

JOURNAL

HAAS+IMTS2018
PRODUCT SPOTLIGHT



HAAS

INDUSTRYICON

THE HAAS VF-1 Vertical Machining Center

THEN AND NOW



TRAVELS	20" x 16" x 20"	20" x 16" x 20"
SPINDLE SPEED	5000 rpm	8100 rpm (up to 30,000 rpm)
SPINDLE POWER	7.5 hp	30 hp
SPINDLE DRIVE	Open-loop inverter	Closed-loop vector drive
TOOL CHANGER	16-pocket ATC	20-pocket ATC (opt. 30-pocket SMT)
AXIS DRIVES	DC brush	AC brushless with digital encoders
RAPIDS	480 ipm	1000 ipm
PROCESSOR	(1x) 32-bit 68020	iMX6-A9 quad core 64-bit ARM SoC
PROCESSING SPEED	20 blocks/sec	2000 blocks/sec
PROGRAM MEMORY	128 k	1 GB (options to 64 GB)
MONITOR	12" monochrome CRT	15" color LCD
COMMUNICATION	RS232	Ethernet and USB (optional WiFi)
PRICE	\$49,900	\$46,995
	\$106,600 (in 2018 \$)	\$23,395 (in 1988 \$)

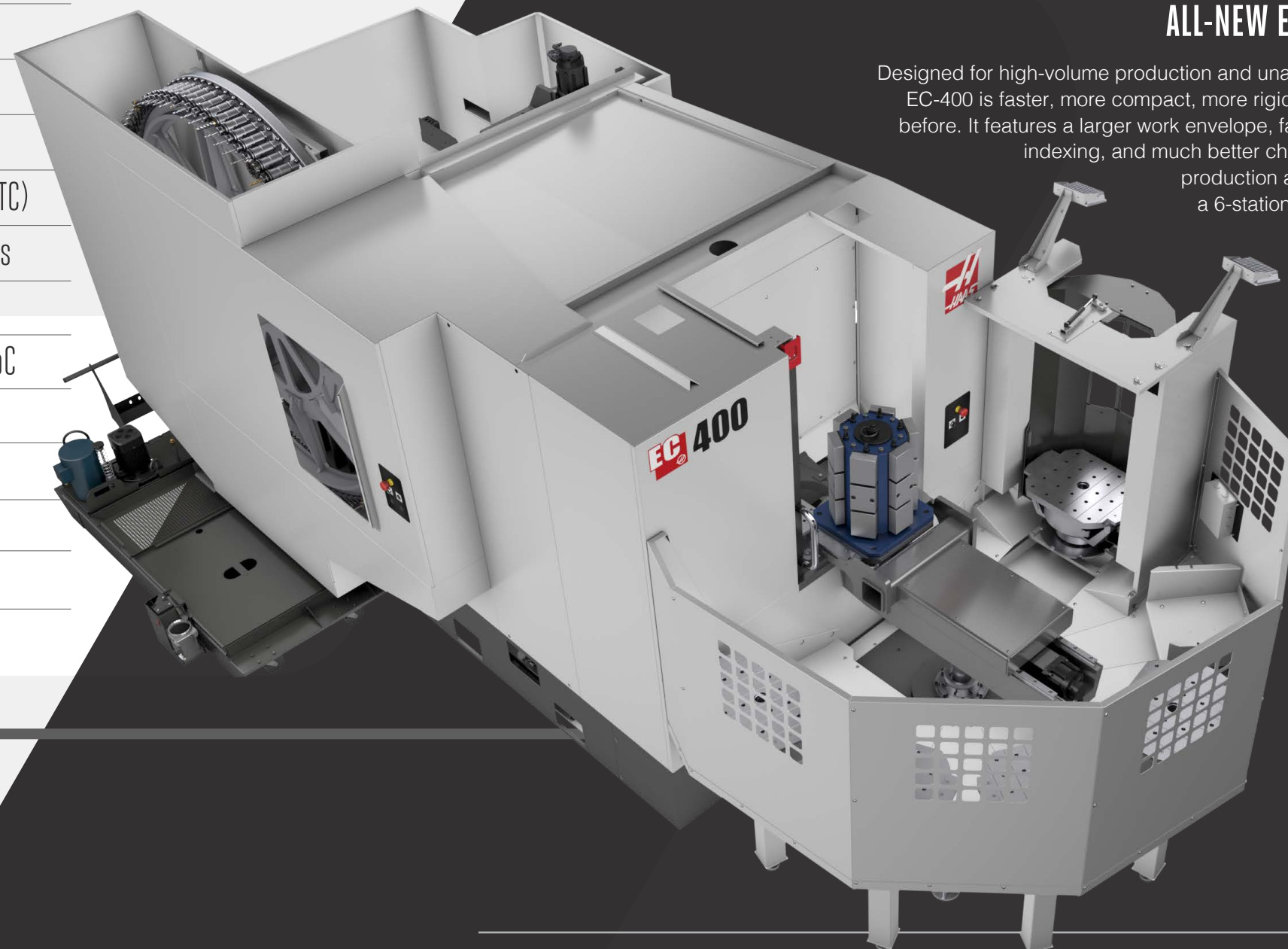
NEW FROM HAAS

In this industry, if you're not moving forward, you're falling behind. At Haas, we're always innovating and creating new products to help you keep moving forward, and we've come up with some pretty cool stuff since last IMTS. Check it out!

ALL-NEW EC-400 with Pallet Pool

Designed for high-volume production and unattended operation, the all-new EC-400 is faster, more compact, more rigid, and more capable than ever before. It features a larger work envelope, faster rapids, full 4th-axis pallet indexing, and much better chip management. For extended production and true "lights out" capability, a 6-station pallet pool and high-capacity tool changers are available.

- Standard 30+1 tool side-mount tool changer, with options for 50+1 or 100+1 tools
- Built-in pallet changer with 400 mm pallets
- Full 4th-axis indexing
- Available 6-station pallet pool



Haas Automation, Inc.

