

# **ST-10 TURNING CENTRE**

NEXT GENERATION COMPACT CNC LATHE



The all-new USA-made ST-10 CNC Turning Centre features all you need to start turning metal in a compact footprint...

The **ST-10 CNC Turning Centre** has an extra-small footprint with a generous work envelope, offering the best performance for the money – the best value – in its class. It's the ideal option for a new business, schools and colleges, or to add extra capacity and to free-up existing equipment.

✓ **START UP** If you're starting-up a new business the **ST-10 CNC Turning Centre** is the perfect choice.

✓ FREE UP Free-up existing, more expensive machinery to improve efficiency and boost your productivity.

✓ **BUILD UP** Increase your production capacity and support your business expansion.

✓ **SECOND OP** When you need a second-op machine, or an extra spindle, where space is limited.





# **VF-SERIES VERTICAL MACHINING CENTRES**

HIGH-PERFORMANCE CNC MILLS

Haas Automation offers a wide range of CNC Vertical Machining Centres - one just right to meet the demands of your machine shop. Haas CNC machines offer an abundant menu of options, accessories and rotary products that allows you to fully tailor your machine.

Long before you start looking at options, you'll be impressed with the extensive standard features and capabilities packed into every machine. A Haas VMC is designed to provide the features and performance you need, making it the soundest investment you considered; providing more utility, flexibility and productivity than you've ever imagined.



### **NEXT GEN CONTROL**

- Visual Programming System
- Improved Connectivity
- Dynamic Work Offsets
- Tool Centre Point Control



- Travels 508 x 406 x 508 mm
- 8,100 rpm 40-Taper 30 hp
- 20 Tool Carousel Changer
- (SMTC optional)



- Travels 762 x 406 x 508 mm
- 8,100 rpm 40-Taper 30 hp
- 20 Tool Carousel Changer
- (SMTC optional)



### VF-2YT EXTENDED Y-AXIS

- Travels 762 x 508 x 508 mm
- 8,100 rpm 40-Taper 30 hp
- 20 Tool Carousel Changer
- (SMTC optional)



- Travels 1,016 x 508 x 635 mm
- 8,100 rpm 40-Taper 30 hp
- 20 Tool Carousel Changer
- (SMTC optional)



### VF-3YT EXTENDED Y-AXIS 40/50 TAPER

- Travels 1,016 x 660 x 635 mm
- 8.100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- 20 Tool Carousel (SMTC option)



- Travels 1,270 x 508 x 635 mm
- 8,100 rpm 40-Taper 30 hp
- 20 Tool Carousel Changer
- (SMTC optional)



- Travels 1,270 x 660 x 635 mm
- 8.100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- 20 Tool Carousel (SMTC option)



# VF-5XT EXTENDED X-AXIS 40/50 TAPER

- Travels 1,524 x 660 x 635 mm
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp

VF-9 40/50 TAPER

• Travels 2,134 x 1,016 x 762 mm

• 8,100 rpm 40-Taper • 30 hp

• 7,500 rpm 50-Taper • 30 hp

• Side-Mount Tool Changer

• 20 Tool Carousel (SMTC option)



# VF-6 40/50 TAPER

- Travels 1,626 x 813 x 762 mm
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- Side-Mount Tool Changer



- Travels 2,134 x 813 x 762 mm
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp

VF\_7 40/50 TAPER

• Side-Mount Tool Changer



• Travels 1,626 x 1,016 x 762 mm

VF-8 40/50 TAPER

- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- Side-Mount Tool Changer



VF-10 40/50 TAPER

- Travels 3,048 x 813 x 762 mm
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- Side-Mount Tool Changer



- Travels 3,048 x 1,016 x 762 mm
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- Side-Mount Tool Changer



- Travels 3,810 x 813 x 762 mm
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- Side-Mount Tool Changer

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# **SUPER SPEED VMCs**

NEXT GENERATION HIGH-SPEED MILLS

The Haas high-performance Super Speed vertical machining centres provide the high spindle speeds, fast rapids, and quick tool changes necessary for high-volume production and reduced cycle times.

The Super Speed VF-Series machines feature a 30+1 side-mount tool changer, which gives tool-to-tool change times of 1.6 seconds.



### SMM-1 SUPER MINI MILL

- 406 x 305 x 254 mm
- 10,000 rpm (15K opt.)
- 40-Taper 15 hp
- 30.5 m/min Rapids



# SMM-2 SUPER MINI MILL

- 508 x 406 x 356 mm
- 10,000 rpm (15K opt.)
- 40-Taper 15 hp
- 30.5 m/min Rapids



### VF-3SSYT SUPER SPEED EXTENDED Y-AXIS

- 1.016 x 660 x 635 mm
- 12,000 rpm Spindle (15k opt.)
- 30+1 Side Mount Tool Changer
- Tool-to-Tool 1.6 seconds
- 35.6 m/min Rapids

The Super Speed direct-drive 12,000 rpm spindle system couples the drive directly to the spindle, which results in better surface finishes, extreme thermal stability and very quiet operation.

**2**2ss



### VF-2SS SUPER SPEED

- 762 x 406 x 508 mm
- 12,000 rpm Spindle (15k opt.)
- 30+1 Side Mount Tool Changer
- 35.6 m/min Rapids

VF-4SS SUPER SPEED

• 12,000 rpm Spindle (15k opt.)

• 30+1 Side Mount Tool Changer

• Tool-to-Tool 1.6 seconds

• 35.6 m/min Rapids



- 1.270 x 660 x 635 mm • 1.270 x 508 x 635 mm
  - 12,000 rpm Spindle (15k opt.)

VF-5SS SUPER SPEED

- 30+1 Side Mount Tool Changer
  - Tool-to-Tool 1.6 seconds • 30.5 m/min Rapids



## VF-2SSYT SUPER SPEED EXTENDED Y-AXIS • 1,016 x 508 x 635 mm

- 762 x 508 x 508 mm
- 12,000 rpm Spindle (15k opt.)
- 30+1 Side Mount Tool Changer



• 12,000 rpm Spindle (15k opt.)

• 30+1 Side Mount Tool Changer

### VF-6SS SUPER SPEED

- 1.626 x 813 x 762 mm
- 12,000 rpm Spindle (15k opt.)
- 30+1 Side Mount Tool Changer
- Tool-to-Tool 2.3 seconds
- 30.5 m/min Rapids

# **HIGH SPEED DRILL MILL/TAP**

# COMPACT HIGH-SPEED MACHINING CENTRES

The DM and DT series compact, high-speed machining centres are built from proven Haas components and designs.

With their standard 10,000 rpm spindles (12K, 15K & 20K options) 61 m/min rapids, high axis accelerations (1G) and 1.8 second tool change times, they can reduce cycle times by more than 20% compared to the already fast Haas Super Speed VF-2SS.





