck
- Balancing arbor
- · Parallel wheel dresser and diamond pen
- · Wheel balancer
- · Grind wheel and wheel flange
- Wheel extractor wrench

#### **Optional Accessories:**

- Dust extractor
- Two-axes DRO (SINO)
- · Coolant system w/ magnetic separator

# **COORDINATE MEASURING MACHINE**

**HMM430** 

Haas Automation's first coordinate measuring machine - the HMM430 - brings professional-grade inspection to your shop. This machine is perfect for small- to medium-sized shops looking for their first entry into the world of CMM inspections and ownership. Everything you need to get started is included.

Streamline your quality control by reducing the amount of time spent performing inspections with conventional metrology tools. Compared to similarly sized options from the big names in the CMM world, you'll find the HMM430 offers competitive accuracy at an unbeatable Haas price.



#### FAST | AFFORDABLE | RELIABLE



# **SR-3015 SHEET ROUTER**

■ aas **SR Series** sheet routers are affordable alternatives to gantry-style milling machines for cutting lighter, non-metallic materials, such as wood, plastics, high-density foam, and composites. The large travels of these machines easily accommodate full sheets of material, long extrusions, or multiple setups of smaller parts.

Powered by the industry-leading Haas control, SR Series routers provide a level of programmability and functionality not found in other CNC routers. The intuitive Haas control interface and robust features make programming and adjustments easy even for beginners.

Perfect for job shops, professional craftsman, and even hobbyists. Haas sheet routers are designed to elevate productivity and creativity in any manufacturing environment. Their heavy steel construction reduces vibration to increase speed and accuracy during machining, and they have a built-in vacuum dust collection system to easily remove chips, swarf, and dust produced during machining.





#### **PRISMATIC MACHINE**



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.

#### **Machine Features:**

- · Mill prismatic parts in a single setup
- · 40-taper articulating spindle w/brake
- +106° to -8° B-axis spindle rotation, interpolated or positioning
- · Add a rotary table for 5-side machining

The VP-5's articulating B-axis spindle head provides +106° to -8° of rotation, allowing you to machine prismatic parts in a single setup. Synchronize the B-axis motion with the X, Y, and Z axes for 3D interpolated machining, or engage the powerful B-axis brake for rigid 3+1 machining.

Two rotary options are available for the VP-5, providing additional flexibility for machining complex, multi-sided parts:

> High-Speed A-Axis Rotary option - mounts an HRT310SS rotary table vertically on the VP-5's table, to provide a high-speed A-axis platter for machining smaller prismatic parts.

High-Speed C-Axis Rotary option - mounts an HRT310SS rotary table horizontally on the VP-5's table as a C-axis platter, to provide access to 5 sides of longer parts.

VR-5 30 TAPER



The VR-5 brings 2-axis spindle head capabilities to our mid-size VMC platform to create a compact 5-axis machine for profiling and contouring mid-size parts. The machine's smaller footprint - 40% smaller than the large-frame VR-8 - makes it well suited for shops where space is at a premium.

Standard features include a 24.000-rpm integral-motor spindle, a 50+1 sidemount tool changer, and a 54" x 24" (1372 x 610 mm) T-slot table that easily supports longer workpieces and fixtures. The 2-axis gimbaled head provides ±245 degrees of C-axis rotation and ±120 degrees of B-axis tilt to access nearly any angle for complex shapes, undercuts, and 5-side machining, and brakes on the B and C axes provide plenty of rigidity for 3+2 machining.

- 24,000-rpm integral motor spindle
- ±245 degrees of C-axis rotation and ±120 degrees of B-axis tilt
- 50+1 side-mount tool changer
- 5-axis simultaneous machining
- Brakes on the B and C axes for rigid 3+2 machining

Includes Tool Center Point Control





**NEW PRODUCTION MODELS** 

**TOOLROOM** 

**LATHES** 

- 8" x 30" (203 x 762 mm) max capacity
- 6.5" (165 mm) power chuck with hydraulic closer
- 4-station automatic tool turret
- 3000-rpm A2-5 spindle

Bring production capabilities to your toolroom with the new Haas TL-1P Toolroom Lathe. We've taken our shop-proven TL-1 and added a 6.5" (165 mm) power chuck with hydraulic closer, a 4-station automatic tool turret, and a 3000-rpm A2-5 spindle to create a production-ready machine for any shop.

The machine's compact footprint, standard Visual Programming System, and ability to run on single-phase power make the TL-1P perfect for shops needing a last- or second-op machine, toolrooms, schools, and garage machinists. If longer turning capacity is needed, the TL-2P offers the same production features with a 48" (1219 mm) turning length.

**Machine Features:** 



Haas Visual Programming System



# STAINLESS STEEL **WAYCOVERS**

These heavy-gauge 304 stainless steel way covers for the X and Y axes of Haas VMCs provide high strength, as well as excellent resistance to chemical corrosion and rust. (Already standard on Z axis)

- · Heavy-gauge 304 stainless steel construction
- · Excellent corrosion resistance and strength
- · Glass-filled HDPE wipers for smooth operation and long life





HL50E LASER **MARKING MACHINE** 

The Haas HL50E is a fully enclosed, infrared fiber laser marking machine that combines advanced photonics and fiber optic technology to offer precise laser marking capabilities to your production line.

Equipped with an optical fiber cable instead of the typical series of lenses to concentrate and amplify the high-output, diode-generated light through a converging lens, the resulting laser beam is straighter, smaller, and more precise than other types of laser marking machines, with greater electrical efficiency and comparatively low operating costs.

This machine is suitable for most metallic materials and alloys, such as steel, stainless steel, brass, aluminum, silver, and iron, as well as some non-metallic materials, allowing it to be applicable across a wide range of industries—ideal for small and large manufacturing operations alike.

#### **Product Specifications**

- · Laser Power: 50W
- F160 Lens: 110x110mm (~4x4") working area, 160mm focal length (default)
- F290 Lens: 200x200mm (~8x8") working area, 290mm focal length
- · Wavelength: 1064nm (infrared)
- · Repeatability: +0.01mm

#### **Product Highlights**

- Q-Switch Pump Source efficiently emits light in rapid bursts/pulses, for better thermal control
- · Laser Pointers ensures engraver is in focus once calibrated
- Foot Switch
- · Power and Manual Laser Height Adjustment
- · Laser Light-Safe Windows
- Fume Extractor
- · Runs on Single-Phase Power (specify 120V or 220V)

# **BROKEN TOOL DETECTION**

The Haas Broken Tool Detection system uses a built-in camera to visually compare tools before and after a tool change, to determine if the tool was damaged during machining. If a broken tool is detected, the machine generates an alarm, and prevents the tool from being swapped into the spindle.

#### Standard on all UMCs<sup>\*</sup>

- · Safely stops the machine if a broken tool is detected
- · Saves money by preventing damage to tooling, workholding, and possibly the machine

\*Except UMC-350HD-EDU



#### STREAMLINE YOUR WORKFLOW

# TOOL PRESETTERS

The Haas series of Tool Presetters, designed to streamline your workflow, are the ultimate solutions for maximizing efficiency and maintaining precision in your machining operations. By eliminating the need for manual tool measuring, presetters allow tool offsets to be taken prior to each job, ultimately maximizing spindle time and leading to more efficient production runs.

Three presetter options are available, each tailored to meet specific customer needs. The range of X & Y axis travels, interchangeable taper sleeves to support numerous machines, and pneumatic capabilities for enhanced precision on the intermediate and advanced models, make these the most cost-effective and versatile solutions on the market.

#### HTS400

- Max X-Axis Travel: 12.6" (320 mm)
- Max Z-Axis Travel: 15.7" (400 mm)
- 5000 Tool Memory
- 50 Machine Origin Memory
- 40 Taper Tool Sleeve
- 20" Monitor

#### **HTS600**

- Max X-Axis Travel: 15.7" (400 mm)
- Max Z-Axis Travel: 23.6" (600 mm)
- 10,000 Tool Memory
- 100 Machine Origin Memory
- Pneumatic Axis Clamping
- Pneumatic Tool Interlocking System
- 40 Taper Tool Sleeve • 22" Monitor

- HPTS600
- Max X-Axis Travel: 15.7" (400 mm)
- Max Z-Axis Travel: 23.6" (600 mm)
- 20,000 Tool Memory
- · 200 Machine Origin Memory
- Pneumatic Axis Clamping
- Pneumatic Tool Interlocking System
- Pneumatic Taper Sleeve Brake
- 50 Taper Tool Sleeve
- 24" Monitor

**MAKING THE CUT BAND SAW** capability for extra efficiency.

Elevate shop productivity and precision with the HAB3232 Automatic Bandsaw, designed to meet the rigorous demand of automated metal cutting. Engineered for precision, our bandsaw delivers smooth, clean cuts on a variety of metals, from

The HAB3232 can cut different lengths in the same cycle, and has bar-stacking

Featuring an intuitive control panel, the HAB3232 offers user-friendly operation. Use Al Mode to let the saw determine its own feedrate, or use the adjustment wheel to make fine adjustments and determine what feedrate works best.

#### **Specifications**

- Max cutting height 12.6" (320 mm)
- Max cutting width 12.6" (320 mm)
  - Blade Speed 32.8 to 262.5 fpm (10 m/min to 80 m/min)
- Blade Size 162" x 1.3" x 0.04" (4115 x 33 x 1 mm)

#### **Product Highlights**

- Al Mode
- Wheel Adjustable Feed rate
- Bar Stacking Capability
- Manual and Automatic Modes Memory for multiple jobs
- · Can pause after cut
- Select first cut or no first cut

WHAT<sup>9</sup>S NEW



## **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





**70+1 SMTC**Optional tool changer for the EC-630 **Now Available on EC-1600 Series HMCs!** 

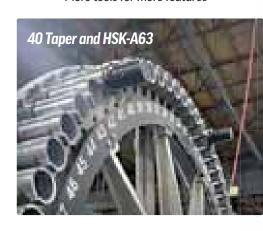
- Increased capacity for complicated jobs
   Add redundant tools for unattended
- Add redundant tools for unattended operation.
- Leave preset tools in the tool changer for quick changeover