JOURNAL

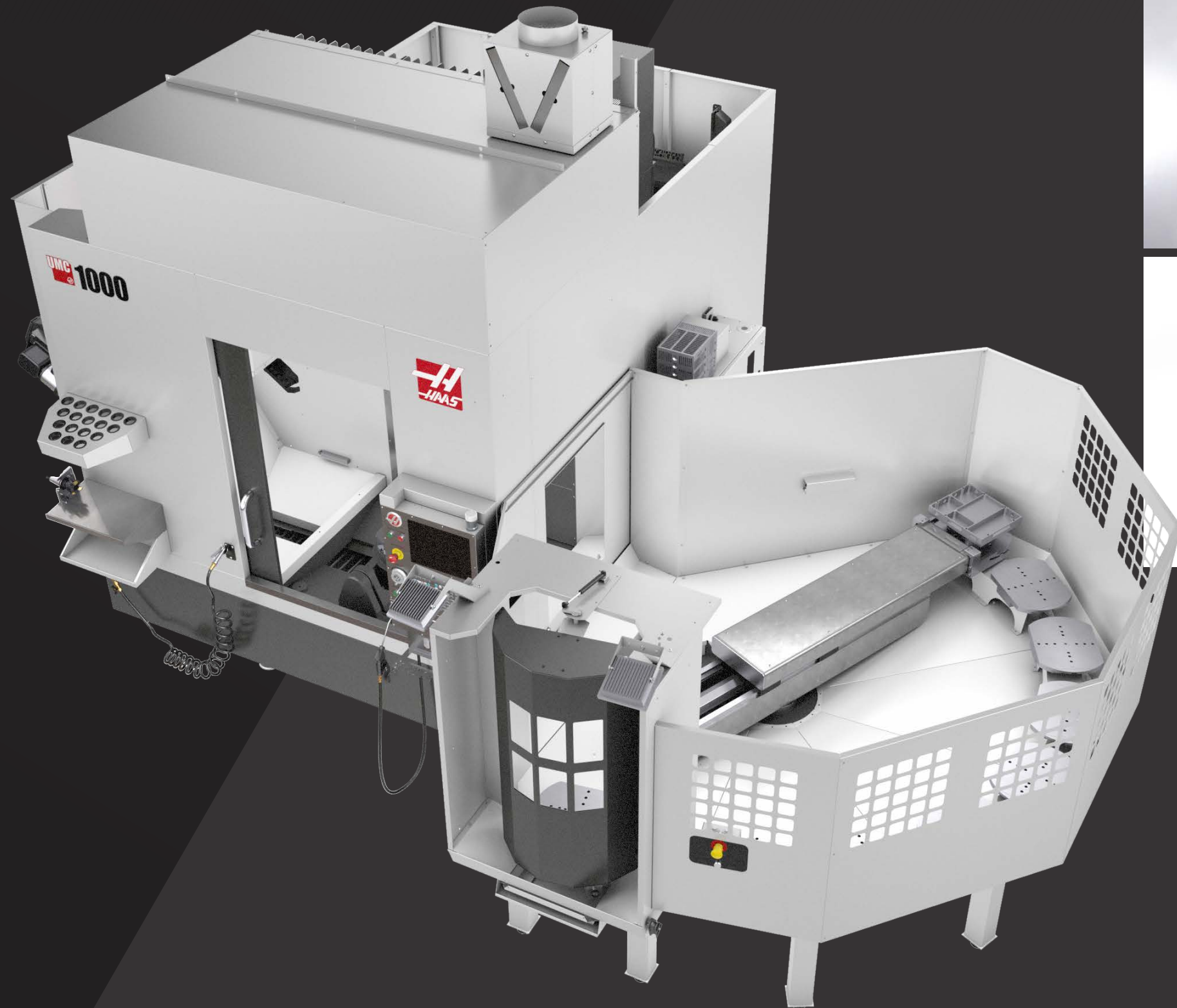
HAAS+IMTS2018
PRODUCTSPOTLIGHT

NEW PRODUCT FOCUS

UMC-1000/SS UNIVERSAL MACHINING CENTERS

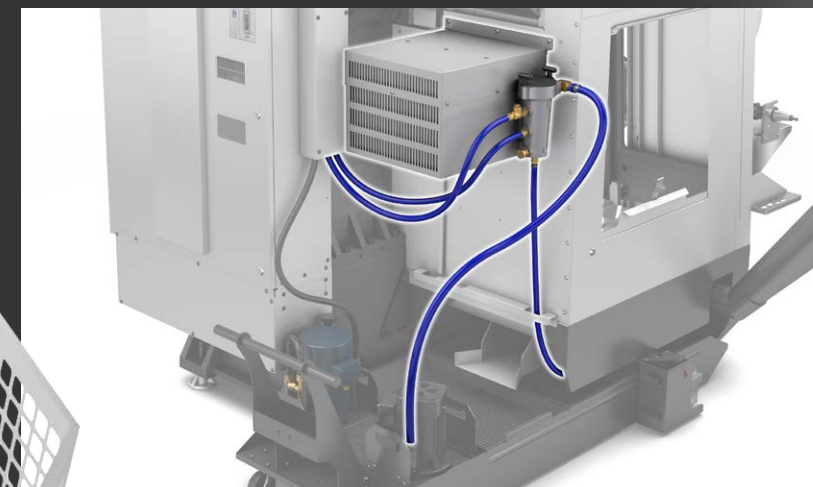
The UMC-1000 is the latest addition to the Haas lineup of 5-axis universal machining centers. It features a large 40" x 25" x 25" work envelope, and an integrated dual-axis trunnion with 635 mm platter for full 5-axis capability. The machine is available in standard and Super Speed versions, with spindle speeds to 15,000 rpm, and rotary axis speeds to 170 deg/sec. High-productivity options include:

- 50+1 side-mount tool changer
- 15,000-rpm HSK-A 63 spindle
- 8-station pallet pool for unattended operation



MQL 2.0

- Simplified oil delivery system
- Oil Injector is mounted to the Programmable Coolant Nozzle
- Two modes of operation: pulse or mist
- Perfect for drilling and tapping
- Reduces chip welding
- Activated via M-codes
- Comes with Haas-recommend oil, and works with a variety of fluids



HAAS SPINDLE COOLANT CHILLER

The Haas Spindle Coolant Chiller reduces the temperature of the machine's coolant before it is circulated through an independent jacket in the spindle head. The chilled coolant removes heat to stabilize the spindle temperature and increase thermal stability.

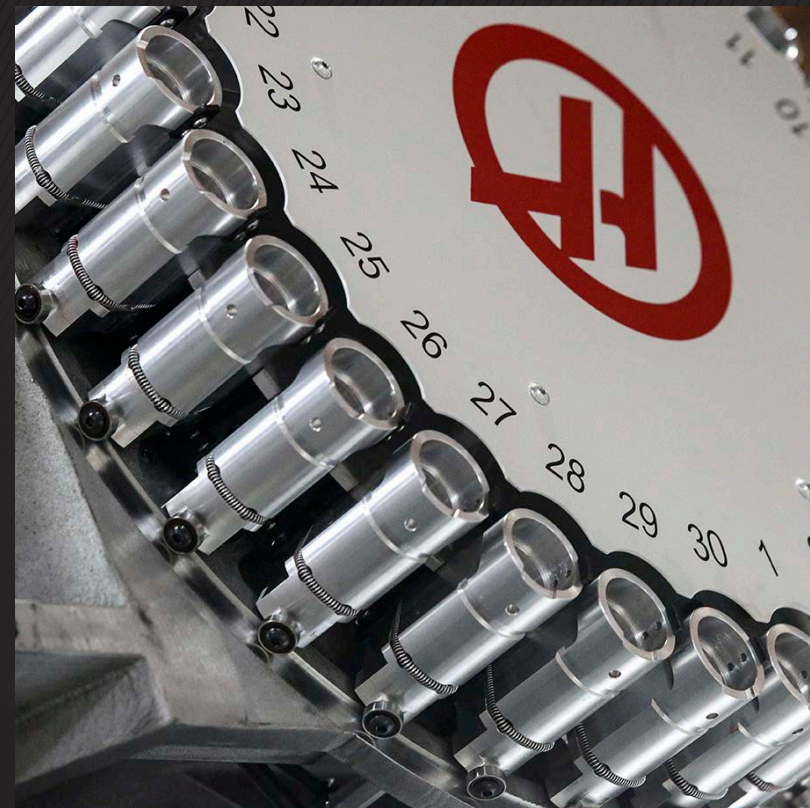
- Stabilizes spindle temperature
- Increases thermal stability
- Reduces part variations caused by thermal changes
- Removes heat generated by the machining process
- Stabilizes the temperature of the entire machining environment



ENCLOSURE EXHAUST 2.0 - MIST REMOVER

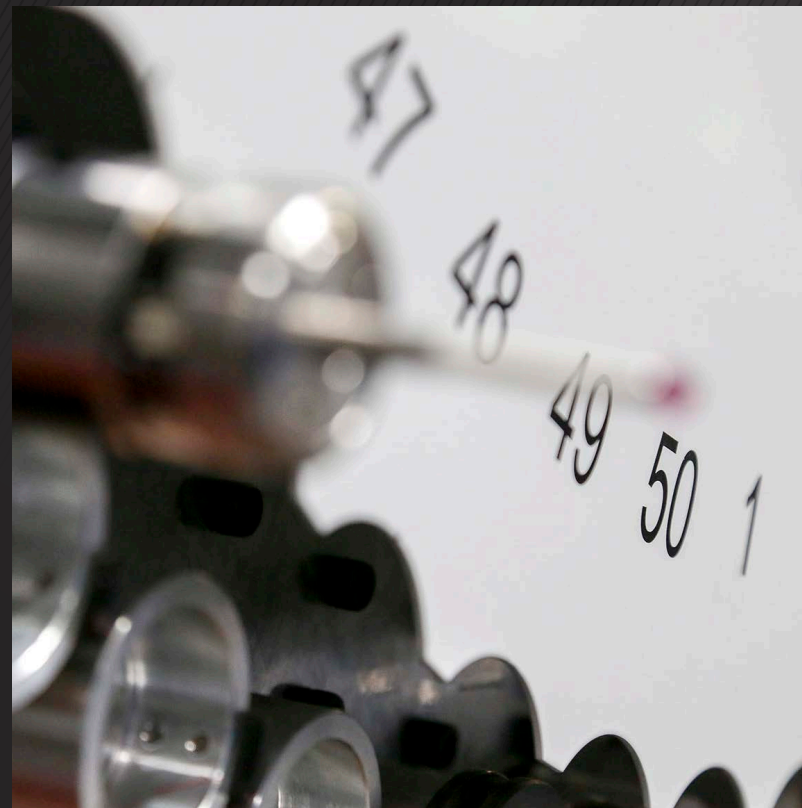
The Haas Mist Remover keeps the machine's enclosure clear of mist and smoke generated during the machining process, for improved visibility, reduced coolant consumption, and a cleaner machine and shop.