-1 DRILL AND TAP

- 508 x 406 x 394 mm
- 10,000 rpm Spindle 30-Taper
- 20+1 Side Mount Tool Changer
- Rigid Tapping up to 5,000 rpm
- 61.0 m/min Rapids



T-2 DRILL AND TAP

- 711 x 406 x 394mm
- 10,000 rpm Spindle 30-Taper
- 20+1 Side Mount Tool Changer
- Rigid Tapping up to 5,000 rpm
- 61.0 m/min Rapids



DRILL AND MILL

- 508 x 406 x 394mm
- 10,000 rpm Spindle 40-Taper
- 18+1 Side Mount Tool Changer
- Rigid Tapping up to 5,000 rpm
- 61.0 m/min Rapids



DM-2 DRILL AND MILL

- 711 x 406 x 394mm
- 10,000 rpm Spindle 40-Taper
- 18+1 Side Mount Tool Changer
- Rigid Tapping up to 5,000 rpm
- 61.0 m/min Rapids

# **MOULD MAKING MACHINES**

VM-SERIES MOULD MAKERS

We've taken our industry-leading VF-Series machines and created custom configurations to boost productivity for mould making, tool & die work, and other high-precision industries.

With our optional

15,000 rpm spindle, and our 30,000 rpm

30-taper spindle -

Haas has the speed

you need.



VM-2 MOULD MAKER

- 762 x 508 x 508 mm
- 12,000 rpm Spindle (15k & 30k opt.)
- 30+1 Side Mount Tool Changer
- 18.0 m/min Rapids



VM-3 MOULD MAKER

- 1.016 x 660 x 635 mm
- 12,000 rpm Spindle (15k & 30k opt.)
- 30+1 Side Mount Tool Changer • 18.0 m/min Rapids
- VM-6 MOULD MAKER • 1,626 x 813 x 762 mm • 12,000 rpm Spindle (15k & 30k opt.)
- 30+1 Side Mount Tool Changer
- 15.2 m/min Rapids

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The all-new USA-made **Modular Mini Mill** is based on the shop-proven Haas Mini Mill. In its standard configuration, it features all you need to start cutting metal and is available from just **£21,995**.

Add a **convenience module**, a **faster spindle** and **increased rapids**, or you could add the **high-productivity software module**, or a **4-axis drive** to run a rotary table, perhaps go 'all-in' and add all available modular options.

✓ **START UP** If you're starting-up a new business the Modular Mini Mill is the perfect choice.

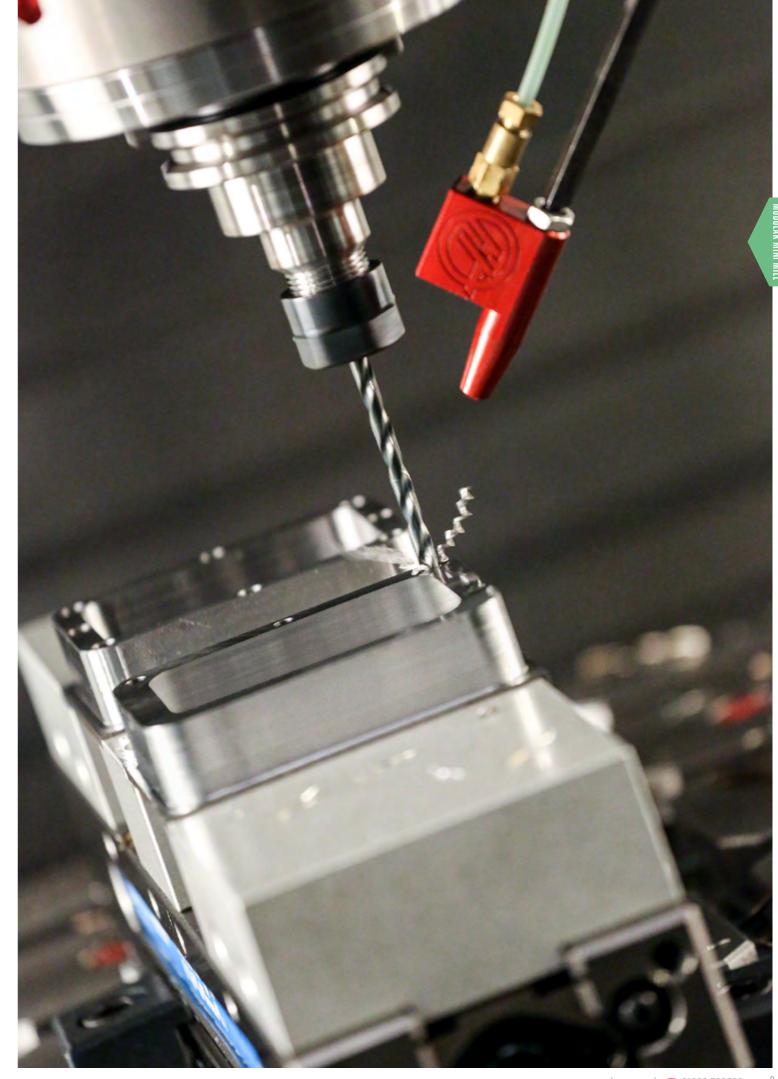
✓ **FREE UP** Free-up existing, more expensive machinery to improve efficiency and boost your productivity.

✓ **BUILD UP** Increase your production capacity and support your business expansion.

✓ **SECOND OP** When you need a second-op machine, or an extra spindle, where space is limited.

✓ **BOLT ON** Low-cost, bolt-on options can be added, or even retro-fitted, when required.





# **MINI MILLS & SUPER MINI MILLS**

COMPACT HIGH-PERFORMANCE MACHINING CENTRES

Haas Automation's Mini Mills are the industry standard for compact machining centres, they take up little shop floor space, yet provide a generous work envelope.

Handling small-parts manufacturing - they're ideal for finishing work and cutting aluminium, yet also provide enough low-end torque to cut steel.



See page 8 for more information about the Modular Mini Mill



### MM-1 MODU

- 406 x 305 x 254 mm
- 4,000 rpm Spindle
- 40-Taper 7.5 hp
- 7.6 m/min Rapids



### MM-2 MINI MILL

- 508 x 406 x 356 mm
- 6,000 rpm Spindle
- 40-Taper 7.5 hp
- 15.2 m/min Rapids



### SMM-1 SUPER MINI MILL

- 406 x 305 x 254 mm
- 10,000 rpm (15K opt.)
- 30.5 m/min Rapids



### SMM-2 SUPER MINI M

- 508 x 406 x 356 mn
- 10,000 rpm (15K opt.)
- 40-Taper 15 hp
- 30.5 m/min Rapids



### CM-1 COMP

- 305 x 254 x 305 mm
- 30,000 rpm Spindle
- 20-Taper 5 hp
- 19.2 m/min Rapids



# **AUTO PARTS LOADER**

# TAKE YOUR PRODUCTION TO THE NEXT LEVEL

The Automatic Parts Loader (APL) is a simple way to automate part production on Haas VF-1 through VF-2 size vertical machining centres, including SS, VM and YT models and the UMC-500 and UMC-500SS.