High-Speed 70+1 Side-Mount Tool Changer

More tools for more features





Mold

VM-2 VM-3

**Machines:** 

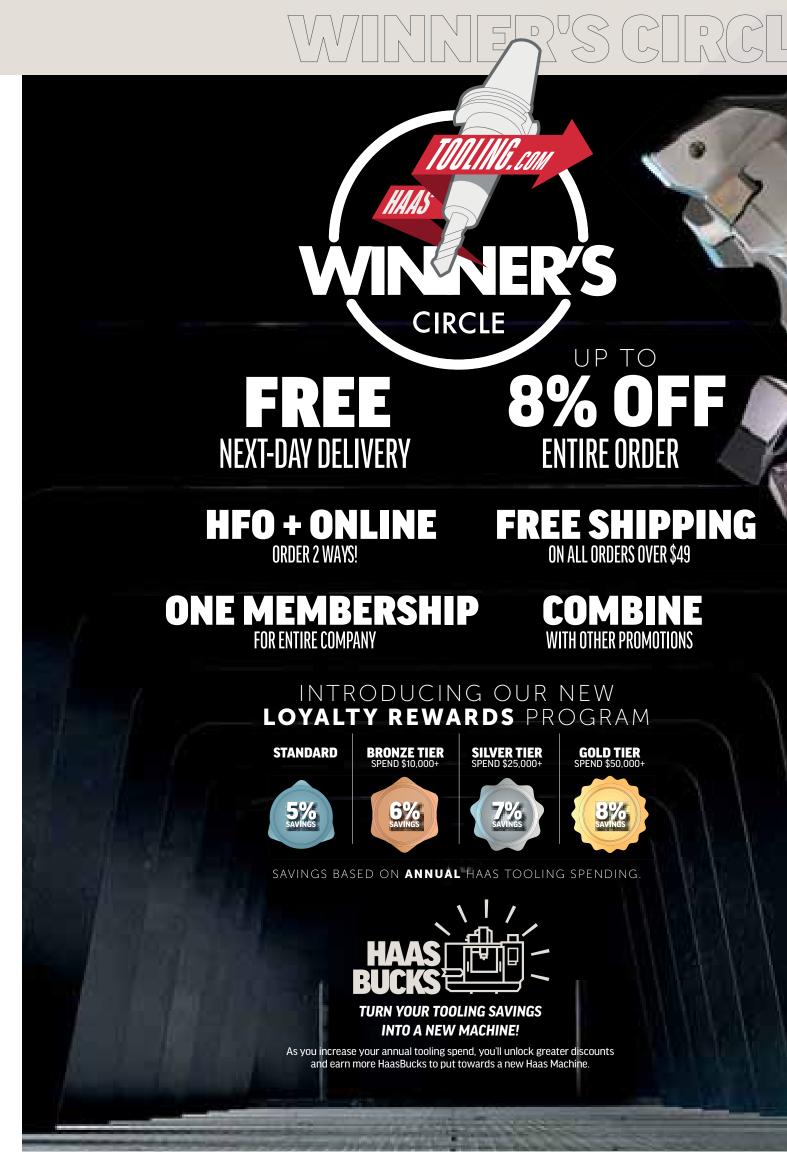
Every second counts - SS Models include even faster, Super-Speed, Tool Changes



**Universal Machines:** 

UMC-500/SS UMC-750/SS UMC-1000/SS UMC-1000-P/SS UMC-1250/SS UMC-1500-DU0/SS







# ROTARY & INDEXER

# 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.

- · 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)

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.

#### **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.



#### **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



# 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.

# HAAS AUTOMATIC VISE OPTIONS & CONFIGURATIONS

#### **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

#### **Hydraulic Vise Ready** Provision to accept hydraulie workholding. Option includes the HPU. rotary union, hydraulic lines, and foot pedal.

Replacement stee	l and aluminum	jaws available

9			1	
II			B	
	1			
П		7		
1			E.	

TRT160	4				
TRT210	4				
TRT310		<b>4</b>			
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)

**AIR VISES** 

100 MM

150 MM

- 1) Programmable Air REQUIRED
- 2) Air Vise Ready REQUIRED

Machine

Model

DT/DM

MM/SMM

VF-1/2

VF-3/4/5

VF-6/7/8/9

75 MM

- 3) Hydraulic Vise Ready option REQUIRED
- 4) Air Clamping Provision REQUIRED

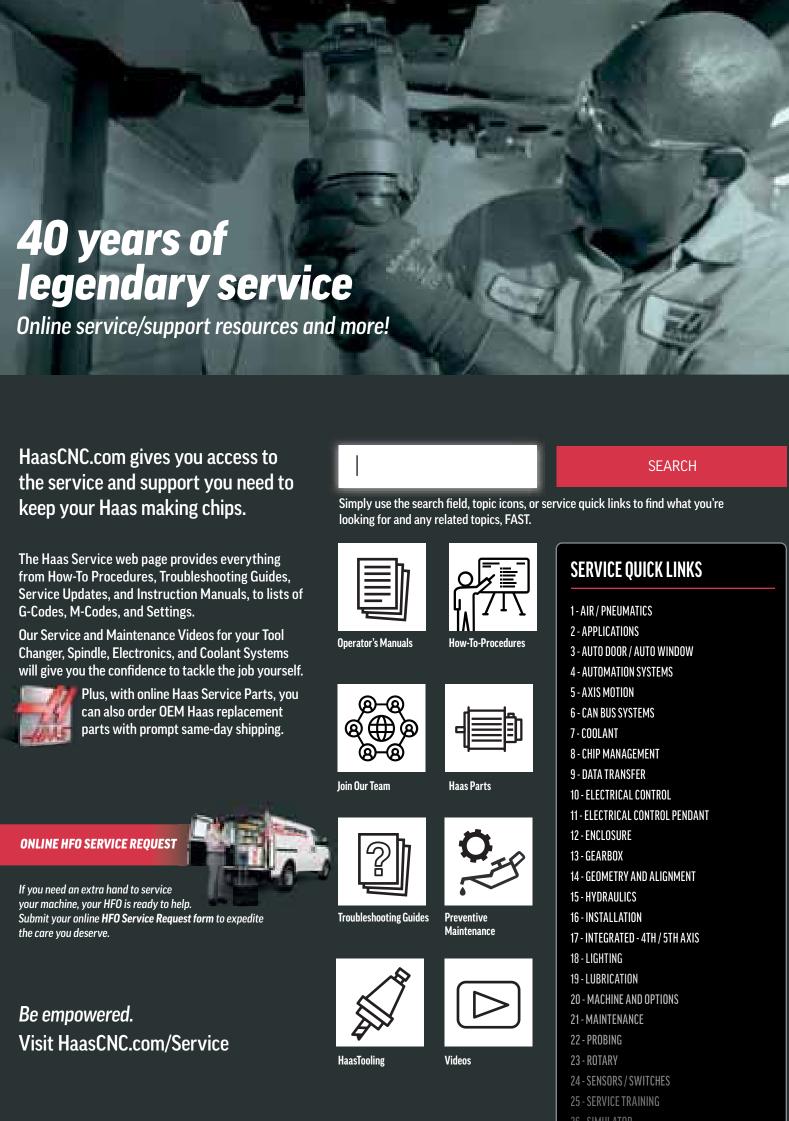
Air and hydraulic vises, as well as additional jaws and other vise accessories, are available through HaasTooling.com.

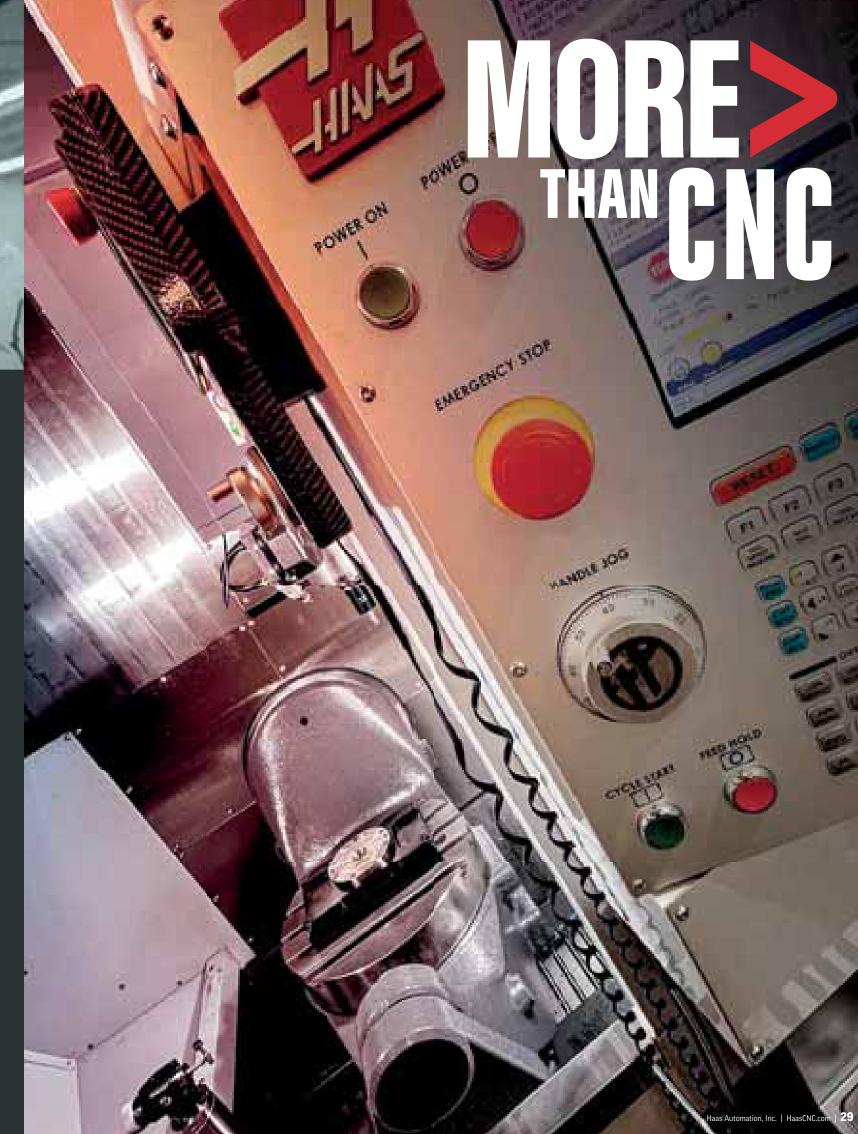
**HYDRAULIC VISES** 



- 26 SIMULATOR











# **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."



#### **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. HTEC is global! Visit www.HaasCNC.com/HTEC.

#### **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 HaasCNC.com/HTEC

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

# Simplicity by Design



# Centralized engineering and assembly

Haas machine's are designed, engineered, and assembled in our single Southern California factory, 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!



"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 controls 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 sident. 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 (MO3) 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.



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



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.

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.

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

"The Haas CNC control is so user

friendly: students are able to spend less time learning the control layout, and more time



#### Safe Run

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

#### **MORE POWERFUL STANDARD FEATURES:**



everything you need to know about your CNC machines in one convenient place. Download the free MyHaas app for Android and

Manage your fleet of machines

· Browse and order Haas Tooling

- Access HaasConnect and HaasDrop
- · Save and manage your machine quotes
- In the shop or on the go, MyHaas puts iOS devices - so you can:

#### **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.



#### **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.



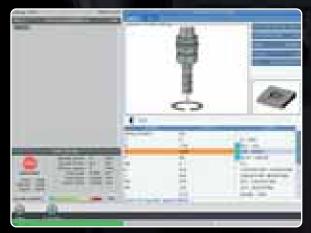
#### **Media Display Function**

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

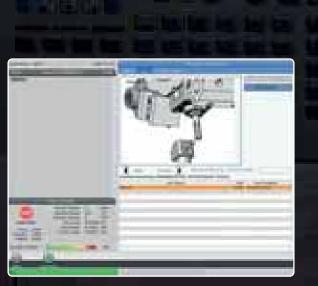
The Haas Visual Programming System uses graphical templates and a form-like interface to help you quickly create G-code programs for not only basic part features, but also more complex operations like bolt-pattern drilling cycles that let you incorporate spot drill, drill, tap, bore, counter-bore, and 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!