- Complete recirculation system does not require venting to the outside
- Dual filters condense the mist and return the coolant to the enclosure
- Less machine wait time; no waiting for mist to clear to change parts
- Better work environment for operators
- 3" ABS ducting to return and recirculate air



30+1 Side-Mount Tool Changer

- Direct-positioning carousel for super-fast tool staging
- 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
- Standard on all VF-SS, and VF-6 to VF-12 40-taper



50+1 Side-Mount Tool Changer

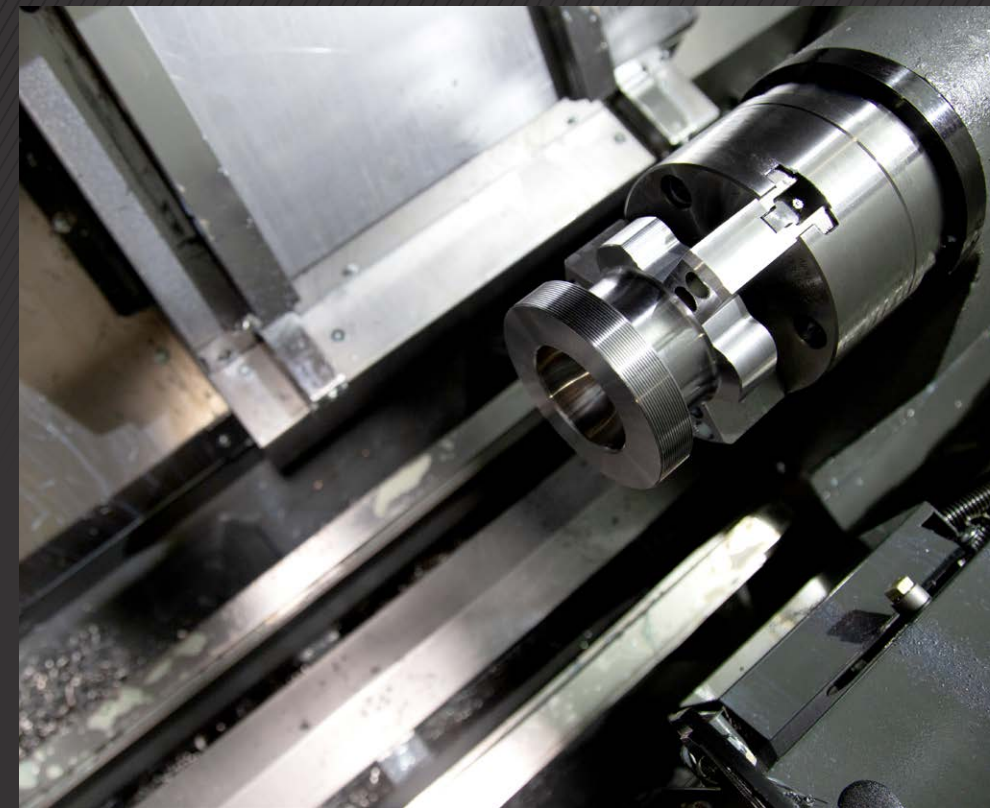
- Perfect for high-mix/low-volume machining
- Additional pockets allow redundant tooling for long runs
- Direct-positioning carousel for super-fast tool staging
- Fast tool changes shorten cycle times on every tool change
- Available on VF-2YT through VF-6 VMCs



REMOTE JOG HANDLE

The Haas Remote Jog Handle with color LCD lets you to get up-close to the machine's work area for part setup, changeover, and inspection, while still having control of the machine.

- Allows the operator to get close to the part, and still maintain control of the machine
- Provides precise jogging speed control
- Set work and tool offsets directly from the Remote Jog Handle
- Command tool changes directly from the Remote Jog Handle
- Cycle Start and Feed Hold running programs
- Touchscreen Display



SUB-SPINDLE FOR FINISHING

Our new sub-spindle for ST-10 through ST-25 turning centers will not only make you more productive, and but will also provide new options for finishing the 2nd-op side of your part.

This affordable A2-5 spindle is equipped with a 5.3-inch hydraulic chuck, and will fully synchronize with the main spindle to provide effortless "in-cycle" part handoff. This allows you to finish-off the "other half" of your part in a single setup – simply load up your raw workpiece, and the next time you open the door, you'll have a finished part.

Available for ST-10 – ST-25, including Y-axis models.



HSK SPINDLE

The Haas-designed 15,000-rpm HSK-A 63 spindle provides high rigidity and high stability for high-speed, extended-reach machining applications. The HSK (*Hohl Shaft Kegel*, or hollow-shank taper) tooling provides dual contact between the taper and the spindle face, providing a very rigid connection that offers excellent axial and radial accuracy, especially at high spindle speeds and long tool lengths.

- Dual-contact taper for high rigidity and high accuracy
- More rigid toolholders for long-reach tools, as found in 5-axis work
- Available on UMC-1000 & UMC-1000SS

NEWPRODUCTFOCUS

BMT65

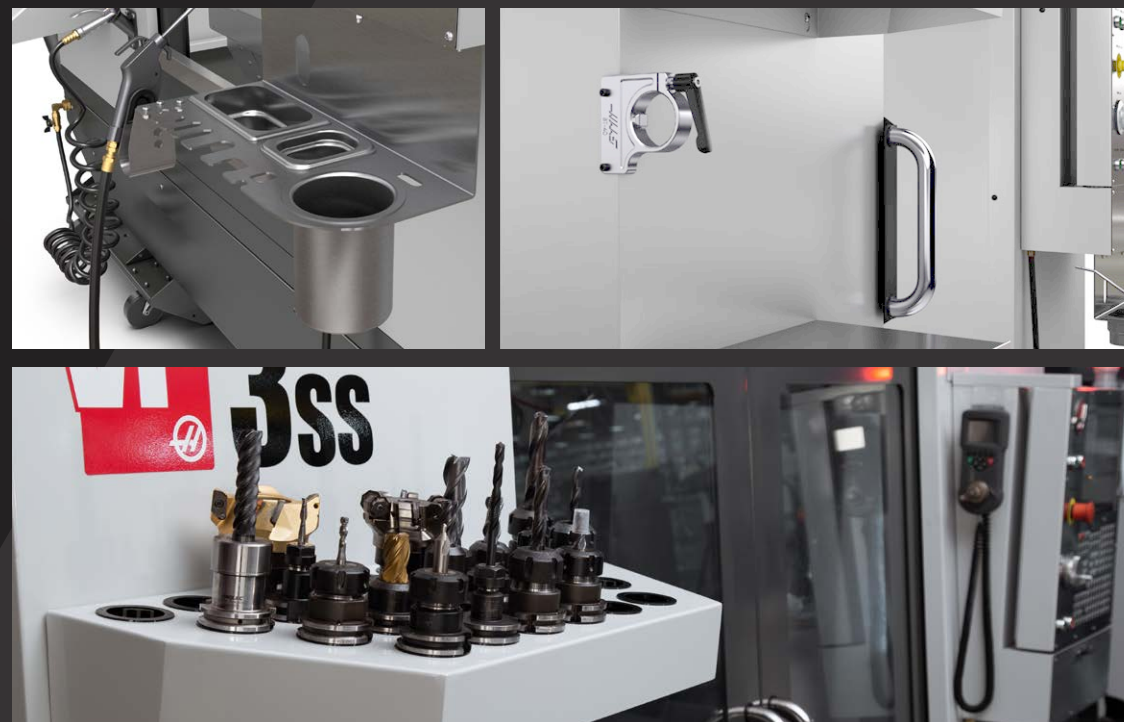
The Haas 12-station BMT65 turret with live tooling lets you perform secondary operations – milling, drilling, slotting, and tapping – on the face of the part and around the diameter. The BMT65 system provides increased cutting performance, longer tool life, and better tool clearance.



OPERATOR CONVENIENCE

Haas machines are loaded with convenience features designed to make your job easier – every day. Our standard package includes a stainless steel worktable and large storage shelf mounted to the front of the machine, along with a toolholder tray mounted above them. And a die-cast toolholder vise mounted directly to the machine provides a convenient place for maintaining tools.