The easy-to-use interface in the Haas control guides you through a simple, step-by-step setup process that "teaches" the APL arm its positions, and has you fully automated in minutes, loading and unloading parts for unattended machining.



- ✓ All-inclusive design, with plug-and-play capabilities
- ✓ Haas VF-1 through VF-2 size VMCs & UMC-500/SS
- ✓ Interfaces directly with the Haas control
- ✓ Accommodates parts up to 152 x 152 mm and 4.5 kg
- ✓ Includes light curtain for safe operation



# FINANCE

# **FUNDYOUR NEXT STEP TODAY**



# **ASSET FINANCING TO HELP YOUR BUSINESS**

Asset finance can be used by your business to purchase the equipment it needs to grow without overstretching its finances. The benefits of asset finance allow you to expand your business and fulfil new orders, whilst protecting working capital and any existing credit lines.

Depending on the nature of your business, the assets concerned could be upgrades to equipment, machinery and company

# **FUNDING OPTIONS**

HIRE PURCHASE We can offer hire purchase contracts, which give you immediate access to assets that you will own outright after completing a series of payments. This method involves you paying a deposit as well as fixed monthly instalments for the agreed term.

EQUIPMENT LEASING This makes for a straightforward leasing agreement in which you rent the assets you need, but do not own them at the end of the term.

ASSET REFINANCING These agreements are aimed at businesses that have already invested in equipment and which now need to release some of the capital tied up in those assets.

# **TAKE THE NEXT STEP**

Navigating your way through the different forms of lending banks and companies have to offer can be overbearing. Get in touch and we'll be able to help you find the perfect option to finance your business and let you take the next step.

# **INSURANCE**

# PROTECT YOUR BUSINESS WITH MACHINERY COVER

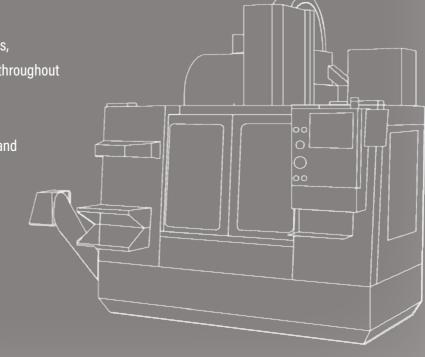
Developed in conjunction with a leading insurer, the Haas Financial Services insurance policy is designed for manufacturers using industrial machinery.

It helps you plan for unforeseen mechanical breakdowns and production interruptions.

# PROTECT YOUR MACHINERY

- Offers full repair costs (parts & labour) in the event of mechanical or electrical breakdown to the original manufacturers specification.
- Cover is provided for sudden unforeseen damage including Operator Error.
- · Flexible cover for up to 7 years, allowing protection for your machinery longer than conventional insurance policies.
- Fixed cost regardless of the incidence of claims, the premium is guaranteed never to increase throughout the lifetime of the policy.
- Covers new and used machinery both Haas and most other manufacturers.

Excluding insurance premium tax increases





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# **TOOLROOM VERTICALS**

# TM SERIES CNC TOOLROOM MILLS

The TM Series Toolroom Mills are the true definition of value, providing full CNC capabilities, including available 4thand 5th-axis functionality, at affordable prices.

They combine the precision control of the Haas CNC system with the convenience of a manual machine, and are easy to learn and operate even without knowledge of G-code.



### TM-1P TOOL CHANGER

- 762 x 305 x 406 mm
- 6,000 rpm Spindle
- 40-Taper 7.5 hp
- 10 Tool Carousel Changer



### TM-2P TOOL CHANGER

- 1,016 x 406 x 406 mm
- 6,000 rpm Spindle
- 40-Taper 7.5 hp
- 10 Tool Carousel Changer

TM-3P TOOL CHANGER

• 1,016 x 508 x 406 mm

• 10 Tool Carousel Changer

• 6,000 rpm Spindle

• 40-Taper • 7.5 hp



- 762 x 305 x 406 mm
- Table 1,213 x 267 mm
- 4,000 rpm Spindle
- 40-Taper 7.5 hp



### TM-2

- 1.016 x 406 x 406 mm
- Table 1.466 x 267 mm
- 4,000 rpm Spindle • 40-Taper • 7.5 hp



## TM-3

- 1,016 x 508 x 406 mm
- Table 1,466 x 368 mm
- 4,000 rpm Spindle
- 40-Taper 7.5 hp



# **5-AXIS TRUNNION VMCs**

AFFORDABLE 5-AXIS FLEXIBILITY

The Haas Trunnion Series machines are versatile 5-axis machining centres that provide full simultaneous 5-axis motion for machining complex parts, or can position a workpiece to almost any angle for multi-side machining. The VF-TR models have a removable dual-axis trunnion mounted to the standard T-slot table, which provides the flexibility to run the machine with or without the trunnion table installed.



### VF-2TR 5-AXIS

- Travels 762 x 406 x 508 mm
- Dual-Axis Trunnion Table
- ± 120° Tilt, 360° Rotation
- 8,100 rpm 40-Taper
- 30 hp
- Side-Mount Tool Changer



# VF-5TR 5-AXIS 40/50 TAPER

- Travels 1,270 x 660 x 635 mm
- Dual-Axis Trunnion Table
- ± 120° Tilt, 360° Rotation
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp • Side-Mount Tool Changer



### VF-6TR 5-AXIS 40/50 TAPER

- Travels 1,626 x 813 x 762 mm
- Dual-Axis Trunnion Table
- ± 120° Tilt, 360° Rotation
- 8,100 rpm 40-Taper 30 hp
- 7,500 rpm 50-Taper 30 hp
- Side-Mount Tool Changer

The VF-2TR features a TR-160 with a 160 mm platter (250 mm option also available). The VF-5TR features a TR-210 with a 210 mm platter (350 mm option also available), and the VF-6TR features a TR-310 with a 310 mm platter. The VF-5TR and VF-6TR models are available in both 40-taper 8,100 rpm and 50-taper 7,500 rpm configurations. Super Speed spindle options are also available.



# **UMC-SERIES UNIVERSAL MACHINING CENTRES** THE BEST SELLING 5-AXIS MACHINES

The Haas UMC-Series 5-axis machines are versatile, cost-effective solutions for 3+2 machining and full simultaneous 5-axis machining.

The machines are packed with innovative features such as Tool Centre Point Control (TCPC) and Dynamic Work Offsets (DWO) to improve workflow and boost your productivity (see page 27 for more information).

The Super Speed models increase performance further with a faster spindle, a high-speed tool changer, and a faster trunnion table.



# UMC-500

- Travels 610 x 406 x 406 mm
- Dual-Axis Trunnion 50°/Sec Tilt
- 400 mm Platter 40-Taper
- 10,000 rpm (15K opt.)
- 30+1 SMTC (50+1 opt.)