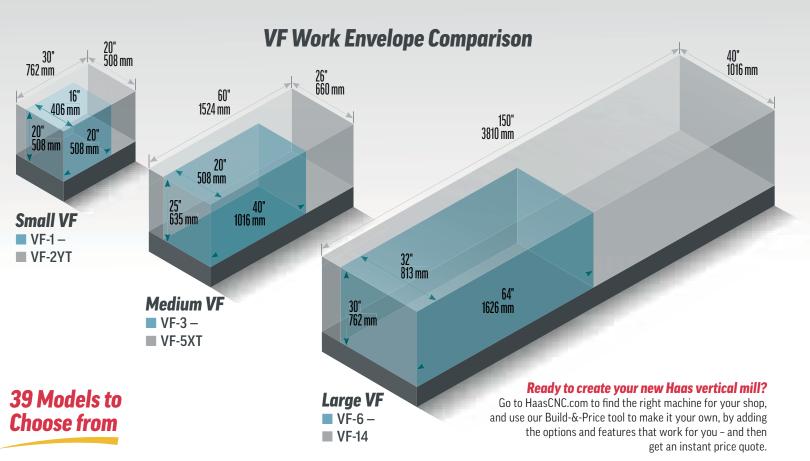


Our Visual Programming System for lathes gives you an easy way to write programs on the fly at your machine's control, using the geometry and features of your part.



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







#### **VF Model Series**

Small		Large	
▼ VF-1	20" x 16" x 20" (xyz) 508 x 406 x 508 mm	✓ VF-6	64" x 32" x 30" 1626 x 813 x 762
▼ VF-2	30" x 16" x 20" (xyz) 762 x 406 x 508 mm	VF-6SS Super Speed	64" x 32" x 30" 1626 x 813 x 762
VF-2SS Super Speed	30" x 16" x 20" (xyz) 762 x 406 x 508 mm	VF-6TR 5-Axis	64" x 32" x 30" 1626 x 813 x 762
VF-2TR 5-Axis	30" x 16" x 20" (xyz) 762 x 406 x 508 mm	<b>■</b> VF-6/50	64" x 32" x 30" 1626 x 813 x 762
▼ VF-2YT	30" x 20" x 20" (xyz) 762 x 508 x 508 mm	VF-6/50TR 5-Axis	64" x 32" x 30" 1626 x 813 x 762
VF-2SSYT Super Speed	30" x 20" x 20" (xyz) 762 x 508 x 508 mm	VF-7	84" x 32" x 30" 2134 x 813 x 762
		✓ VF-7/50	84" x 32" x 30" 2134 x 813 x 762
Medium	_	■ VF-8	64" x 40" x 30" 1626×1016×762
✓ VF-3	40" x 20" x 25" (xyz) 1016 x 508 x 635 mm	<b>■</b> VF-8/50	64" x 40" x 30" 1626×1016×762
VF-3SS Super Speed	40" x 20" x 25" (xyz) 1016 x 508 x 635 mm	<b>✓</b> VF-9	84" x 40" x 30" 2134 x 1016 x 762
■ VF-3YT	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm	✓ VF-9/50	84" x 40" x 30" 2134 x 1016 x 762
VF-3SSYT Super Speed	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm	<b>☑</b> VF-10	120" x 32" x 30" 3048 x 813 x 762
VF-3YT/50 50-Taper	40" x 26" x 25" (xyz) 1016 x 660 x 635 mm	✓ VF-10/50	120" x 32" x 30" 3048 x 813 x 762
■ VF-4	50" x 20" x 25" (xyz) 1270 x 508 x 635 mm	✓ VF-11	120" x 40" x 30" 3048 x 1016 x 762
VF-4SS Super Speed	50" x 20" x 25" (xyz) 1270 x 508 x 635 mm	<b>☑</b> VF-11/50	120" x 40" x 30" 3048 x 1016 x 762
▼ VF-5/40	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm	VF-12/40	150" x 32" x 30" 3810 x 813 x 762
VF-5SS Super Speed	50" x 26" x 25" (xyz) 1270 x 660 x 635 mm	VF-12/50	150" x 32" x 30" 3810 x 813 x 762

50" x 26" x 25" (xyz) 1270 x 660 x 635 mm

60" x 26" x 25" (xyz)

1524 x 660 x 635 mm 50" x 26" x 25" (xyz) 50" x 26" x 25" (xyz)

60" x 26" x 25" (xyz)

#### Machine With Available Option(s):

150" x 40" x 30" (xyz) 3810 x 1016 x 762 mm

150" x 40" x 30" (xyz)

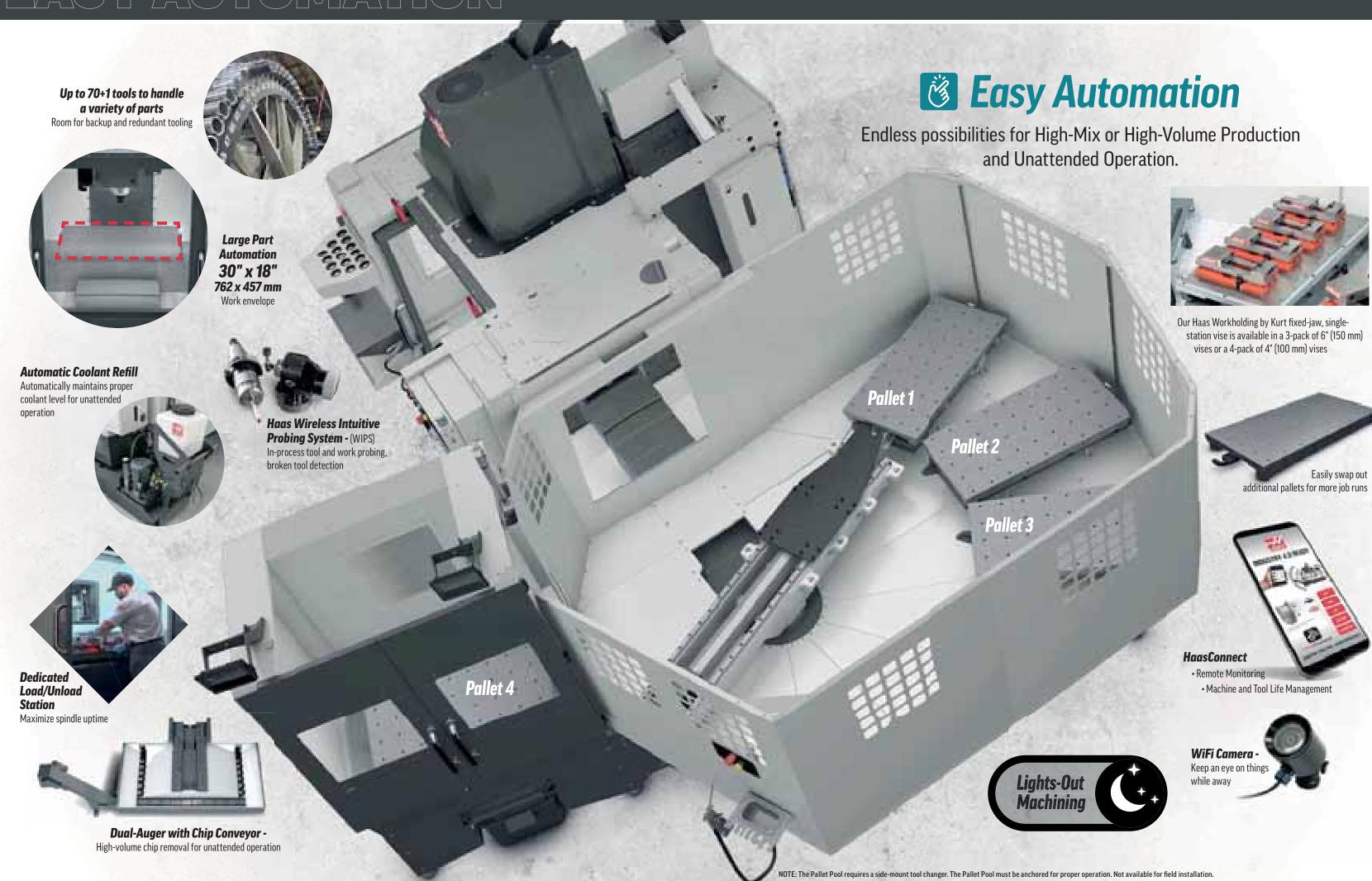
▲ Automatic Parts Loader Pallet Pool

Haas Cobot

Haas Robot

"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."





# 5-Axis for Everyone



#### **UMC Work Envelope Comparison**

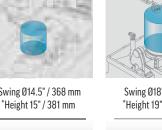


Swing Ø14.5" / 368 mm \*Height 15" / 381 mm

Width 94" / 2388 mm

Depth 100" / 2540 mm



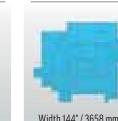


Width 95" / 2413 mm

Depth 84" / 2134 mm



\*Height 19" / 483 mm



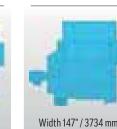
Width 115" / 2921 mm Depth 106" / 2692 mm



Swing Ø27" / 686 mm

\*Height 23" / 584 mm

Depth 124" / 3150 mm



Width 147" / 3734 mm Depth 131" / 3727 mm

Swing Ø33" / 838 mm

\*Height 28" / 711 mm

Width 162" / 4115 mm Depth 144" / 3658 mm

Swing Ø39" / 991 mm

\*Height 31" / 787 mm

NOTE: Maximum height and swing apply to 80 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 + workniece 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

#### 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

MACHINE FOOTPRINT Machine footprints are to scrole

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



#### 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** HSK 40 Taper 12,000 12,000

**Chip Flow** 

#### **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.

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



#### **Chip Disc Filtration Conveyor**

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



This optional conveyor features a built-in disk filtration height. Ideal for trouble-free unattended operation.