- Toolholder vise will save hours of time per year
- Handy worktable for everyday use
- Toolholder rack for tool storage



50-TAPER TOOL LOADER

This heavy-duty 50-taper tool load stand mounts to the machine's table to simplify the loading and unloading of heavy and oversized tools.



NEWPRODUCTFOCUS

GM-2-5AX

The GM-2-5AX is a 5-axis gantry mill designed for complex, large-part machining, such as airframe components, layup molds, and composite structures. The machine's dual-axis spindle head provides ± 245 degrees of C-axis rotation and ± 120 degrees of B-axis tilt for complex surfacing, or to access any angle of a part.

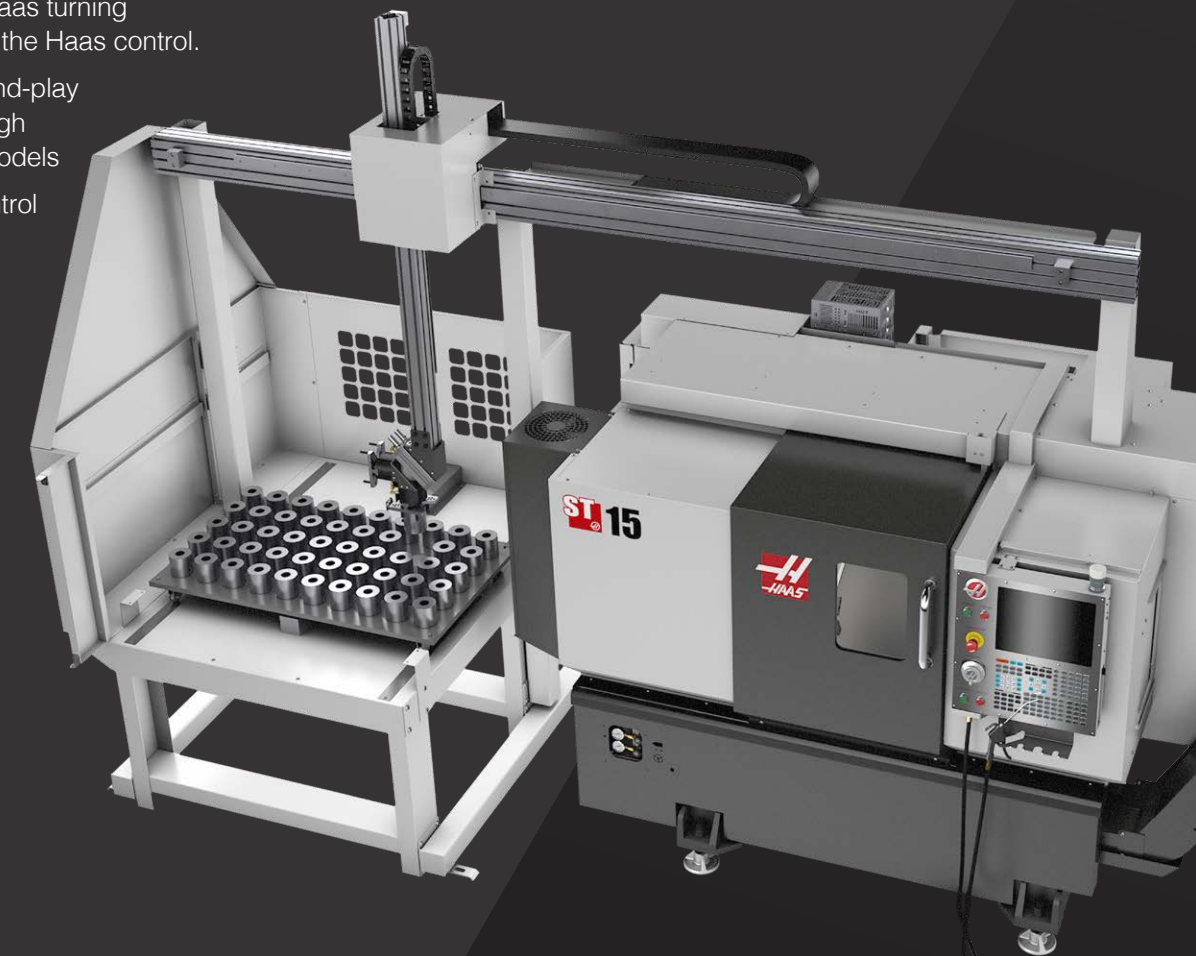
- Dual-axis spindle head
- 20,000-rpm HSK 63F spindle
- 30+1 side-mount tool changer
- Rigid-steel construction
- Traveling chip and coolant guard
- 1" thick aluminum table



AUTOMATIC PARTS LOADER FOR LATHES

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 Haas turning centers, and connects directly to the Haas control.

- All-inclusive design, with plug-and-play capabilities to Haas ST-10 through ST-35 lathes, including Y-axis models
- Direct interface to the Haas control
- Accommodates parts up to 5.8" diameter x 5" length
- Light curtain for safe operation
- Simple, effective automation

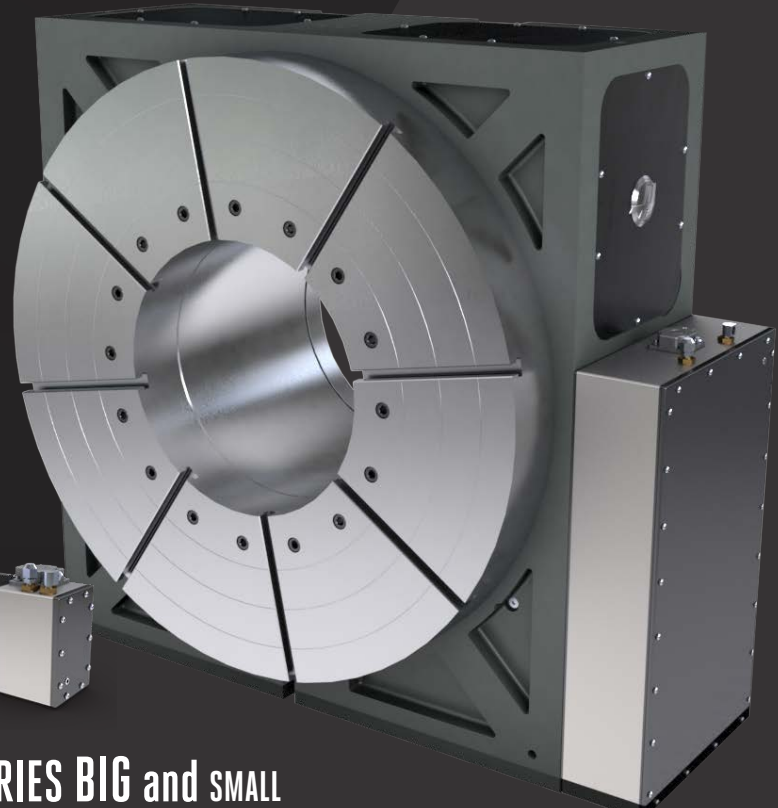


NEW PRODUCT FOCUS

ALL-NEW DT AND DM DRILL/TAP/MILL CENTERS

The lean-style DT and DM high-speed drill/tap/mill centers have been redesigned from the castings up to provide more performance and reliability than ever, with better chip flow, more visibility into the machine, and easier access to parts and fixturing.

- Better chip flow and coolant washdown
- Centered operator door for better ergonomics
- Larger side window for better workspace visibility
- Larger coolant capacity (standard 55-gallon tank)
- Simpler enclosure for easier service
- Front-mounted auger with side discharge.



TRT160

Our TRT160 dual-axis rotary table has been completely redesigned to create a much more compact and versatile 5-axis solution for smaller mills. The new unit easily fits on one end of the machine's table, leaving the remainder open for additional fixtures or vises.

- 160 mm platter w/multiple bolt patterns
- 10.5" max part swing
- 150 lb max capacity
- ±120 degrees of tilt
- 360 degrees of rotation

ROTARIES BIG and SMALL

Whether you're machining large shafts for windmills, rethreading drill pipe, or machining blowout preventers, the extra-large HRT1000 rotary table has what you need to handle the big jobs. With its massive platter, generous torque, and large through-hole, this extra-large rotary table will easily handle even the biggest 4-axis jobs in your shop.

At the other end of the size spectrum, the ultra-compact HRT100 rotary table provides high-speed, accurate positioning and full 4-axis motion for machining small parts on the Haas CM-1 Compact Mill. The unit's very small size and light weight make it the perfect 4-axis solution for even the smallest machining centers.