# UMC-1000

- Travels 1,016 x 635 x 635 mm
- Dual-Axis Trunnion 50°/Sec Tilt
- 10,000 rpm Spindle (15k opt.)
- 635 mm Platter 40-Taper
- 50+1 Side-Mount Tool Changer



### UMC-500SS SUPER SPEED

- Travels 610 x 406 x 406 mm



### UMC-1000SS SUPER SPEED

- Travels 1,016 x 635 x 635 mm
- Dual-Axis Trunnion 179°/Sec Tilt
- 12,000 rpm (15K & 15K HSK opt.) • 635 mm Platter • 40-Taper
- 50+1 Side-Mount Tool Changer



### UMC-750

- 762 x 508 x 508 mm
- Dual-Axis Trunnion 50°/Sec Tilt
- 8,100 rpm Spindle (10K & 15K opt)
- 500 mm Platter 40-Taper
- 30+1 SMTC (50+1 opt)



# UMC-750SS SUPER SPEED

- 762 x 508 x 508 mm
- Dual-Axis Trunnion 170°/Sec Tilt
- 12,000 rpm Spindle (15K opt)
- 500 mm Platter 40-Taper
- 30+1 SMTC (50+1 opt)



### 8+1 or 16+1 PALLET POOLS

Add a pallet-pool to your UMC-500/SS and UMC-1000/SS to take your production to the next level. With 8 or 16 additional pallets, you can be sure your machine will be running "lights out".

# **UMC-1500-DUO**



The Haas **UMC-1500-DUO** is like having two machines in one: a powerful **5-axis** universal machining centre, and a versatile 3-axis vertical machining centre. We've taken our industry-leading UMC-750 universal machining centre,

expanded its X-axis travel, and added a stationary 813 mm x 457 mm T-slot table next to the dual-axis trunnion.

Use the stationary table to set up workholding for first operations – like cutting dovetails on your 5-axis material – or to machine the 6th side of your completed 5-axis parts. Also, because the stationary table and trunnion platter (at B0) are at the same height, you can fixture parts across both, and use the machine's full X-axis travel to machine long parts. Super Speed UMC-1500SS-DUO version is also available.



UMC-1500-DUO

• Travels 1.500 x 508 x 508 mm

• 500 mm Platter • 40-Taper

UMC-1500SS-DUO SUPER SPEED • Travels 1 500 x 508 x 508 mm

• 12.000 rpm Spindle (15K opt) • 500 mm Platter • 40-Taper • 30+1 SMTC (50+1 opt)

• 30+1 SMTC (50+1 opt)





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# **TRUNNION & TILTING TABLES**

# 2-AXIS TRUNNION & TILTING ROTARY TABLES

If you need a 5-axis solution for your 3-axis mill, look to the Haas trunnion rotary tables for a simple bolt-on solution for machining complex parts. The Haas dual-axis trunnion tables bolt directly to the mill's table to provide 5-axis simultaneous motion, or position parts to nearly any angle for multi-sided machining.



- ✓ Eliminate second and third operations and setups by using Haas two-axis tilting rotary tables.
- ✓ Machine five sides of a part, and easily program the table to reach virtually any compound angle.



- 70 mm Platter
- Tilt ±120° Rotation 360°
- 0.001 to 410°/Sec (Tilt)
- 0.001 to 410°/Sec (Rotary)
- Resolution 0.001°
- Max torque 81Nm



# SUPER HIGH SPEED TRT100 TILTING 5-AXIS

- 100 mm Platter
- Tilt ±120° Rotation 360°
- 0.001 to 1,000°/Sec (Tilt)
- 0.001 to 1,000°/Sec (Rotary)
- Resolution 0.001°

**TRT160** with 160mm platter available



### TR160 TRUNNION 5-AXIS

- 160 mm Platter (250 mm opt.)
- Tilt ±120° Rotation 360°
- 0.001 to 104°/Sec (Tilt)
- 0.001 to 104°/Sec (Rotary)
  - Resolution 0.001°

TR160-2 with twin platter available



### TR200Y TRUNNION 5-AXIS

- 200 mm Platter
- Tilt ±120° Rotation 360°
- 0.001 to 100°/Sec (Tilt)
- 0.001 to 130°/Sec (Rotary)
- Resolution 0.001°



- Tilt ±120° Rotation 360°
- 0.001 to 104°/Sec (Tilt)
- 0.001 to 104°/Sec (Rotary)
- 160 mm Platter
- Resolution 0.001°



### TRT210 TILTING 5-AXIS

- 210 mm Platter
- Tilt ±120° Rotation 360°
- 0.001 to 80°/Sec (Tilt)
- 0.001 to 100°/Sec (Rotary)
- Resolution 0.001°



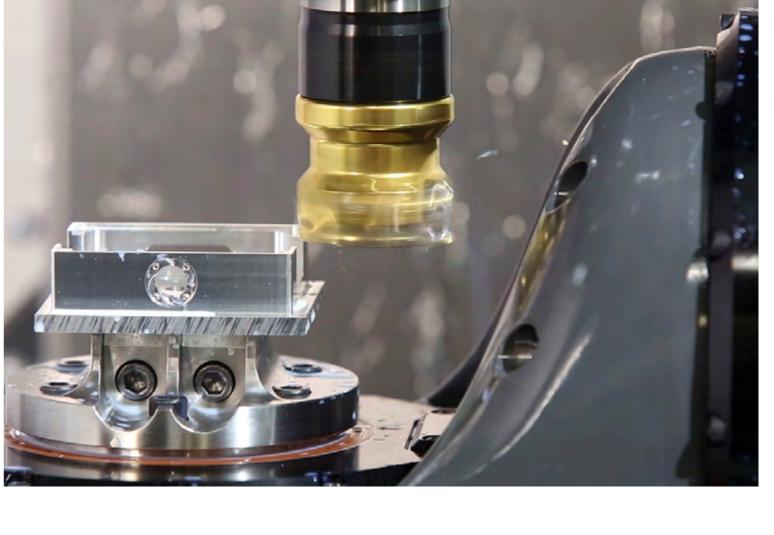
### TR210 TRUNNION 5-AXIS

- 210 mm Platter (350 mm opt.)
- Tilt ±120° Rotation 360°
- 0.001 to 60°/Sec (Tilt)
- 0.001 to 60°/Sec (Rotary)
- Resolution 0.001°



# TR310 TRUNNION 5-AXIS

- 310 mm Platter
- Tilt ±120° Rotation 360°
- 0.001 to 50°/Sec (Tilt)
- 0.001 to 50°/Sec (Rotary)
- Resolution 0.001°



# **MAKING 5-AXIS EASIER**

DYNAMIC WORK OFFSETS + TOOL CENTRE POINT CONTROL

Dynamic Work Offsets (DWO) and Tool Centre Point Control (TCPC) are software features in the Next Generation Control that greatly simplify multi-axis machining when using 4- and 5-axis rotary tables. DWO/TCPC eliminates the need to locate the workholding in exactly the same place, or repost the part program every time a job is set up. With DWO/TCPC the Haas control recognises the part position and creates the correct toolpath, regardless of the workholding position, greatly reducing set-up time or reposting time.