**Universal Machines** 

15" x 14" x 12" (xyz)

381 x 355 x 304 mm

17" x 11" x 13" (xyz)

432 x 279 x 330 mm

17" x 11" x 13" (xyz) 432 x 279 x 330 mm 24" x 16" x 16" (xyz)

610 x 406 x 406 mm

24" x 16" x 16" (xyz)

610 x 406 x 406 mm

30" x 20" x 20" (xyz) 762 x 508 x 508 mm 30" x 20" x 20" (xyz)

762 x 508 x 508 mm

40" x 25" x 25" (xyz) 1016 x 635 x 635 mm

40" x 25" x 25" (xyz) 1016 x 635 x 635 mm

40" x 25" x 25" (xyz)

1016 x 635 x 635 mm

40" x 25" x 25" (xyz) 1016 x 635 x 635 mm 50" x 30" x 28" (xyz)

1270 x 762 x 711 mm

50" x 30" x 28" (xyz)

1270 x 762 x 711 mm

60" x 20" x 20" (xyz)

1524 x 508 x 508 mm

60" x 20" x 20" (xyz)

1524 x 508 x 508 mm

■ UMC-350HD

▲ • UMC-500SS

■ UMC-750

■ ■ UMC-750SS

■ UMC-1000

■ UMC-1000SS

■ UMC-1250

UMC-1000-P

UMC-1000SS-P

UMC-1500-DU0

UMC-1500SS-DU0

UMC-400

UMC-400SS

- Haas Cobot
- Haas Robot
- 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 Automatic Parts Loader** 



Versatile Automation Robot & Cobot

# 

# Designed Specifically for Maximum Speed and Minimal Space







#### 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**

■ A ■ DT-2

20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm 28" x 16" x 15.5" (xyz)

✓ Markon DM-1

20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm

711 x 406 x 394 mm

28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm

#### Machine With Available Option(s)

- Haas Cobot
- Haas Robot

▲ Automatic Parts Loader

"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.





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.

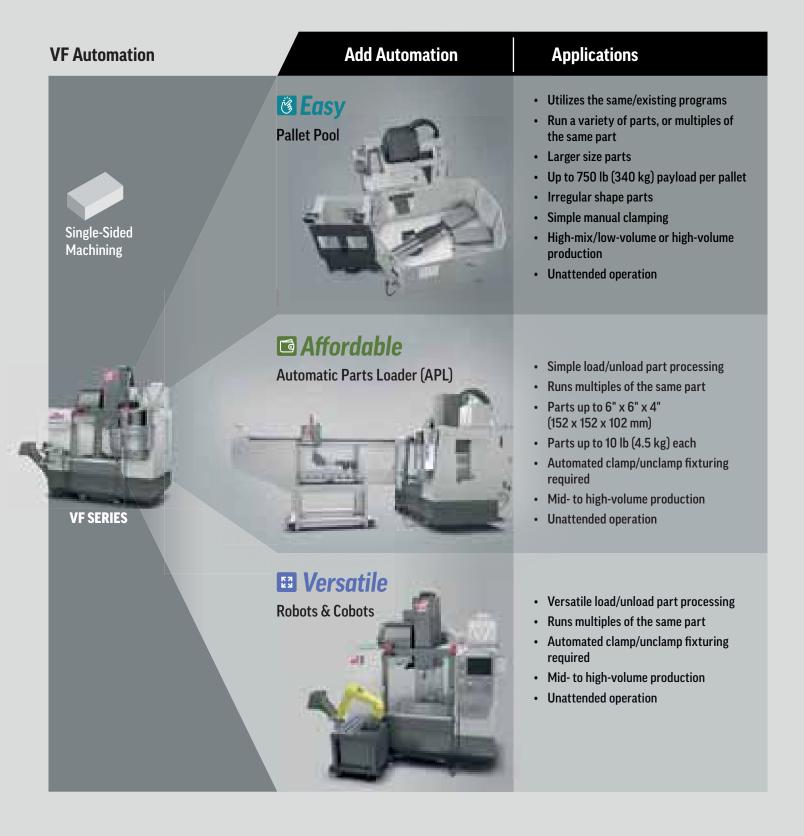


# UMC AUTOMATION



## Choosing the Right Automation for your VF

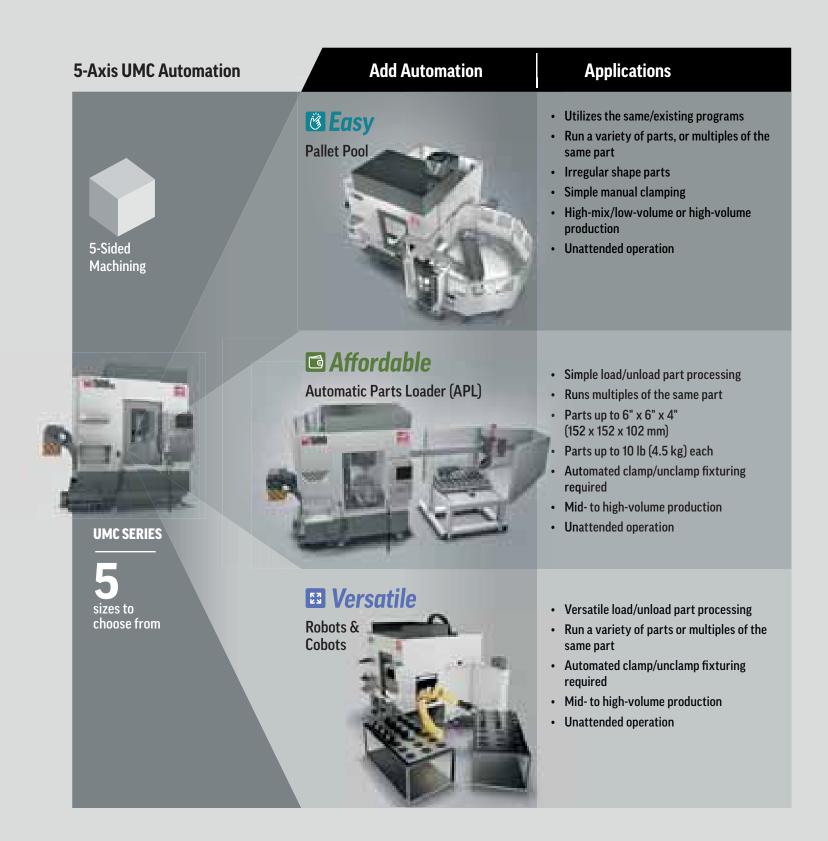
There are many ways to automate a machining process. Haas has the right choices to ensure that your future productivity is secure. We have pre-engineered a number of automation systems to help you find the one that fits best.





## **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.





# 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.

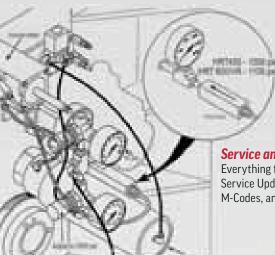


# **Build-&-Price**

Take a quick tour through our

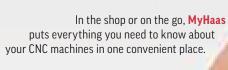
Build-&-Price feature, and discover
just how easy it is to find the machine
you need for the parts you're making.

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.



#### 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

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.





# Your source for genuine OEM Haas Parts

- Replacement parts
- Performance upgrades
- Maintenance upgrades



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 22" x 16" x 20" (xyz) Super Speed 559 x 406 x 508 mm



#### 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

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



# 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 Machinina**

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.

#### Haas Cobot

Haas Robot

✓ VM-3

▲ Automatic Parts Loader

Machine With Available Option(s):

**Mold Machines** 

30" x 20" x 20" (xyz)

40" x 26" x 25" (xyz)

1016 x 660 x 635 mm 64" x 32" x 30" (xyz) 1626 x 813 x 762 mm



#### **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** 

# GANTRY SERIES

Large-Platform CNC Gantry Machines for Big Jobs

**Gantry Mill Series** 



**GM-2-5AX** 5-AXIS 20,000 RPM

2-5AX IS IO RPM TOOLS TAPER

GM-1 & 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.

are Large of spindle coming Soon 3124 x 1549 x 279 mm

GM-2

GM-2-5AX

145" x 87.5" x 22" (xyz)

3683 x 2223 x 559 mm

145" x 87.5" x 39.3" (xyz)

3683 x 2223 x 998 mm



#### 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-1 and 2

The GM-1 and 2 are heavy-duty 3-axis gantry mills designed for heavier machining of large parts, such as airframe structures, large plates, and long extrusions.

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









#### **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.



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 inhouse, 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 30" x 16" x 16" (xyz) 762 x 406 x 406 mm 40" x 16" x 16" (xyz)

1016 x 406 x 406 mm

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



#### **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

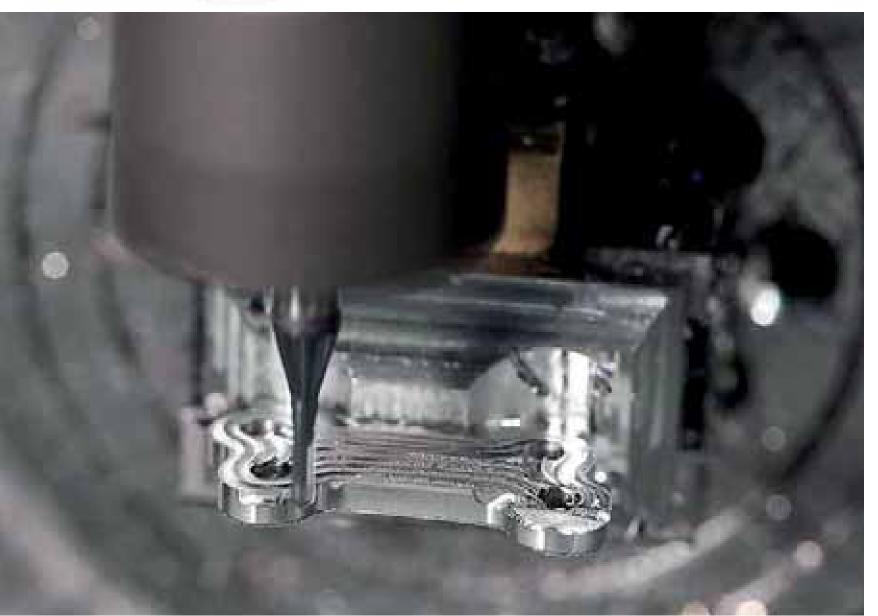


# **CM-1 Series**



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.





#### **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.



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.

#### **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 4thand 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.