You can own a

COMPLETE MACHINE SHOP

for just **\$983/MONTH**



That's right. You can buy **BOTH** of these compact machine tools for less than \$1000 a month.

If you've been waiting for a reason to make your move into CNC, this is it.

(And, by the way, both machines can run on single-phase power, so if you're thinking about putting these in your garage, power isn't an obstacle.)



Don't let the footprints fool you. These are big-boy machine tools, not desktop or hobby machines.



TL-1 Starting at

\$26,995



TM-1P Starting at

\$31,995

THE HAAS CONTROL



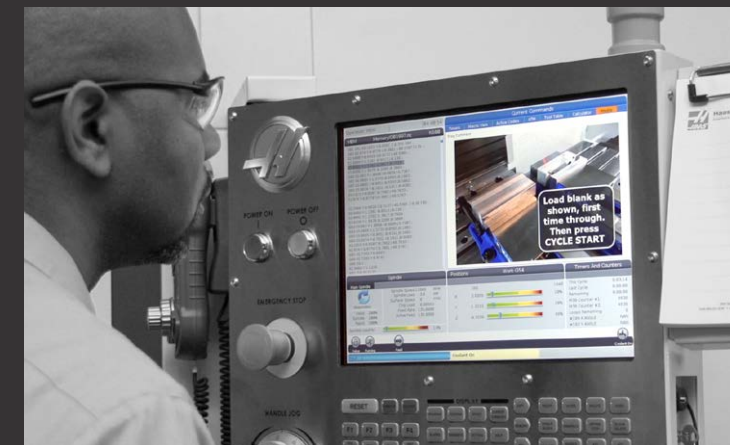
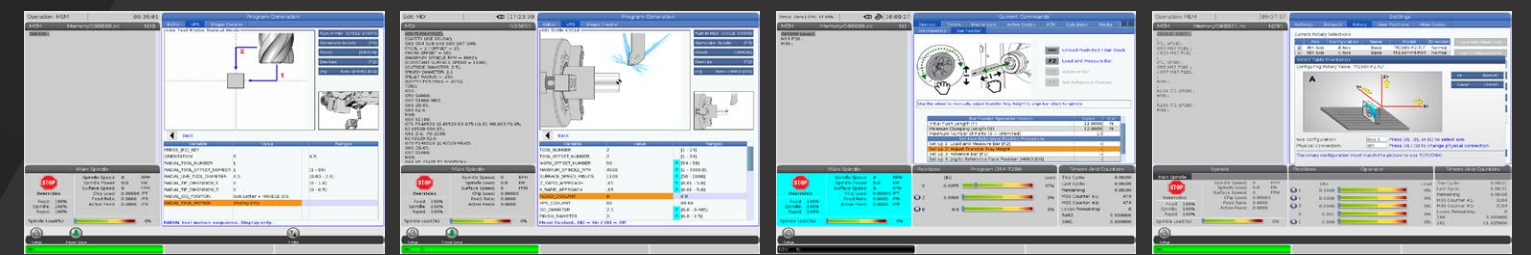
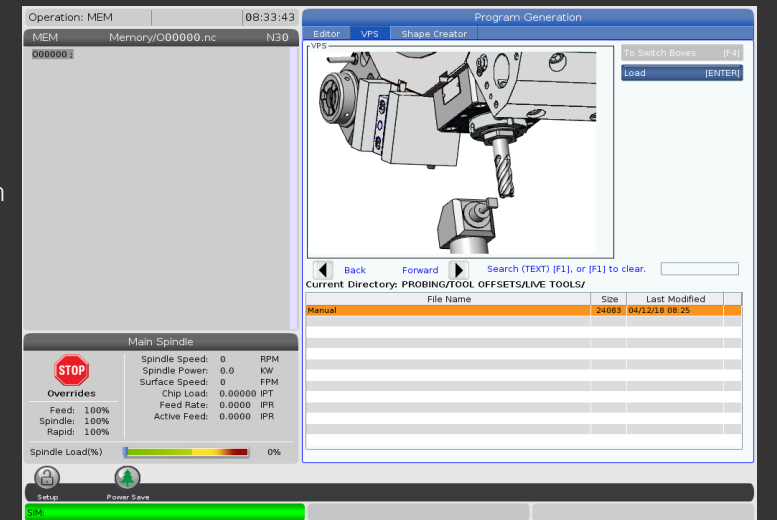
STANDARD FEATURES

Dedicated Keypad • Ethernet Interface • One-Button Features
 M130 Media Player • 1 GB Memory • USB Port • 15" Color LCD Screen
 Advanced Tool Management • Multi-Function Jog Handle
 HaasConnect Mobile Monitoring • Power-Failure Detection Module

Unlock ALL of Your Machine's Potential

VISUAL PROGRAMMING SYSTEM >>

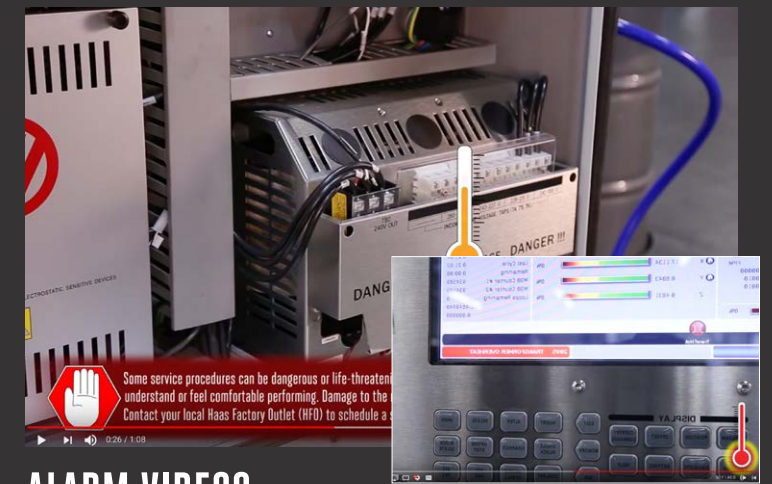
The Haas Visual Programming System lets you quickly create G-code programs for basic part features using graphical templates and a form-like interface. Simply define the feature in the template, and VPS then outputs working G-code at the touch of a button. VPS also includes a custom template generator, so you can create templates for your own part features or frequently used programs.



M130 MEDIA DISPLAY

The Haas M130 Media Display M-Code is a powerful tool for communicating with machine operators and programmers directly from the Haas control as an NC program runs. Use M130 to call up setup instructions, tool lists, CAD images, manufacturing information, and more. When the program reaches an M130, the specified media (image, video, or PDF) will be displayed in the upper right corner of the control screen. The function is turned off using an M131 in the program.

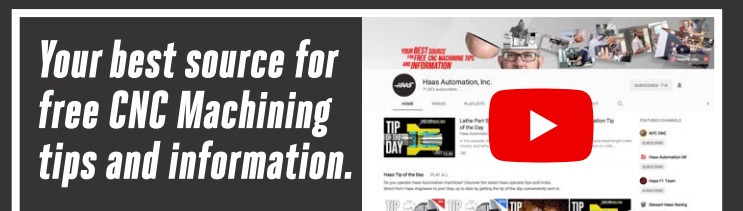
- Explain difficult-to-understand secondary operations on the control, using pictures and videos
- Avoid miscommunications with your shop peers
- Describe step-by-step part inspection processes
- Share important setup information with shop personnel



ALARM VIDEOS

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

VISIT WWW.YOUTUBE.COM/HAASAUTOMATION



TECHNOLOGY FOCUS

INDUSTRY 4.0 HAAS & YOU

Hey Siri, how many miles did I run today? Alexa, what time is my next appointment? Okay Google, turn on the air conditioning.

We definitely live in a connected world these days . . . at least at the personal level. But what about at the industry level? There's much talk lately about the Industrial Internet of Things (IIoT) and Industry 4.0, but what are they, and what do they mean for the average job shop or small manufacturer?

Most of us are familiar with the Internet of Things (IoT) – the technology behind all of our “smart” devices. The Industrial IoT is the application of this “smart” technology and connectivity to the manufacturing industry. But, whereas the IoT is aimed primarily at enriching our personal lives, the IIoT is intended to improve the productivity and profitability of our manufacturing processes and businesses. Industry 4.0 is the full implementation of these digital technologies across the manufacturing sector.