# WITH DWO/TCPC THERE'S NO NEED TO:

- X Place the part in the exact same location every time
- X Repost the program when the fixture changes
- X Repost the program if the job moves to another Haas machine

# DWO/TCPC CHANGES EVERYTHING:

- ✓ Save time on programming and setup
- ✓ Reduce fixturing costs
- ✓ Increase your number of multi-axis operators
- ✓ Increase your productivity and profits

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# **ROTARY TABLES**

# 5C COLLET INDEXERS

The Haas HA5C series is the ideal choice for holding smaller parts. Clamp your parts using standard 5C collets, or chuck them by threading a 3-jaw chuck to the spindle nose. Collets can be closed with your choice of a manual handle or an optional air collet closer. The HA5C series is easy to program, interface, and set up. With over three decades of refinement, the Haas HA5C is the industry benchmark for quality, accuracy, and dependability.

# PLATTER-STYLE ROTARY TABLES

For holding medium to large parts or fixtures, the HRT series of T-slotted rotary tables is the answer. Available with platter sizes from 100 mm to 1,000 mm, these rugged, heavy-duty tables can be mounted vertically or horizontally for added versatility. Chucks and fixtures can easily be bolted to the table using the six precision T-slots, and large through-holes allow for bar feeding and special fixture-locating requirements.



### HASC 4-AXIS

- Torque 81 Nm
- 0.001 to 410°/sec
- Resolution 0.001°



HA5C-2 4-AXIS

- Torque 34 Nm
- Resolution 0.001°



HA5C-3 4-AXIS

- 0.001 to 200°/sec

T5C-2 TILTING 5-AXIS

• Tilt ±120° Rotation 360°

• 0.001 to 60°/sec (Tilt)

• Resolution 0.001°

• 0.001 to 200°/sec (Rotary)



- Torque 34 Nm
- 0.001 to 200°/sec
- Resolution 0.001°



### HA5C-4 4-AXIS

- Torque 34 Nm
- 0.001 to 200°/sec





### TSC TILTING 5-AXIS

- Tilt ±120° Rotation 360°
- 0.001 to 410°/sec (Rotary)
- 0.001 to 60°/sec (Tilt)



HA2TS 4-AXIS TWIN TAILSTOCK

- Dual Spindle
- Twin Pneumatic Tailstocks
- Precision T-Slot Baseplate



HASCS 4-AXIS SUPER HIGH SPEED

- Torque 27 Nm
- 0.001 to 725°/sec
- Resolution 0.001°



### T5C-3 TILTING 5-AXIS

- Tilt ±120° Rotation 360°
- 0.001 to 200°/sec (Rotary)
- 0.001 to 60°/sec (Tilt)
- Resolution 0.001°



# T5C-4 TILTING 5-AXIS

- Tilt ±120° Rotation 360°
  - 0.001 to 200°/sec (Rotary)
  - 0.001 to 60°/sec (Tilt)
  - Resolution 0.001°



### HRT-A5 4-AXIS A1 SPINDLE NOSE

- A1-5 Spindle Nose
- 0.001 to 130°/sec
- Repeatability 10 arc-sec



HRT-AG 4-AXIS A1 SPINDLE NOSE

- A1-6 Spindle Nose
- 0.001 to 100°/sec
- Repeatability 10 arc-sec



- 100 mm Platter
- 0.001 to 300°/sec
- Resolution 0.001°



### HRT160-SS 4-AXIS HIGH SPEED

- 160 mm Platter
- 0.001 to 570°/sec
- Resolution 0.001°



HRT310 4-AXIS

- 310 mm Platter
- 0.001 to 75°/sec
- Compact SP version available



- 160 mm Platter
- 0.001 to 130°/sec
- Compact SP version available



# HRT210 4-AXIS

- 210 mm Platter
- 0.001 to 100°/sec • Resolution 0.001°



HRT450 4-AXIS

- 450 mm Platter
- 0.001 to 50°/sec
- Resolution 0.001°



HRC160 4-AXIS ROLLER CAP

- 160 mm Platter
- 0.001 to 830°/sec • Resolution 0.001°



DIE HOTTANDTUA BAAH

HRT160-2 4-AXIS

• 160 mm Platters



HRC210 4-AXIS

- 210 mm Platter
- 0.001 to 830°/sec
- Resolution 0.001°



HRT630 4-AXIS

- 630 mm Platter
- 0.001 to 50°/sec
- Max Torque 1,390 Nm



HRT210-SP 4-AXIS COMPACT

• 210 mm Platter

• 0.001 to 100°/sec

- 1,000 mm Platter
- 0.001 to 35°/sec

HRT800 also available

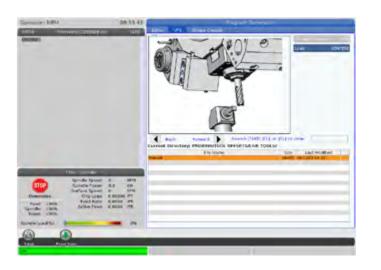
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# **UNLOCK ALL YOUR HAAS MACHINE'S POTENTIAL**

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.











# **HAAS NEXT GENERATION CONTROL**

DESIGNED, BUILT & PROGRAMMED BY HAAS

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

# STANDARD FEATURES

- ✓ Ethernet Interface
- ✓ One-Button Features
- ✓ M130 Media Player
- ✓ 1 GB Memory

- ✓ Advanced Tool Management
- ✓ HaasConnect Mobile Monitoring
- ✓ Power-Failure Detection
- ✓ Multi-Function Jog Handle

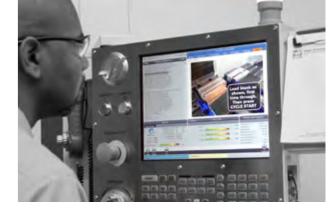
# **M130 MEDIA DISPLAY**

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

The Haas M130 Media Display M-Code is a powerful tool for communicating with operators and programmers directly from the Haas control as a 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.

# ON-SCREEN COMMUNICATION

- ✓ Easily explain secondary operations on the control
- ✓ Avoid miscommunications with your colleagues
- ✓ Describe step-by-step part inspection processes
- ✓ Share important setup information with colleagues



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# EC-500 4-AXIS

- 813 x 635 x 711 mm
- 8,100 rpm (10K, 12K, 15K opt.)
- 40-Taper 30 hp (50-Taper opt.)
- 30+1 SMTC (50 or 100+1 opt.)
- Dual pallet changer

- 30+1 SMTC (50+1 opt.)