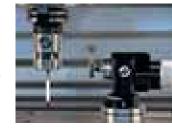
#### TRT70 dual-axis rotary

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

**Compact Mill** 

#### **Wireless Probing**

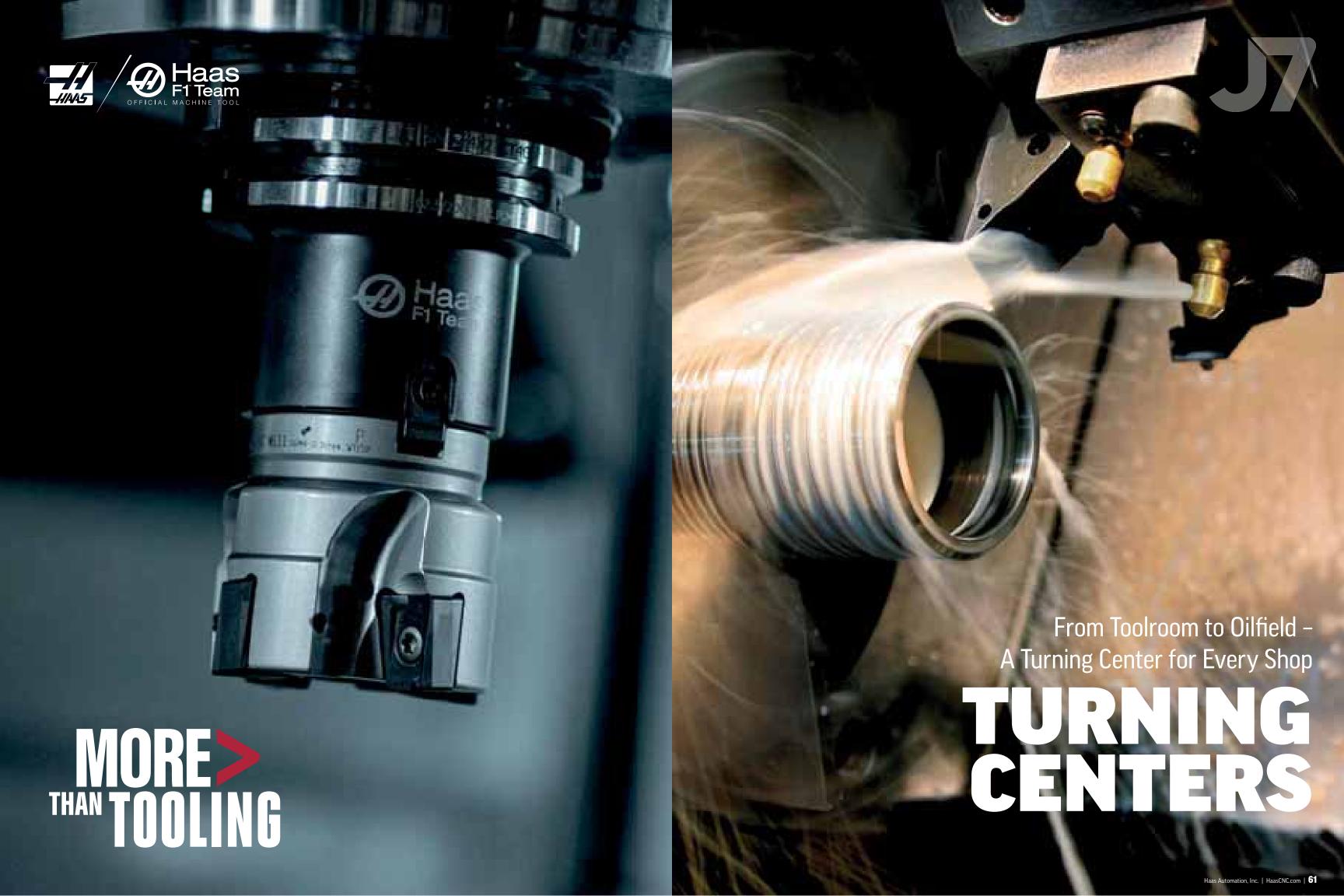
Setup reduction is critical to maximizing the productivity of any machine tool. With the probing solutions available from Haas, any machine can be set up in minutes, with just a few button pushes. Our industry-leading Wireless Intuitive Probing System (WIPS) sets the standard for integrated probing systems.



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



Haas Cobot



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" 10" 20" 30" 40" 50 0mm 254mm 508mm 762mm 1016mm 127		APL APL	ROBOT/ COBOT
A2-5	ST-10	1.75" 44mm	6.5" 165mm	12"o x 16" o 305 x 406mm	•	•	
	ST-15	2.5" 64mm	8.3" 210mm	12"o x 16" o 305 x 406mm	•		
	ST-20	2.5" 64mm	8.3" 210mm	13"0 x 22.5" o 330 x 572mm	•	00	
A2-6	ST-25	3" 76mm	10" 254mm	13"o x 22.5" o 305 x 572mm		• •	
	ST-30	3" 76mm	10" 254mm	15"0 x 32.5" 0 381 x 826mm		0	
	DS-30Y	3" 76mm	10" 254mm	13.75"o x 32.5" o 349 x 826mm		0	
	ST-28	4" 102mm	12" 305mm	13"o x 22.5" o 330 x 572mm		00	
A2-8	ST-35	4" • 102mm	12" 305mm	15"o x 32.5" o 381 x 826mm		0	
A2-11	ST-40	4" 102mm	15" 381mm	30"o x 44" o 762 x 1118mm		00	
AZ-11	ST-45	7" 178mm	18" 457mm	30"o x 44" o 762 x 1118mm		00	
		BAR CAPAC	ITY CHUCK	TURNING DIAMETER & Z-AXIS	For a complete list of work envelo short-bed ST-40/45 models, see p		g the new



#### 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 halfindex 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**

12" x 16" (max cap)

13"x22.5"(maxcap) 330 x 572 mm

305 x 406 mm

**■** ■ ◆ ST-10\* 12" x 16" (max cap) 305 x 406 mm 1.75" Bar (44 mm

✓ ST-15\* 2.5" Bar (63.5 mm)

▲ **■** ■ ◆ ST-20\*

2.5" Bar (63.5 mm)

13"x22.5"(maxcap) ▲ ■ ■ ◆ ST-25\* 330 x 572 mm 3.0" Bar (76 mm

13"x22.5"(maxcap) ▲ 🗾 🔰 ST-28\* 330 x 572 mm

✓ ST-30\* 15"x32.5"(maxcap) 3.0" Bar (76 mm) 381 x 826 mm

✓ ST-35\* 15"x32.5"(maxcap) 381 x 826 mm 4.0" Bar (102 mm)

> ✓ ST-40 30" x 44" (max cap) 762 x 1118 mm 4.0" Bar (76 mm) ✓ ST-45 30" x 44" (max cap)

7.0" Bar (178 mm) 762 x 1118 mm

Haas Cobot

Haas Robot

Automatic Parts Loader

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** 

# ST Y-/AX/IS/IDS-30Y

# 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** 

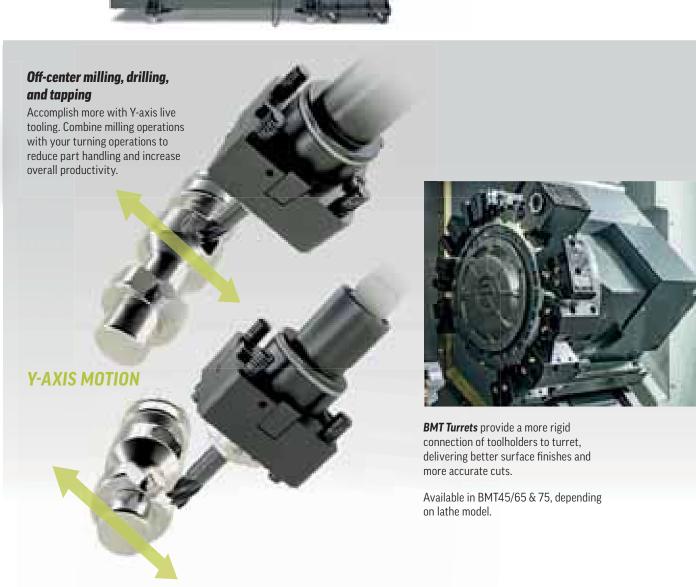
ST-20Y ST-25Y ST-28Y

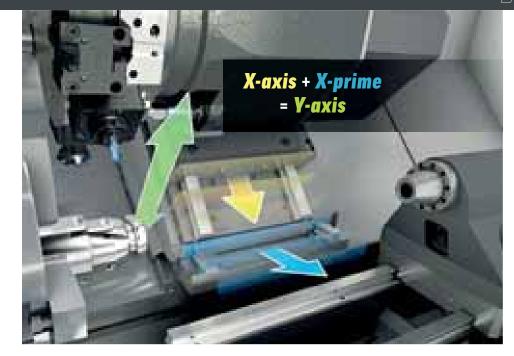
ST-30Y ST-35Y

DS-30Y

BMT75

ST-40Y ST-40SY ST-45Y ST-45SY





#### 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.



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

Available on HaasTooling.com



#### **ST Series Y-Axis**

A ■ ST-10Y\*

175" Bar (44 mm)

12" x 16" (max cap)

279 x 406 mm

12" x 16" (max cap)

279 x 406 mm

12" x 16" (max cap)

279 x 406 mm

175" x 22.5" (max cap)

275" Bar (63.5 mm)

279 x 406 mm

175" x 22.5" (max cap)

298 x 572 mm

175" x 22.5" (max cap)

298 x 572 mm

298 x 572 mm

ST-28Y" 11.75" x 22.5" (max cap) 4.0" Bar (102 mm) 298 x 572 mm ST-30Y" 13.75" x 32.5" (max cap)

3.0" Bar (76 mm)

■ ■ ST-35Y\* 13.75" x 32.5" (max cap) 349 x 826 mm
■ ST-40Y 27.5" x 44" (max cap)

■ ST-40SY 28" x 44" (max cap) 4.0" Bar (102 mm) 711 x 1118 mm ST-45Y 27.5" x 44" (max cap)

699 x 1118 mm

7.0" Bore (178 mm) 699 x 1118 mm ST-45SY 28" x 44" (max cap) 7.0" Bore (178 mm) 711 x 1118 mm

## Dual-Spindle or DS-30V 137

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

#### Machine With Available Automation Option(s

- Automatic Parts Loader
- Haas Cobot
- Haas Robot

Haas Bar Feeder

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



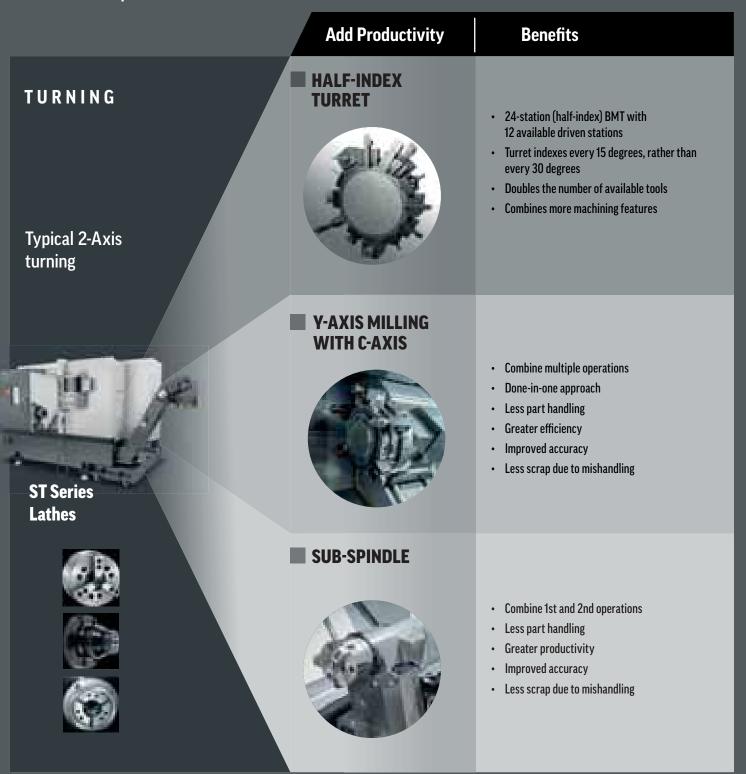
#### The Haas Automatic Parts Loader

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, 2O, 2OY, 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