This digitalization is all about collecting data, and processing that data in near real time to give operations personnel and management a clear and accurate view of how their business is operating, so they can make better decisions. Early adopters of the IIoT are already leveraging networks of intelligent devices to increase their operational efficiency, save time, reduce costs, and improve customer service.

Connecting your factory equipment to the Internet is the first step, and the latest machine tools from Haas Automation are Industry 4.0 ready, which makes connecting to the IIoT easy. Built-in Ethernet provides a super fast and reliable connection for file sharing and data exchange, and available WiFi connectivity provides similar speed and reliability, but without the cables. Both wired and wireless networks are quickly set up through an easy-to-use interface in the Haas control.

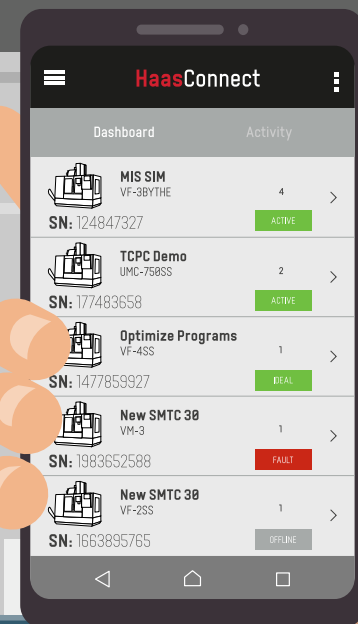
All Haas machines also feature HaasConnect – a powerful mobile machine monitoring system that provides real-time alerts for machine status. HaasConnect gathers information from the control, and has the ability to send email and SMS text notifications to designated recipients about the operating status of the Haas machine. Setup is fast and easy through the MyHaas Portal at HaasCNC.com, and the account administrator can specify which machine events trigger an alert – alarms, feedrate overrides, spindle overrides, cycle start, and cycle stop – and who should get them.

HaasConnect improves overall equipment effectiveness by keeping users and management updated with live machine data. Instant alerts offer peace of mind during unattended machining, by tracking alarms; and provide visibility of operator adjustments, by tracking overrides.

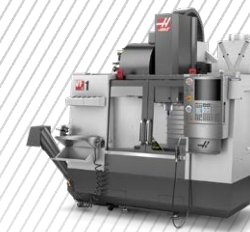
So what's next for the connected factory?

Hey Siri, how many parts did I run today? Alexa, what was the cycle time on my last part? Okay Google, turn on the chip auger.

The technology may not be to this point yet, but such capability definitely is on the horizon, and companies that implement IIoT technologies now will have a definite advantage as the IIoT and Industry 4.0 become the norm. **HAAS**



VERTICAL MACHINING CENTERS



VF Series

Small

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

Medium

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



Large

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



Universal Machines

UMC-750	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
UMC-750SS Super Speed	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
UMC-750P Porting/Profiling	30" x 20" x 20" (xyz) 762 x 508 x 508 mm
UMC-1000 Pallet Pool Available	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm
UMC-1000SS Pallet Pool Available Super Speed	40" x 25" x 25" (xyz) 1016 x 635 x 635 mm

Mini Mills

Mini Mill	16" x 12" x 10" (xyz) 406 x 305 x 254 mm
Mini Mill 2	20" x 16" x 14" (xyz) 508 x 406 x 356 mm
Super Mini Mill	16" x 12" x 10" (xyz) 406 x 305 x 254 mm
Super Mini Mill 2	20" x 16" x 14" (xyz) 508 x 406 x 356 mm
Mini Mill-EDU	16" x 12" x 10" (xyz) 406 x 305 x 254 mm



HAAS MODEL GUIDE

Machines shown with optional equipment. Specifications subject to change without notice. Machines not shown to scale.

CONTINUED >>>

VERTICAL MACHINING CENTERS



Drill/Tap/Mill Series

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



Toolroom Mills

TM-1	30" x 12" x 16" (xyz) 762 x 305 x 406 mm
TM-1P Tool Changer	30" x 12" x 16" (xyz) 762 x 305 x 406 mm
TM-2	40" x 16" x 16" (xyz) 1016 x 406 x 406 mm
TM-2P Tool Changer	40" x 16" x 16" (xyz) 1016 x 406 x 406 mm
TM-3	40" x 20" x 16" (xyz) 1016 x 508 x 406 mm
TM-3P Tool Changer	40" x 20" x 16" (xyz) 1016 x 508 x 406 mm



Compact Mills

CM-1	12" x 10" x 12" (xyz) 305 x 254 x 305 mm
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Gantry Series

GR-510	121" x 61" x 11" (xyz) 3073 x 1549 x 279 mm
GR-712	145" x 85" x 11" (xyz) 3683 x 2159 x 279 mm
GM-2	COMING LATE 2018
GM-2-5AX 5-Axis	COMING 2019



Mold Machines

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

TURNING CENTERS



ST Series

Standard	
ST-10	14" x 16" (max cap) 1.75" Bar (44 mm) 356 x 406 mm
ST-15	14" x 16" (max cap) 2.5" Bar (63.5 mm) 356 x 406 mm
ST-20	15" x 21" (max cap) 2.0" Bar (51 mm) 381 x 533 mm
ST-25	15" x 21" (max cap) 3.0" Bar (76 mm) 381 x 533 mm
ST-30	21" x 26" (max cap) 3.0" Bar (76 mm) 533 x 660 mm
ST-35	21" x 26" (max cap) 4.0" Bar (102 mm) 533 x 660 mm



Y-Axis

ST-10Y	12" x 16" (max cap) 1.75" Bar (44 mm) 305 x 406 mm
ST-15Y	12" x 16" (max cap) 2.5" Bar (63.5 mm) 305 x 406 mm
ST-20Y	12" x 21" (max cap) 2.0" Bar (51 mm) 305 x 533 mm
ST-25Y	12" x 21" (max cap) 3.0" Bar (76 mm) 305 x 533 mm
ST-30Y	18" x 23" (max cap) 3.0" Bar (76 mm) 457 x 584 mm
ST-35Y	18" x 23" (max cap) 4.0" Bar (102 mm) 457 x 584 mm

Dual-Spindle

DS-30Y	18" x 23" (max cap) 457 x 584 mm
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TURNING CENTERS



Large-Through-Bore

ST-40	25.5" x 44" (max cap) 4.0" Bar (102 mm) 648 x 1118 mm
ST-40L	25.5" x 80" (max cap) 4.0" Bar (102 mm) 648 x 2032 mm
ST-45	25.5" x 44" (max cap) 7.0" Bore (178 mm) 648 x 1118 mm
ST-45L	25.5" x 80" (max cap) 7.0" Bore (178 mm) 648 x 2032 mm
ST-50	25.5" x 80" (max cap) 8.5" Bore (216 mm) 648 x 2032 mm
ST-55	25.5" x 80" (max cap) 12.5" Bore (318 mm) 648 x 2032 mm



Chuck Lathe

CL-1	1" x 8" (max cap) 1" Bar (25 mm) 25.4 x 203 mm
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Toolroom Lathes

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

HORIZONTAL MACHINING CENTERS



EC Series

EC-400	22" x 25" x 22" (xyz) Pallet Pool Available 559 x 635 x 559 mm
EC-1600	64" x 50" x 32" (xyz) 1626 x 1270 x 813 mm
EC-1600ZT	64" x 50" x 40" (xyz) 1626 x 1270 x 1016 mm
EC-1600ZT-5AX 5-Axis	64" x 50" x 40" (xyz) 1626 x 1270 x 1016 mm



VS Series

VS-3 COMING IN 2019

ALSO COMING IN 2018

Automatic Pallet Changers and Automatic Parts Loaders will also be making a return to the Haas family in 2018.