- 1,626 x 1,270 x 1,016 mm
- 7,500 rpm (10K opt.)
- 50-Taper 30 hp
- 30+1 SMTC (50+1 opt.)



- 7,500 rpm (10K opt.)
- B-axis rotary platter
- HRT310 A-axis rotary



# **HORIZONTAL MACHINING CENTRES**

# GET THE HORIZONTAL ADVANTAGE

The EC-1600 Series HMCs are rugged 50-taper horizontal machining centres with large work cubes, and a maximum part capacity of 4,500 kg. The machines are available with a full 4-axis rotary platter integrated into the T-slot table to provide access to four sides of a part or tombstone, a 5-axis model is also available.

For extended production and true "lights out" capability, a 6-station pallet pool and high-capacity tool changer are available.



# EC-1600

- 1,626 x 1,270 x 813 mm
- 7,500 rpm (10K opt.)
- 50-Taper 30 hp



- - - 30+1 SMTC (50+1 opt.)



# **HAAS ST-SERIES LATHES**

HIGH-PERFORMANCE TURNING CENTRES

Built using heavily ribbed, American-made iron castings for superior vibration damping, these rugged machines use Haas' exclusive torque-tube base design - with more than double the mass of competitors' models - for superior rigidity. The result is high accuracy, consistent repeatability and superb surface finishes, while maintaining dependability and valuebased pricing.

The Haas ST-Series turning centres offer the best combination of performance and value in their class, and are available with a wide selection of high-productivity options.



### ST-10

- Max Cut 0 356 x L 406 mm
- Bar Capacity 44 mm
- A2-5 6,000 rpm 15 hp
- Chuck 165 mm



### ST-10Y Y-AXIS

- Max Cut 0 305 x L 406 mm
- ±51.0 mm Y-Axis
- A2-5 6,000 rpm 15 hp
- 6,000 rpm Live Tooling w/C axis



### ST-15 BIG BORE

- Max Cut 0 356 x L 406 mm
- Bar Capacity 63.5 mm
- A2-6 4,000 rpm 20 hp
- Chuck 210 mm



### ST-15Y BIG BORE Y-AXIS

- Max Cut 0 305 x L 406 mm
- ±51.0 mm Y-Axis
- A2-6 4,000 rpm 20 hp
- 6,000 rpm Live Tooling w/C axis

# **HAAS ST-SERIES LATHES**

# HIGH-PERFORMANCE TURNING CENTRES



# ST-20

- Max Cut BOT 0 381 x L 572 mm
- Bar Capacity 64.0 mm
- A2-6 4.000 rpm 20 hp
- Chuck 210 mm



## ST-20Y Y-AXIS

- Max Cut BMT 0 298 x L 572 mm
- ±51.0 mm Y-Axis
- A2-6 4.000 rpm 20 hp
- 6,000 rpm Live Tooling w/C axis



# ST-25 BIG BORE

- Max Cut 0 381 x L 572 mm
- Bar Capacity 76 mm
- A2-6 3.400 rpm 30 hp
- Chuck 254 mm



ST-25Y BIG BORE Y-AXIS

- Max Cut BMT 0 298 x L 572 mm
- ±51.0 mm Y-Axis
- A2-6 3.400 rpm 30 hp
- 6,000 rpm Live Tooling w/C axis



# ST-30

- Max Cut 0 381 x L 826 mm
- Bar Capacity 76 mm
- A2-6 3,400 rpm 30 hp
- Chuck 254 mm



### ST-30Y Y-AXIS

- Max Cut 0 304 x L 826 mm
- Bar Capacity 76 mm
- 254 mm Chuck 3,400 rpm
- 4,000 rpm Live Tooling w/C axis



### ST-30L

- Max Cut 0 406 x L 1588 mm
- Bar Capacity 76 mm
- A2-6 3,400 rpm 30 hp
- Chuck 254 mm



### ST-30LY LONG BED Y-AXIS

- Max Cut 0 304 x L 1588 mm
- Bar Capacity 76 mm
- A2-6 3,400 rpm 30 hp
- 4,000 rpm Live Tooling w/C axis



# ST-35 BIG BORE

- Max Cut 0 381 x L 826 mm
- Bar Capacity 102 mm
- A2-8 3,200 rpm 40 hp
- Chuck 305 mm



- 4,000 rpm Live Tooling w/C axis



### ST-35Y BIG BORE Y-AXIS

- Max Cut 0 304 x L 826 mm
- Bar Capacity 102 mm
- 305 mm Chuck 3,200 rpm



### ST-35L BIG BORE LONG BED

- Max Cut 0 406 x L 1588 mm
- Bar Capacity 102 mm
- A2-8 3,200 rpm 40 hp
- Chuck 305 mm



### ST-35LY BIG BORE LONG BED Y-AXIS

- Max Cut 0 304 x L 1588 mm
- Bar Capacity 102 mm
- A2-8 3,200 rpm 40 hp
- 4,000 rpm Live Tooling w/C axis



ST-40

- Max Cut 0 648 x L 1,118 mm
- Bar Capacity 102 mm
- A2-8 2,400 rpm
- 40 hp (55 hp opt.) 1,400 rpm



# ST-40L LONG BED

- Max Cut 0 648 x L 2,032 mm
- Bar Capacity 102 mm
- A2-8 2,400 rpm
- 40 hp (55 hp opt.) 1,400 rpm



# ST-45 BIG BORE

- Max Cut 0 648 x L 1,118 mm
- Bar Capacity 165 mm A2-11
- 40 hp (55 hp opt.) 1,400 rpm
- Chuck 457 mm



# ST-45L BIG BORE LONG BED

- Max Cut 0 648 x L 2,032 mm
- Bar Capacity 165 mm A2-11
- 40 hp (55 hp opt.) 1,400 rpm
- Chuck 457 mm







# **HAAS CL-1 CHUCKER LATHE**

ULTRA-COMPACT CNC TURNING CENTRE

The innovative CL-1 is an ultra-compact CNC chucker lathe that comes standard with an 8-station automatic turret, making it ideal for dedicated small-part production, second-op parts, or short runs.

It's perfect for prototyping small parts, such as those found in the communications, aerospace, medical, and dental industries.

The CL-1 can be moved easily with a pallet jack and is small enough to fit into most freight lifts.



- Max Bar 0 25.4 mm
- Rigid Tapping
- 5C Collet Spindle 6,000 rpm
- 8-Station Automatic Tool Turret

# **LARGE-THROUGH-BORE LATHES**

HIGH-PERFORMANCE BIG-BORE TURNING CENTRES

The high-torque spindles and large through-bores of these machines make them ideal for machining heavy pipes and fittings, large couplers, and long rollers. Their versatile design allows easy loading and unloading of large parts. The large-capacity Haas lathes offer the best combination of performance and value in their class.