#### **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.

	Add Automation	Benefits
TURNING CHOICES	Easy Haas Bar Feeder	<ul> <li>Easiest solution for automation</li> <li>Auto-feed material up to 3" (76 mm) Diameter</li> <li>Unattended operation</li> <li>Interfaces directly with the Haas control</li> <li>Set up &amp; program completely through Haas Control</li> <li>Mid- to high-volume production</li> </ul>
ST Series Lathes	Affordable Automatic Parts Loader (APL)	<ul> <li>Affordable automation, great alternative to robot</li> <li>Load/unload slugs up to Ø5.8" x 5" x 10 lb (Ø147 mm x 127 mm x 4.5 kg)</li> <li>Load/unload shafts up to Ø4.0" x 21" x 10 lb (Ø102 mm x 533 mm x 4.5 kg)</li> <li>Unattended operation</li> <li>Interfaces directly with the Haas control</li> <li>Set up &amp; program completely through Haas Control</li> <li>Mid- to high-volume production</li> </ul>
	Robots & Cobots	<ul> <li>Most versatile automation choice</li> <li>Incorporate part flipping station</li> <li>Able to pick up/drop off at different locations</li> <li>Unattended operation</li> <li>Interfaces directly with the Haas control</li> <li>Set up &amp; program completely through Haas Control</li> <li>Mid- to high-volume production</li> </ul>

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

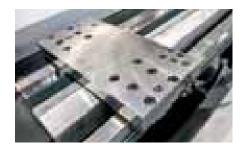
Y-axis and C-axis capabilities, with high-performance live tooling, allowing high-productivity, done-in-one







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**

12" x 32.5" (max cap) 1.75" Bar (44 mm) 305 x 826 mm

ST-10LY 12" x 32.5" (max cap) 305 x 826 mm 1.75" Bar (44 mm)

♦ ST-15L 12" x 32.5" (max cap) 2.5" Bar (63.5 mm) 305 x 826 mm

12" x 32.5" (max cap) ST-15LY 2.5" Bar (63.5 mm) 305 x 826 mm

13" x 42.5" (max cap)

330 x 1080 mm

330 x 1080 mm

**✓** ST-20L 2.5" Bar (51 mm) ✓ ST-20LY

11.75" x 42.5" (max cap) 298 x 1080 mm 2.5" Bar (51 mm) 13" x 42.5" (max cap) **✓** ST-25L

3.0" Bar (76 mm)

**■** ■ ST-25LY 11.75" x 42.5" (max cap) 3.0" Bar (76 mm) 298 x 1080 mn

13" x 42.5" (max cap) **■** ST-28L 330 x 1080 mm 4.0" Bar (102 mm)

**■** ■ ◆ ST-28LY 11.75" x 42.5" (max cap) 298 x 1080 mm

15" x 62.5" (max cap) ✓ ST-30L 381 x 1588 mm 3" Bore (76 mm)

13.75" x 62.5" (max cap) ■ ST-30LY 349 x 1588 mn

15" x 62.5" (max cap) ✓ ST-35L 4.0" Bar (102 mm) 381 x 1588 mm

13.75" x 62.5" (max cap) ✓ ST-35LY 349 x 1588 mm

#### **Large Through-Bore**

ST-40L 30" x 80" (max cap) 762 x 2032 mm 27.5" x 80" (max cap) ST-40LY

4.0" Bar (102 mm) 699 x 2032 mm ST-45L 30" x 80" (max cap) 762 x 2032 mm 7.0" Bore (178 mm)

27.5" x 80" (max cap) ST-45LY 699 x 2032 mm 70" Bore (178 mm) ST-55 25.5" x 80" (max cap)

648 x 2032 mm

Machine With Available Automation Option(s):

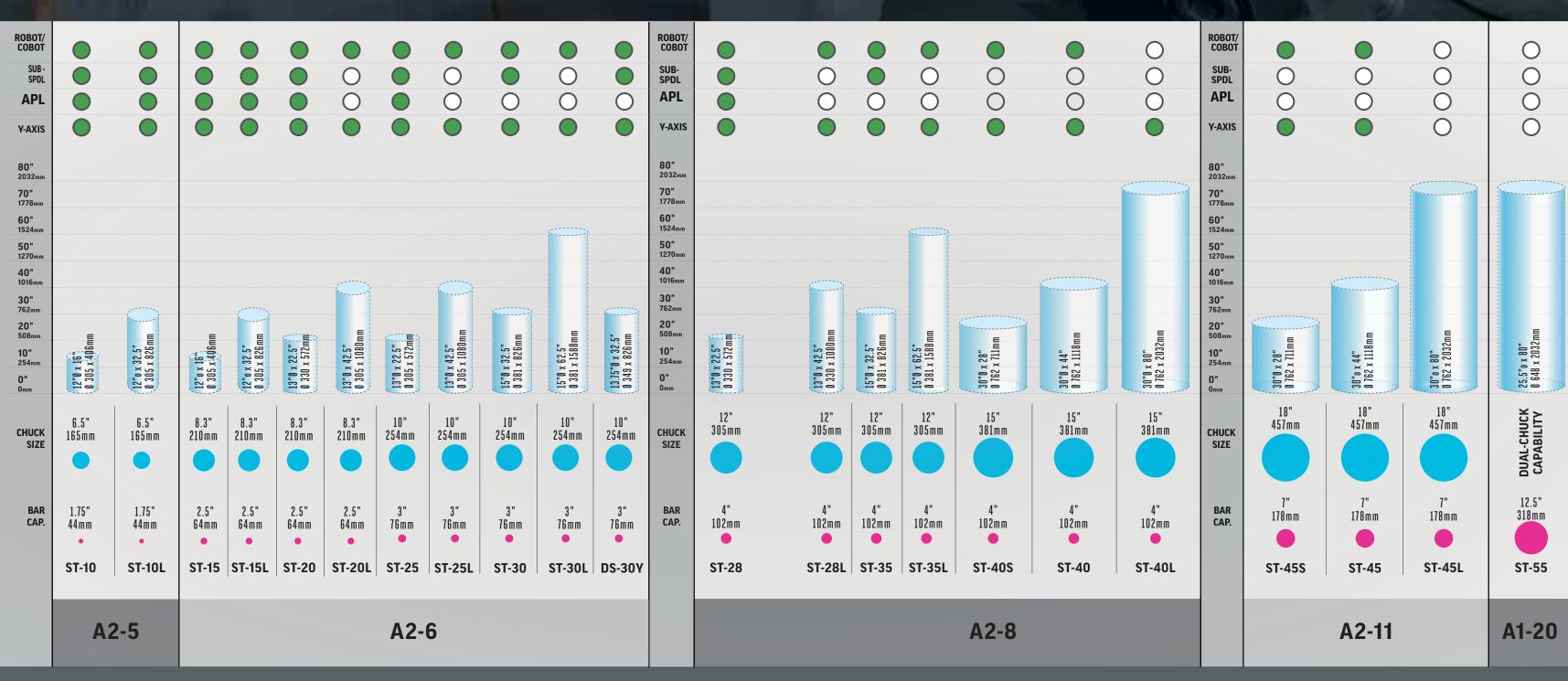
Haas Cobot

12.5" Bore (318 mm

Haas Robot

Haas Bar Feeder

# LATHE Work Envelope Comparison









# Toolroom and beyond



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

**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



### **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.



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, highvolume 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 cross slide 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**

16" x 30" (max cap) 406 x 762 mm

16" x 48" (max cap) TL-2 406 x 1219 mm

16" x 30" (max cap) TL-1-EDU For Education 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** UPTAGRAFFT, LLC

# CHUCKER LATHE

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.



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









### 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.

### 1. 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 MILLS

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

EC-400

4 AXIS
8100-15,000 RPM
31-101 TOOLS



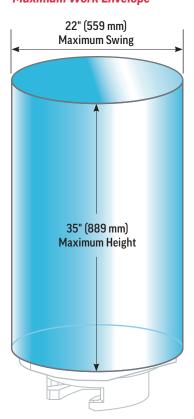
The EC-400 was designed from the ground up with FEA-optimized castings for increased rigidity and better cutting performance in a compact footprint. It features a full 4th-axis rotary system for synchronous motion, and is available with a 100-pocket tool changer for high-volume production. See how Haas engineers have taken our latest HMCs to the next level.

"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



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



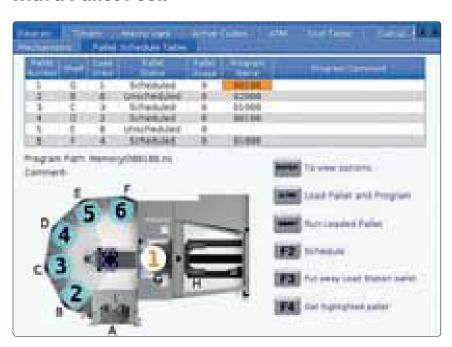


### Designed for high-volume production and unattended operation

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.

### 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 TankCNC 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 ScalesWindow 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



# 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 are an 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** 





## **EC-500** Series

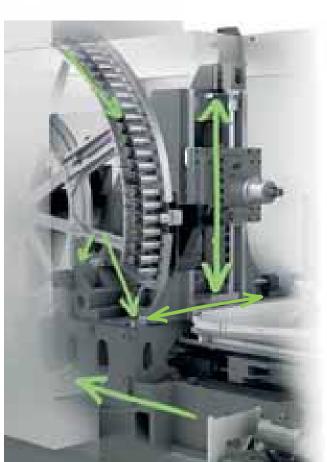




All Haas horizontal machining centers offer superior capabilities at affordable prices. With renowned ruggedness and reliability, you'll find Haas HMCs are the perfect job shop machines for those looking to make more money in less time than ever before.

- 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

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



Available in 40- and 50-taper configurations, the Haas EC-500 Series HMCs offer a larger work envelope than the EC-400, while providing excellent rigidity and cutting performance.



### 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** 





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

### 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 highprecision 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.



### **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.

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.