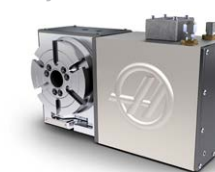
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ROTARIES & INDEXERS

Small Rotary

HRT100
HRT160
HRT160SP
HRT160SS
HRC160
HRT160-2
HRTA-5



Medium Rotary

HRT210
HRT210SP
HRT210M
HRC210
HRT210-2
HRTA6
HRT310
HRT310SP

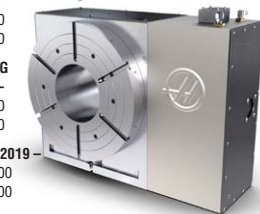


Large Rotary

HRT450
HRT600

COMING SOON -
HRT630
HRT800

EARLY 2019
HRT1000
HRT1200



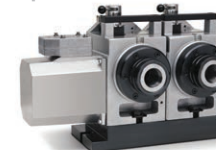
Single Spindle

HASC
HASC-T
HASC5



Multiple Spindle

HASC2
HASC2-T
HA2TS
HASC3
HASC4



Trunnion

TR160
TR160-2
TR200Y
TR210
TR310



Tilting Rotary

TRT70
TRT100
TRT160 - NEW
TRT210



Tilting Indexer

TSC
TSC2
TSC3
TSC4



HAAS MODEL GUIDE

HAAS AT THE TRACK

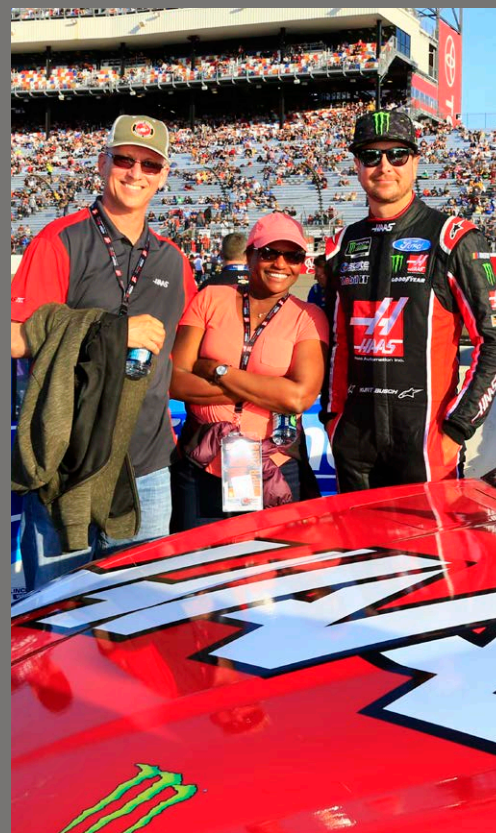


EVERYONE LOVES RACING, MAN!

If you've ever had the opportunity to watch a NASCAR or Formula One race in person, you know it's an experience of a lifetime. The sounds, the smells, and the sense of community among race fans make attending races an experience like no other.

High-performance machines and high-performance racing go hand-in-hand, and that's why Haas is involved in motorsports. But it's not just about the technical aspects of the machinery, or the adrenaline rush of the racing; it's about connecting with machinists and fans alike. We want everyone's experience – both in the shop and at the track – to be positive and valuable.

Haas and motorsports: It's more than a sponsorship – it's a way of life.



HAASCNC.COM MORE THAN YOUR TYPICAL WEBSITE.



CONTENT FOCUS

We know the future lies in the digital realm. We know that in this day and age, our customers expect more from us online. That's why Haas keeps pushing the envelope for how a machine tool manufacturer can use the Internet to provide our current and future customers with better information, and an easier way to understand what they need to know.

HaasCNC.com isn't just a good looking site full of pretty pictures. There's tons of real information, right at your fingertips. If you're new to Haas, we'll guide you through understanding what machine you need for the work you're doing. If you already know our brand, it's easy to find what you need in just a few clicks. If you want all the details on any machine or option, it's just a click away.

Maybe you need videos and images that will tell you more about the investment you're about to make. There's plenty of that there, too.

And most importantly, when you're ready to look at what it's going to cost, you don't need to fill out a questionnaire or talk to a salesman. Just click that "BUILD & PRICE" button and you can configure your machine exactly how you want it, and get pricing immediately. In fact, if you want to see everything we make in one place, check out our online Price List. It shows every machine we sell, and lists exactly what it'll cost to put every single one of them on your shop floor. Nobody else in the industry does that.

"WE'VE ALSO CREATED AN EXTENSIVE LIST OF SERVICE AND MAINTENANCE VIDEOS FOR THOSE OF YOU WHO DON'T WANT TO CALL SOMEONE TO MAINTAIN OR REPAIR YOUR MACHINE."

Of course, if you already own a Haas or have a new one on the way, we have plenty of resources to make your life easier. Diy.HaasCNC.com has Pre-Install pages for every machine we make, and they include everything you need to be fully prepared when your new machine rolls onto your shop floor. Machine layouts, lifting diagrams, power requirements – it's all there.

Or, check out the "How To" section, where we cover G-codes, M-codes, and all your Machine Settings. You can get help with machining fundamentals, machine setup, and productivity, too.

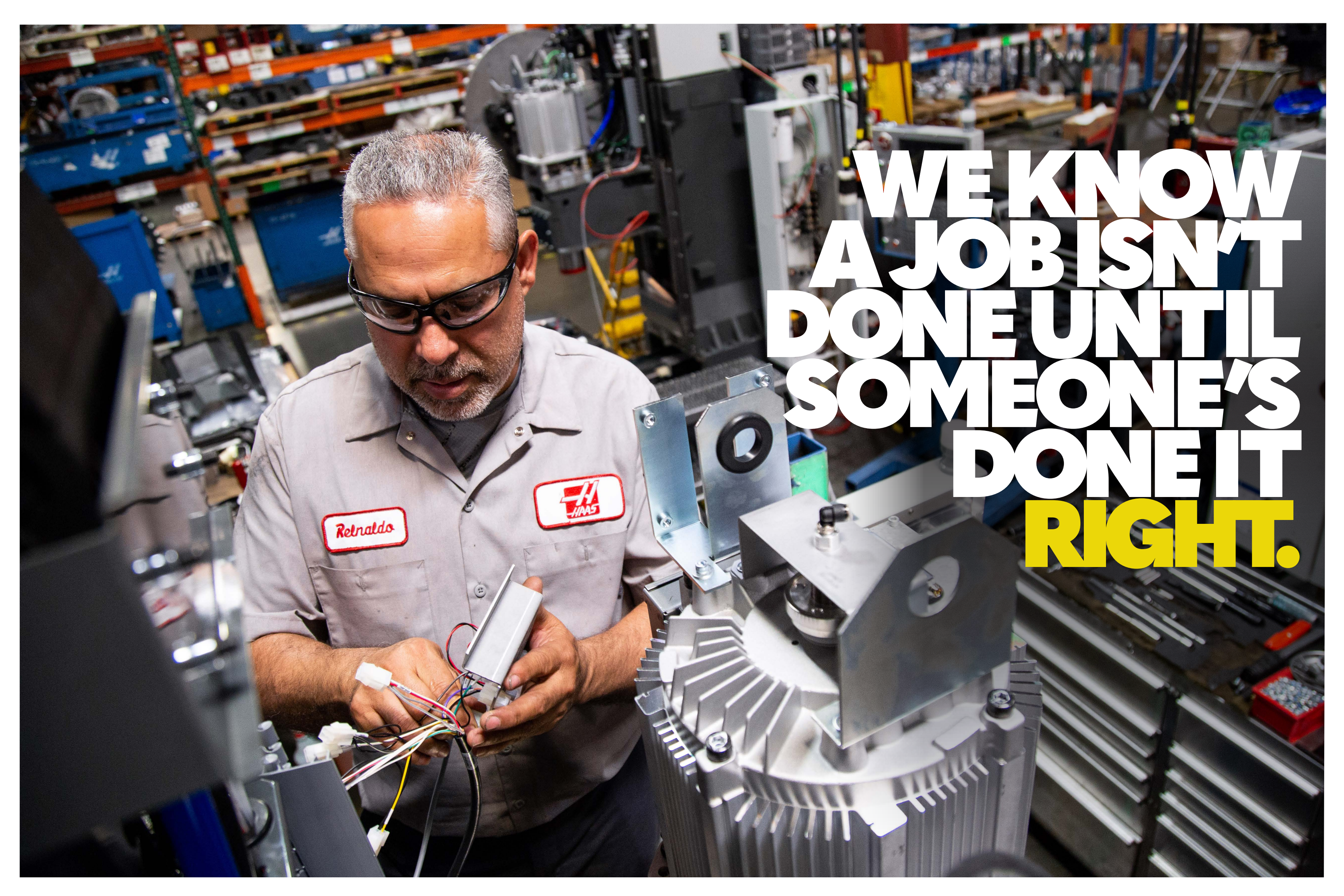
Maybe your Operator's Manual or Service Manual were misplaced. No worries. You'll find current manuals, as well as archived versions for older machines, all available for download right here. And, of course, they don't cost anything.