- Max Cut 0 648 x L 2,032 mm
- Bar Capacity 165 mm

• 1,400 rpm

- A2-11 40 hp (55 hp opt.)
- 1,400 rpm

• Bar Capacity 165 mm

ST-45 BIG BORE

• Max Cut 0 648 x L 1,118 mm

• A2-11 • 40 hp (55 hp opt.)

URNING CENTRES

# ST-45L BIG BORE LONG BED

- Max Cut 0 648 x L 2,032 mm
- Spindle Bore 216 mm
  - 55 hp

ST-50

• A2-15 • 1,200 rpm

# ST-55 BIG BORE

- Max Cut 0 648 x L 2,032 mm
- Spindle Bore 318 mm
- 55 hp
- A1-20 1,000 rpm

# **TOOLROOM LATHES**

# THE NEW GENERATION TL-SERIES

The TL-1 and TL-2 Toolroom Lathes have undergone a complete redesign, with new enclosures and better overall performance.

Both machines have an A2-5 spindle nose with a 58 mm bore, and come with a 254 mm 3-jaw manual chuck.

The spindles are powered by a 10 hp vector drive system, and spin to 1,800 rpm, with a 3,000-rpm option. Rapids have increased to 11.4 m/min on both X and Z axes, and an optional manual tailstock is available for additional part support.



### TOOLROOM

- Max Cut 0 406 x L 762 mm
- Spindle Bore 58 mm
- 10 hp A2-5
- 1,800 rpm (3k opt.)

### TL-2 TOOLROOM

- Max Cut 0 406 x L 1,219 mm
- Spindle Bore 58 mm
- 10 hp A2-5
- 1,800 rpm (3k opt.)

# **HAAS Y-AXIS TURNING CENTRES**

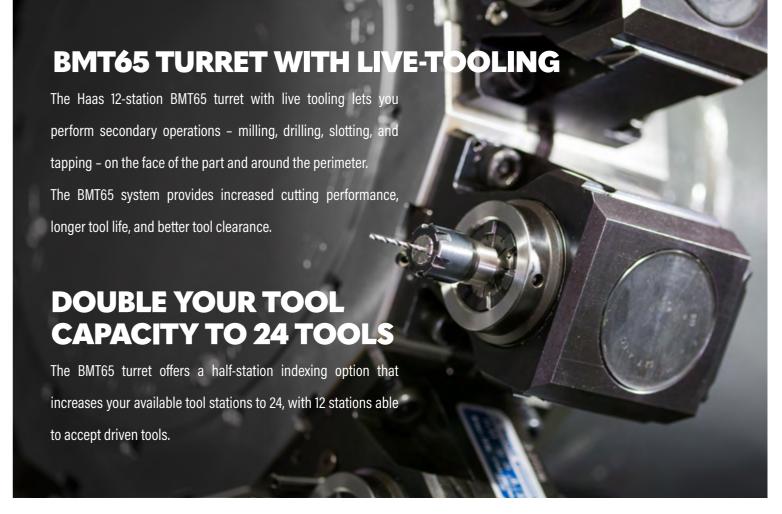
MULTIPLE OPERATIONS ON A SINGLE MACHINE

The Haas Y-axis lathes provide the ability to turn and mill complex parts and perform multiple operations on a single machine - increasing throughput, reducing handling, and improving part accuracy.

The option includes a full C-axis that provides interpolated bidirectional motion at precise speeds and feeds for part positioning and repeatability.









# ST-15Y Y-AXIS

- Max Cut 0 305 x L 406mm
- Bar Capacity 63.5 mm



- 210 mm Chuck 4,000 rpm
- 6,000 rpm Live Tooling w/C axis



# ST-20Y Y-AXIS

- Max Cut 0 254 x L 572 mm
- ±51.0 mm Y-Axis
- A2-6 4,000 rpm 20 hp
- 6,000 rpm Live Tooling w/C axis



• 6,000 rpm Live Tooling w/C axis

- Max Cut 0 254 x L 572 mm



## ST-25Y BIG BORE Y-AXIS

- ±51.0 mm Y-Axis
- A2-6 3,400 rpm 30 hp
  - 6,000 rpm Live Tooling w/C axis



# ST-30Y Y-AXIS

- Max Cut 0 304 x L 826 mm
- Bar Capacity 76 mm
- 254 mm Chuck 3,400 rpm
- 4,000 rpm Live Tooling w/C axis



### ST-30LY LONG BED Y-AXIS

- Max Cut 0 304 x L 1588 mm
- Bar Capacity 76 mm
- A2-6 3,400 rpm 30 hp
- 4,000 rpm Live Tooling w/C axis



# ST-35Y BIG BORE Y-AXIS

- Max Cut 0 304 x L 826 mm
- Bar Capacity 102 mm
- 305 mm Chuck 3,200 rpm
- 4,000 rpm Live Tooling w/C axis



## ST-35LY BIG BORE LONG BED Y-AXIS

- Max Cut 0 304 x L 1588 mm
- Bar Capacity 102 mm
- A2-8 3,200 rpm 40 hp
- 4,000 rpm Live Tooling w/C axis



## DS-30Y Y-AXIS DUAL SPINDLE

- Max Cut 0 457 x L 584 mm
- Bar Capacity 76 mm
- A2-6 + A2-5 4,800 rpm
- 6,000 rpm Live Tooling w/C axis



# **A2-5 SUB SPINDLE**

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

This affordable A2-5 spindle is equipped with a 134 mm 5.3") 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. A built-in part ejector propels the finished part into the optional parts catcher for automated operation.

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# **HAAS BAR FEEDER**

# AUTOMATE PART PRODUCTION

The Haas Bar Feeder is a simple and affordable way to automate part production on Haas ST and DS series turning centres to boost productivity. It is designed and built exclusively for use on Haas turning centres, and connects directly to the Haas control.

Our rollaway design lets you swap out the patented Haas extruded spindle liners in minutes, and our quick-change pushrods snap in place without tools. Bar height adjustments are fast and easy using a single handwheel, and our belt-driven bar-shuttle system provides lightning-fast retract speeds to reduce cycle times.

- ✓ All-inclusive design, with plug-and-play capabilities
- ✓ Interfaces directly with the Haas control
- ✓ Includes patented Haas spindle liners













# **AUTO PARTS LOADER**

TAKE YOUR PRODUCTION TO THE NEXT LEVEL

The Haas Automatic Parts Loader is a simple and affordable way to automate part production and boost productivity on Haas turning centres.

The easy-to-use interface in the Haas control guides you through a simple, step-by-step setup process that "teaches" the APL arm its positions, and has you fully automated in minutes, loading and unloading parts for unattended machining.