# Our updated EC-1600 has received a host of improvements





### Improvements standard on the EC-1600 include:

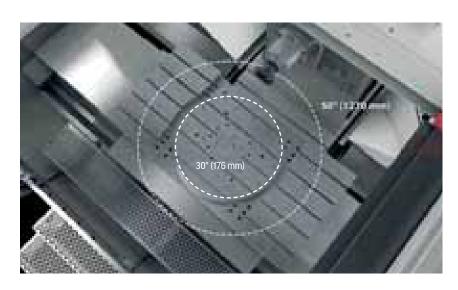
- Standard 7500 rpm spindle
- Flood Coolant ring
- Redesigned column with 13% greater casting stiffness and reduced mass
- X and Z ballscrews 25% larger (50 mm)
- X and Z motors 50% larger
- Tool Changer 50% faster
- · Enclosure Exhaust system
- Four 50-watt LED lights

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

- 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

machining.

• 50" (1270 mm) max part swing with integrated 4th axis (optional)





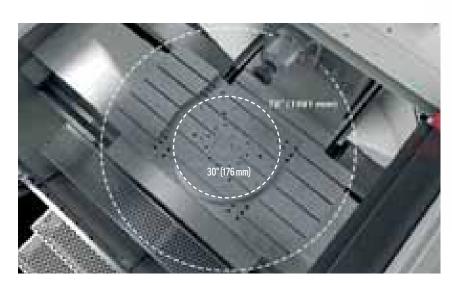
### **EC-1600ZT**



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)
- · Now available with a 70+1 Side-Mount Tool Changer.



### 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.

# HORIZONTAL MILLS

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





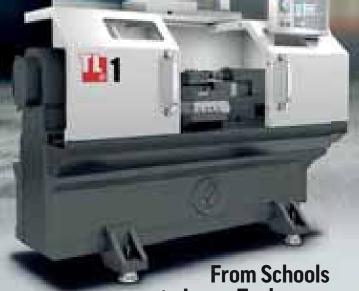
The EC-1600ZT-5AX has a 4th-axis rotary platter integrated into the T-slot table that provides ±30 degrees of B-axis rotation. The 5th-axis consists of an HRT310 with an A-frame support mounted on a removable riser block, which can support a part up to 55.875" (1419 mm) long.

- 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









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.

Maximum Designed for **Our Smallest and Most-Affordable Toolroom Mill** to Large Toolrooms The Haas TM-O 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) \$31,695 **Toolroom Mill (TM-0) \$33,995** 16" x 30" (406 mm x 762 mm) Travels • • 20" x 12" x 16" (508 x 305 x 406 mm) travels Operates on single- or three-phase power • • Operates on single- or three-phase power 1800-rpm spindle, 10 hp (7.5 kW) • • 4000-rpm 40-taper spindle Visual Part Programming System • • Visual Part Programming System Standard program memory, 1 GB • • Standard program memory, 1 GB User-friendly Haas control • • User-friendly Haas control Affordable full CNC capabilities • Affordable full CNC capabilities 1-year standard warranty • • 1-year standard warranty **Contact your nearest HFO for complete details.** \*Monthly pricing based on sample products shown above when financed for 84 months with a 30% down payment, at 1.49%. OAC.





### Do More Than 3-Axis Machining



### 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.

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.** 



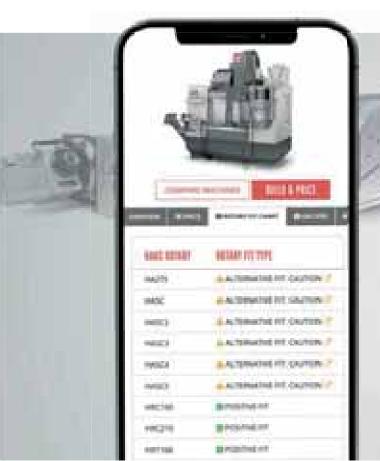
### Multi-Axis Machining Simplicity

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.





### 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

Medium

Models:

HRT210

HRT210HT

HRT210M

HRT210SP

HRT210-2

- · Industry-leading performance and capabilities
- · Heavy-duty design

### **Small Rotaries**



Models: HRT100 HRT160 HRT160SP HRT160-2 HRTA5

### **Medium Rotaries**



### **Through-Hole Rotaries**

240-450 mm PLATTER SIZE 75-156 °/sec MAX SPEED



Our TH and LT 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 LT350

### **Extra-Large Rotaries**

Haas rotaries just got bigger! Our extralarge 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. HRT800

**Extra-Large** Models: HRT450 HRT630 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

### 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

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

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

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).



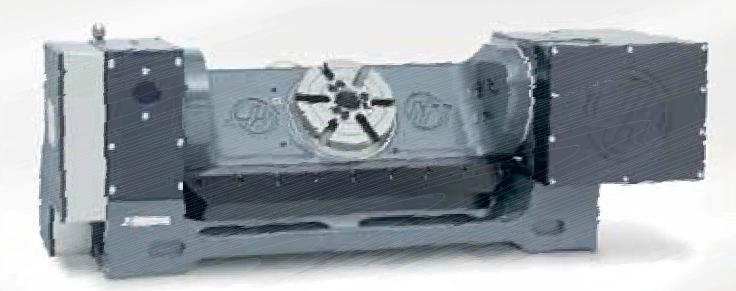
For full 5-axis motion or 3+2 positioning, available as indexers or rotary tables, these units increase accuracy and reduce setups.

# **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.



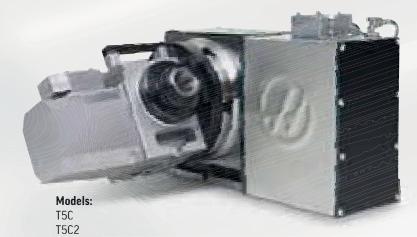
- Add 4- and 5-axis capabilities to your machine
- Easy plug-and-play connection to Haas machines
- Industry-leading performance and capabilities
- · Heavy-duty design

### Models:

TR160 TR210 TR160-2 TR310 TR500SS TR200Y



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.

### **Tilting Rotaries**

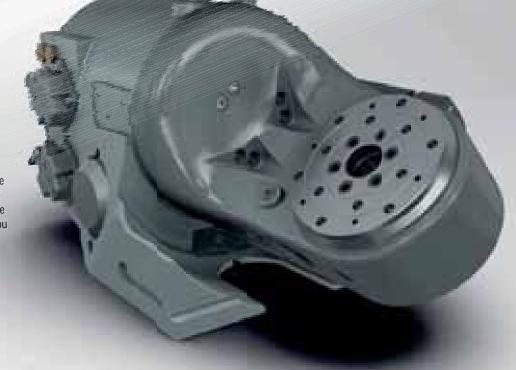
Five-axis machining is the fastest way to reduce setups, boost throughput, and increase accuracy on complex parts. And Haas plug-inplay dual-axis rotary tables and indexers make 5-axis machining easier than ever, allowing you to reduce or totally eliminate multiple setups, and easily handle multi-sided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

### Models:

T5C3

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.

# ROTARY ACCESSORIES





providing a better buying experience.

### INTRODUCING OUR NEW LOYALTY REWARDS PROGRAM

STANDARD

BRONZE TIER SPEND \$10,000+

SILVER TIER SPEND \$25,000+

GOLD TIER SPEND \$50,000-







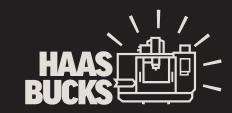


SAVINGS BASED ON ANNUAL HAAS TOOLING SPENDING.



WINNER'S

**CIRCLE** 



**TURN YOUR TOOLING SAVINGS INTO A NEW MACHINE!** 

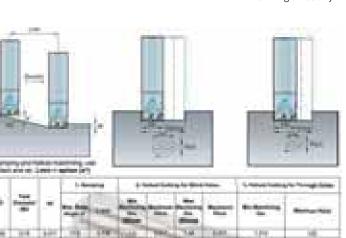
As you increase your annual tooling spend, you'll unlock greater discounts and earn more HaasBucks to put towards a new Haas Machine.

## 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.



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.



### 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** 

\*48 Contiguous United States Only



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



3-Jaw Chucks & Mounts for Mills



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



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



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 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 Collet Kits, ER Collet Chucks, and Straight Shank ER



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



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



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



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



Broaching Toolholders, Broaching Inserts



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



20-Piece CT40 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



6" Haas Vise by Kurt Mill Workholding Kit, Self-Centering Vise and Riser Kit



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



Smooth, Round-Bore, Quick-Change Collets



Cermets, CBNs, Notch Groove, Threading, and **Grooving Inserts** 



Haas BT40, CT40, and CT50 Solid Pull Stud packs, Through-Spindle Coolant Pull Stud packs, and individual units



Many sizes to chose from



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



Straight Flute, Spiral Flute, Spiral Point, Through-Spindle Haas 30/40/50 & HSK63A-Taper Tool Carts Coolant Taps, and every coating type



**STORAGE & HANDLING** 



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



# 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

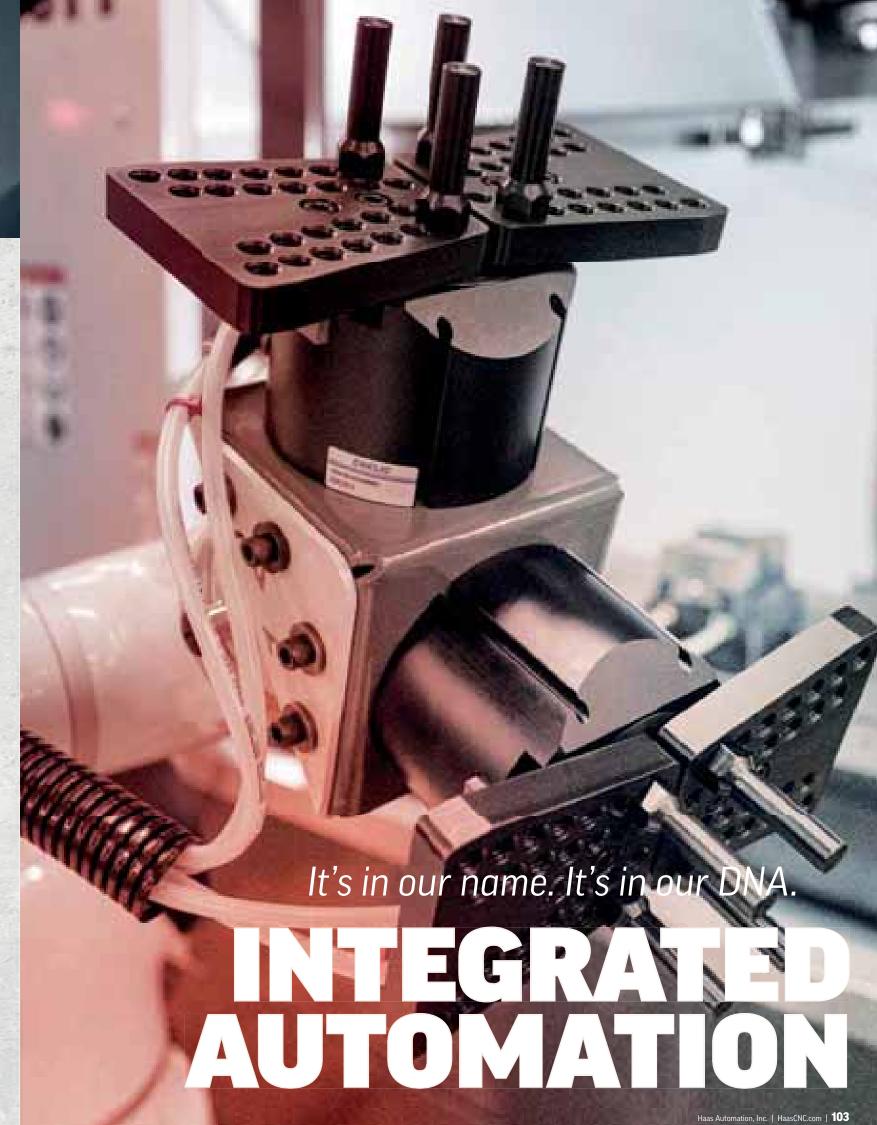


BMT75 12-Station



BMT75 Half Index 24-Station





# Haas Robot Packages

**■ Versatile Automation** 



### 20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm 28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm 20" x 16" x 15.5" (xyz) 508 x 406 x 394 mm 28" x 16" x 15.5" (xyz) 711 x 406 x 394 mm 20" x 16" x 20" (xyz) 508 x 406 x 508 mm