And since we listen to our customers, we've also created an extensive list of service and maintenance videos for those of you who don't want to call someone to maintain or repair your machine.

There are videos and links to the latest Tip of the Day, our popular YouTube series where our resident CNC guru Mark Terryberry breaks down complex topics into easy-to-understand, fun-to-watch videos.

And last, but certainly not least, there will come a time when you need to buy parts to maintain your machine or upgrade for increased performance. Parts.HaasCNC.com is the place for Maintenance and Performance upgrades, as well as genuine Haas replacement parts for your machines. You can make your entire purchase online, without ever making a phone call or sending an email, and have the parts delivered right to your shop.

At the heart of our online presence is a desire to provide useful, actionable, and easy-to-understand information to every shop. **HAAS**

A man with grey hair and glasses, wearing a grey short-sleeved shirt with a name tag that says 'Reinaldo' and a 'HAAS' logo patch, is focused on his work. He is holding a small grey electronic component with several colored wires attached. He is standing in a factory or workshop, with various pieces of machinery and equipment visible in the background. The lighting is bright, highlighting the man and his work area.

**WE KNOW
A JOB ISN'T
DONE UNTIL
SOMEONE'S
DONE IT
RIGHT.**

IN JUNE OF 2018, 30 YEARS AFTER HAAS INTRODUCED
OUR VERY FIRST VMC, WE BUILT AND SHIPPED
MACHINE NUMBER

200,000

TO **VINEBURG MACHINING, INC.**
PRETTY COOL, HUH?

Well, we know we never would have gotten here
without you. Thanks for being a part of this
journey with us. Here's to another 200,000!

WAUKESHA COUNTY TECHNICAL COLLEGE • CNC MACHINES • AAE AEROSPACE • CAL POLY SLO • SCHUPAN ALUMINUM SALES • SIERRA COLLEGE • PROTOFAB ENGINEERING • GREATER
NEW BEDFORD REG. VOC. TECH. • B & M PRECISION • MENDELL MACHINE AND MFG. • GENERAL CARBIDE CORP. • STANLEY HYD TOOLS • FMI • BREVARO ROBOTICS • OILFIELD EQUIPMENT
MARKETING, INC. • CERRITOS COLLEGE • L&S MACHINE COMPANY • TRI-COUNTY TECHNICAL COLLEGE • BRE PRECISION SERVICES, INC. • JABIL • SKYLOCK INDUSTRIES • CHIPPEWA VALLEY
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TECHNICAL H.S. • MACOMB COMMUNITY COLLEGE • BMG TRAUMA • LINDSEY MFG CO • CRESCENT PATTERN • SRI HERMETICS • BUCK KNIVES, INC. • LOS ALAMOS NATIONAL LABS • SHERIDAN
COMMUNITY COLLEGE • MUSKOGEE COMMUNITY COLLEGE • TME • J&D MACHINE • NORTHEAST STATE TECHNICAL COLLEGE • FEMA CORPORATION • STRASSER'S MACHINE INC. • LIE
NIELSEN TOOL WORKS • PROMAC INDUSTRIES LTD • NORTHEAST OKLAHOMA MANUFACTURING • IDP TM INC • ACTRON ENGINEERING INC. • SIMAC • LOCKHEED MARTIN • PHILLIPS PRECISION
MEDICRAFT • DESIGNWERKES COMPANY • ADVANCE TURNING & MANUFACTURING INC • CENTERLINE MANUFACTURING • CAL POLY POMONA • CHAWK TECHNOLOGIES INT'L • DELTA COLLEGE
CONTRAIL DEVELOPMENT LLC • TECHNOPLAN SA DE CV • B E C MACHINE PRODUCTS • DESTECH CORPORATION • POLARIS ELECTRICAL CONNECTORS • CENTER LINE MOLD • PRECISION
DEFENSE SERVICES • MIL SPINNIUM ASSOC. INC. • TONER MACHINING TECH • SNAP-ON TOOLS • MOORE'S MACHINE COMPANY, INC. • GENERAL PLASTICS & RUBBER CO. INC. • STERLING
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COMPANY • INEWAY MACHINE • KALAMAZOO VALLEY • BRADSHAW MEDICAL • VALLEY PRECISION LLC • COX MACHINE • HM DEFENSE • CORESIX PRECISION GLASS, INC. • ALLOY DIE CASTING
RICH N TOME DUCK CALLS • PRECISION AEROSPACE • REKUSE • TECHNICAL ENGINEERING • OIL & GAS • WUNDRBAR • AZIMUTH TECHNOLOGY • DYE PRECISION CNC INC • PREMIER ALUMINUM •
FITZ MANUFACTURING • INCOE CORP • RAMP ENGINEERING • MOELLER AEROSPACE TECHNOLOGY • NATIONAL TECHNOLOGIES • DYE PRECISION CNC INC • PREMIER ALUMINUM •
SOUTH TEXAS COMMUNITY COLLEGE • CENTRO DE INGENIERIA Y DESARROLLO • PRECISION REGAL SA DE CV • FLYING S • FREER TOOL AND DIE • GMS METAL WORKS • AUTO TRANS TECH •
HJM COMPANY • MI-TON TOOL WORKS • MI • MUNN MFG. • KEMONA INDUSTRIES • 5TH AXIS • BOECKER PRECISION • CAPCO INC • GE AVIATION • MOTT COMMUNITY COLLEGE • MACHINING PRO
TECHNOLOGIES • JOHNSON CNC LLC • MICROBEST, INC. • BEN MACHINE PRODUCTS CO. INC. • MAGEL PRECISION INC • BALL AEROSPACE • ORMCO CORPORATION • AMALGA COMPOSITES
WISCONSIN • ADMIRAL TOOL & DIE • AUSTIN PRECISION • MANCOR PA, INC. • PAKO • SANDIA LABORATORIES • MORGAN TECHNICAL CERAMICS • DC MACHINE • CARLSON ENGINEERING &
MANUFACTURING • CTE SOLUTIONS • SPARTAN AEROSPACE LLC • FM INDUSTRIES, INC. • GEORGIA SOUTHERN UNIVERSITY • ALTAMONT COMPANY • ROHEYMAK SA DE CV • ARDEL ENGR &
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ALUMINUM SOLUTIONS • STURM, RUGER & CO., INC. • RJB MACHINING LTD • TNR MACHINING • TADIME S DE RL DE CV • BRUNS MFG. • SHAWSHEN VALLEY • TECHNICAL HIGH SCH • SPRAY
RITE INC. • CRYSTAL GROUP • HOUSTON COMMUNITY COLLEGE • STELLAR PRECISION COMPONENTS • VALVULAS Y REGULADORES DE MEXICO • JIMS MACHINING • DACCO, INC. • DUNCAN
MACHINE PRODUCTS • MICROVENTION • CIE CELAVA SA DE CV • GLENAIR INC. • METALWORKING SOLUTIONS SA DE CV • ODIN HEAVY INDUSTRIES • PROTO LABS INC • QUALITY QUARTZ •
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FOX RACING SHOES • METHODE ELECTRONICS • AVANT GARDE WHEELS • LAWRENCE EQUIPMENT • CONVERTECH INC • SWISSMEX RAPID SA DE CV • AUTOMATIZACIONES RUSEMI S DE RL
UNIVERSITY OF EDWARDS INTERIORS, INC • VANDER-BEND • DRT POWER SYSTEMS, LLC • HOVIS • AGARD GROUP LLC • DOMINGO ALBERTO SAENZ GONZALEZ • NIN JIK
PRECISION • METAL COMPONENTS G • WEST CONN TOOL & DIE INC. • ADVANCE ONE WHEELS INC. • BENJAMIN FRANKLIN HIGH SCHOOL • BROAD PEAK MANUFACTURING, LLC • DYNALINK
LOKAR, INC. • GREENVILLE TECHNICAL COLLEGE • AZTEK TECHNOLOGIES • INDUSTRIAS DE TUBERIAS AERONAUTICAS • VERMONT TECHNICAL COLLEGE • BARN-RITE MOLD &
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ELITE ALUMINUM PRODUCTS • STARK STATE COLLEGE • PATRIOT ALUMINUM PRODUCTS, LLC • TENNESSEE COLLEGE OF APPLIED TECHNO • LEAR ELECTRICAL SYSTEMS DE MEXICO • JEMCO
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