- ✓ All-inclusive design, with plug-and-play capabilities
- ✓ Haas ST-10 through ST-25 turning centres
- ✓ Interfaces directly with the Haas control
- ✓ Accommodates parts up to 147 x 127 mm and 4.5 kg
- ✓ Includes light curtain for safe operation

# SLUG LOADING





SHAFT LOADING





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# **HAAS ENGINEERING**

# AT HAAS, OUR GOAL IS TO KEEP MACHINISTS MACHINING

We offer a complete range of cost-effective support, including: commissioning, training, technical support, service agreements, and applications advice.

Whether it's installing new equipment, training your machining staff, solving a technical problem, or helping to maintain the health and performance of your investment, you can count on our experienced team.

We measure every aspect of our support systems so we can maintain our service to industry-leading high standards.

# **EXPERT ADVICE**

# FRIENDLY, EXPERT ADVICE WHENEVER YOU NEED IT

Our dedicated engineering support team is on hand to give you answers to the widest range of technical queries, including applications, maintenance, programming and the latest products.



# MAXIMISING PARTS AVAILABILITY

Haas Automation's efficient design uses common parts across multiple machines and model ranges. For example a control processor board can fit any current machine from a Mini Mill to multi-pallet horizontal, a coolant pump from a mill will fit a lathe and vice versa.

Every Haas machine, including the control, is entirely designed and built by us, this means we can ensure there are always parts available. In fact, we can supply spares for any Haas built since 1990. It's reassuring to know no matter how old your investment is we've got it covered.



# **SUPPORT & SUPPLY CHAIN**

# THE INDUSTRY'S LARGEST UK STOCK OF SPARES

Haas Automation's UK facilities stock service and maintenance parts worth in excess of £4,600,000, enabling the fastest access and delivery. If necessary, parts can be shipped same day from our European or USA inventories.

# EXPERTISE WHERE IT'S NEEDED

In addition, all our service engineers' training and expertise is formalised within a skills matrix, which works hand-in-hand with van location tracking and a live connection to the Haas Management System for our engineers in the field. This ensures the most appropriate individual can be quickly despatched to a customer.

# THE BEST FIRST CALL FIX RATE

Our engineers can access and update customer and machine history remotely, and check out the appropriate bar-coded spares. Having the right spares where and when they're needed means more than 95% of issues are resolved on the first visit.

IT'S NO WONDER HAAS MACHINES HAVE THE HIGHEST RESIDUAL VALUES IN THE INDUSTRY

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# **HAAS AUTOMATION - MADE IN USA**

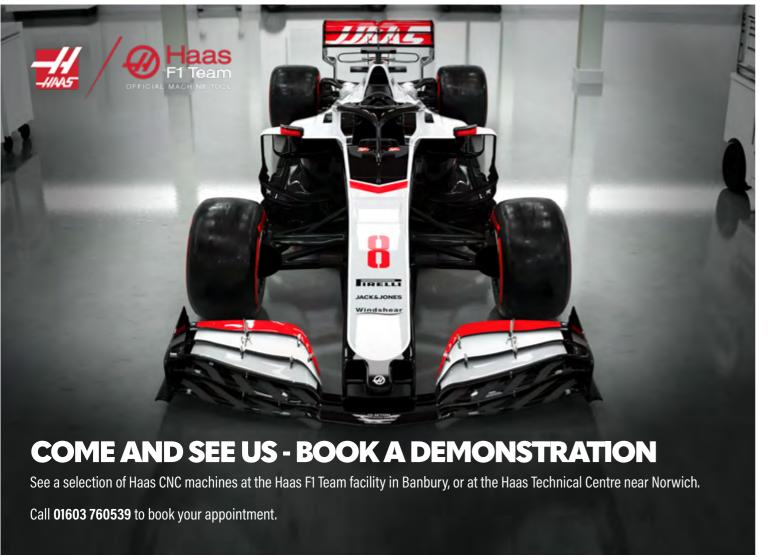
# THE WORLD'S BIGGEST CNC MACHINE TOOL MANUFACTURER

Haas Automation is the largest machine tool manufacturer in the western world, producing over 18,000 machines every year. The full range of metal-cutting machine tools, including CNC machining centres, lathes and rotary tables, is designed and built in its 1.6 million ft<sup>2</sup> factory in California.

Haas machine tools and rotary products are built to exacting specifications to deliver better accuracy, repeatability, and durability than any other machine tools on the market.

Haas makes extensive use of the latest lean manufacturing methods and just-in-time production practices to streamline its capabilities and reduce costs. This, combined with highly trained teams for electronics and mechanical assembly, allows Haas to control quality, cost, reliability, and availability.

The resulting savings and increased quality are passed on to the customer in the form of lower prices and better products.



















# THE INDUSTRY'S BEST SERVICE AND SUPPORT

# HAAS ENGINEERING - WHAT MAKES US DIFFERENT?

- √ 32 full-time Haas engineers strategically placed across the UK
- ✓ Less than 1.5 hours travel time to 98% of our customers
- ✓ Each is USA-factory-certified and tested monthly
- ✓ Every engineer has a fully-stocked 4x4 service vehicle
- ✓ £38,000 of parts on board each 4x4 service vehicle
- ✓ £4,600,000 of parts in our UK warehouses
- ✓ Over 10,000 UK machine installations





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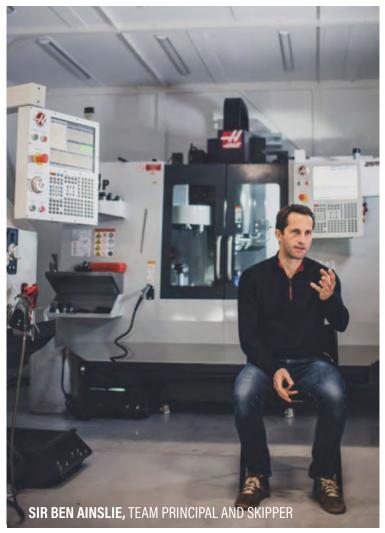
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# INEOS TEAM UK INSTALLS 10,000™ HAAS IN UK

INEOS TEAM UK has announced the installation of the 10,000th Haas UK CNC machine at its headquarters in Portsmouth. INEOS, one of the world's largest manufacturing companies, has partnered with Sir Ben Ainslie, the most successful Olympic sailor in history, to challenge for the 36th America's Cup to be held in New Zealand in March 2021. The recently installed Haas CNC Toolroom Mill will be in constant use, developing components for their first America's Cup race boat, named 'Britannia' in homage to one of Britain's most famous racing yachts.

**Sir Ben Ainslie,** team principal and skipper, commented; "We're really excited to be part of this fantastic milestone for Haas Automation. It's a great partnership for our team, because our designers and engineers now have access to high quality Haas CNC machinery. For us to know we've got such reliability and accuracy is incredibly important, together with the technical support from Haas, both locally and globally, as we travel the world with the America's Cup."

The Haas Toolroom Mill, together with a Haas Toolroom Lathe, will accompany the team to New Zealand for the America's Cup, giving the engineers access to CNC milling and turning as required. Additionally, the team will benefit from full technical support thanks to Haas Automation's global network.