30" x 16" x 20" (xyz) 762 x 406 x 508 mm 30" x 16" x 20" (xyz) 762 x 406 x 508 mm 30" x 16" x 20" (xyz) 762 x 406 x 508 mm 24" x 16" x 16" (xyz) 610 x 406 x 406 mm

UMC-500SS 24" x 16" x 16" (xyz) 610 x 406 x 406 mm

VF-2SS

VF-2TR

UMC-500

ATHE HRP



12" x 16" (max cap) ST-10L 12" x 32.5" (max cap) 305 x 826 mm 11" x 16" (max cap) ST-10Y 279 x 406 mm 11" x 32.5" (max cap) ST-101 Y 1.75" Bar (44 mm) 279 x 826 mm ST-15 12" x 16" (max cap) 305 x 406 mm 2.5" Bar (63.5 mm) 12" x 32.5" (max cap) ST-15L 305 x 826 mm 1.75" Bar (44 mm) ST-15Y 11" x 32.5" (max cap) 2.5" Bar (63.5 mm) 11" x 32.5" (max cap) ST-15LY 279 x 826 mm

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



ST-20

ST-20L

ST-20Y

2.5" Bar (63.5 mm)

2.5" Bar (63.5 mm)

762 x 508 x 508 mm 30" x 20" x 20" (xyz) 40" x 20" x 25" (xyz) 1016 x 508 x 635 mm 40" x 26" x 25" (xyz) 1016 x 660 x 635 mm 40" x 20" x 25" (xyz)

VF-3SS VF-3SSYT VF-3YT/50 VF-4

VF-2SSYT

VF-3

VF-3YT

VF-4SS VF-5/40

VF-5/40XT

VF-5SS

VF-5/40TR VF-5/50TR VF-5/50XT

VM-2

UMC-500

UMC-500SS Super Speed UMC-750

> UMC-750SS UMC-1000

UMC-1000SS

30" x 20" x 20" (xyz) 1016 x 805 x 635 mm

40" x 26" x 25" (xyz) 1016 x 660 x 635 mm 40" x 26" x 25" (xyz) 50" x 20" x 25" (xyz) 1270 x 508 x 635 mm 50" x 20" x 25" (xyz) 1270 x 805 x 635 mm 50" x 26" x 25" (xyz) 1270 x 660 x 635 mm

60" x 26" x 25" (xyz) 1524 x 660 x 635 mm 50" x 26" x 25" ((xyz) 50" x 26" x 25" (xyz) 1270 x 660 x 635 mm 50" x 26" x 25" (xyz) 1270 x 660 x 635 mm 60" x 26" x 25" (xyz) 1524 x 660 x 635 mm 30" x 20" x 20" (xyz) 762 x 805 x 805 mm 40" x 26" x 25" (xyz)

1016 x 660 x 635 mm 24" x 16" x 16" (xyz) 610 x 406 x 406 mm 24" x 16" x 16" (xyz) 610 x 406 x 406 mm 30" x 20" x 20" (xyz)

762 x 805 x 805 mm 30" x 20" x 20" (xvz) 762 x 805 x 805 mm 40" x 25" x 25" (xvz) 1016 x 635 x 635 mm 40" x 25" x 25" (xvz)

1016 x 635 x 635 mm

4

2.5" Bar (63.5 mm) ST-20LY 2.5" Bar (63.5 mm) ST-25 3.0" Bar (76 mm) ST-25L 3.0" Bar (76 mm) ST-25Y ST-25LY 3.0" Bar (76 mm) ST-28 4.0" Bar (102 mm) ST-28L 4.0" Bar (102 mm) ST-28Y 4.0" Bar (102 mm) ST-28LY 4.0" Bar (102 mm) ST-30 3.0" Bar (76 mm) ST-30L 3.0" Bar (76 mm) ST-30Y 3.0" Bar (76 mm) ST-30LY 3.0" Bar (76 mm) ST-35

4.0" Bar (102 mm)

4.0" Bar (102 mm)

4.0" Bar (102 mm)

4.0" Bar (102 mm)

3.0" Bar (76 mm)

ST-35L

ST-35Y

ST-35LY

DS-30Y

13" x 22.5" (maxcap) 13" x 42.5" (maxcap) 11.75" x 22.5" (max cap)

298 x 572 mm 11.75" x 42.5" (max cap) 298 x 1080 mm

13" x 22.5" (maxcap) 330 x 572 mm 13" x 42.5" (maxcap)

330 x 572 mm

330 x 1080 mm

11.75" x 22.5" (max cap)

11.75" x 42.5" (max cap) 298 x 1080 mm

13" x 22.5" (maxcap) 330 x 572 mm

13" x 42.5" (maxcap) 330 x 1080 mm

11.75" x 22.5" (max cap)

11.75" x 42.5" (max cap) 298 x 1080 mm

15" x 32.5" (maxcap) 381 x 826 mm

15" x 62.5" (maxcap) 381 x 1588 mm 13.75" x 32.5" (max cap)

349 x 826 mm 13.75" x 62.5" (maxcap) 349 x 1588 mm

15" x 62.5" (maxcap) 381 x 1588 mm 15" x 62.5" (maxcap)

381 x 1588 mm 13.75" x 32.5" (max cap)

13.75" x 62.5" (max cap) 349 x 1588 mm

13.75" x 32.5" (max cap) 349 x 826 mm

349 x 826 mm

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.



œ I

VF-6/40 64" x 32" x 30" (xyz) 64" x 32" x 30" (xyz) VF-6/40TR 1626 x 813 x 762 mm VF-6/50 64" x 32" x 30" (xvz) 1626 x 813 x 762 mm VF-6/50TR 64" x 32" x 30" (xyz) 1626 x 813 x 762 mm 5-Axis Trunnio VF-6SS 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 mn 84" x 32" x 30" (xyz) VF-7/50 2134 x 813 x 762 mm 64" x 40" x 30" (xyz) VF-8/40 1626 x 1016 x 762 mm 64" x 40" x 30" (xvz) VF-8/50 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

120" x 32" x 30" (xyz)

3048 x 813 x 762 mm

120" x 32" x 30" (xyz)

3048 x 813 x 762 mm

120" x 40" x 30" (xyz)

3048 x 1016 x 762 mm

120" x 40" x 30" (xyz)

3048 x 1016 x 762 mm

VF-10/40

VF-10/50

VF-11/40

VF-11/50

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 150" x 40" x 30" (xyz) VF-14/40 3810 x 1016 x 762 mm VF-14/50 150" x 40" x 30" (xyz) 3810 x 1016 x 762 mm 64" x 32" x 30" (xyz) 1626 x 813 x 762 mm 84" x 40" x 42" (xyz) 2134 x 1016 x 1067 mm 84" x 40" x 42" (xyz) VR-9 2134 x 1016 x 1067 mm

VR-11

120" x 40" x 42" (xvz)

3048 x 1016 x 1067 mn

### Easily adapt the Haas robot systems to meet vour 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 Flippina



**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	8 lb	3.6 kg	*37 lb	*17 kg	40 lb	18 kg
	•					•
DOUBLE GRIPPER						
Max Part Size	6"	152 mm	8"	203 mm	N/A	N/A
Max Part Weight	2.5 lb	1.1 kg	*18 lb	*8 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 / 7KG

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



### Haas Robot Package 2 / 25KG

- 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 / 50KG

- 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 troublefree, 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.

### **Haas Pallet Pools for Verticals**

### Part Type:

Ideal for small, medium, and larger size parts, or irregular-shaped parts that require specialized clamping. Load a single part on each pallet, or multiple vises or fixtures for high-volume production.



### 3+1 or 6+1 Pallet Pool VF-2YT / VF-2SSYT 5+1 Pallet Pool VF-4. VF-4SS

- 3+1 or 6+1 pallets (3/6 storage + 1 machining station)
- Work Envelope: 30" x 18" (762 x 457 mm)
- 5+1 pallets (5 storage + 1 machining station)
- Work Envelope: 47.75" x 20.35" (1213 x 517 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" x 16" (558 x 406 mm)
- 500 lb (227 kg) max payload per pallet (workpiece + workholding)

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

### **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



- 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)

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



### 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 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)

NOTE: Pallet Pool systems must be ordered with the machine

<sup>\*</sup>Max part height varies by machine model

### Part Types Perfect for Automatic Parts Loaders (APLs)

### **Haas Automatic Parts Loader (APL)**

☐ Affordable Automation



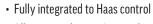
### Haas APL for Lathes

- 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



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



### 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



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

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.

### Which automation system is right for you?

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 thirdparty 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**

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

Configurations subject to change without notice. Availability may vary by region. \*Including long-bed models. †Y-axis models only. ††VF-2YT models only.

To learn more visit HaasCNC.com/automation



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 guizzes 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
- Up-To-Date Information

· Easily Accessible

Standardized Training

Professional Credibility

"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 Cuttina Tools and **Workpiece Materials** 



**Basic Machine Maintenance** 



Hands-On Test



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

Start your journey to becoming Haas certified today at HaasCNC.com/myhaas/haas\_certification



Contact CNCA to find out why we should be your first choice for financing your next Haas CNC.

Simple, straightforward financing without the Red Tape. Why tie up existing lines of credit, or over use existing bank resources? At CNCA, we use our industry experience and expertise to provide superior customer service.

CNC Associates can offer flexible financing terms suitable for your business, ranging from 12 to 84 months. Applying is easy, and turnaround is quick. Contact your local HFO for access to the best financing offers in the industry.

**Visit us at HaasCNC.com/financing for:** 

Pre-Qualification | Resource Documents | Credit Application

CNCA

**CNC** Associates

2900 Challenger Place, Oxnard, CA 93030 Ph: 888-350-4CNC | Fax: 805-278-8501