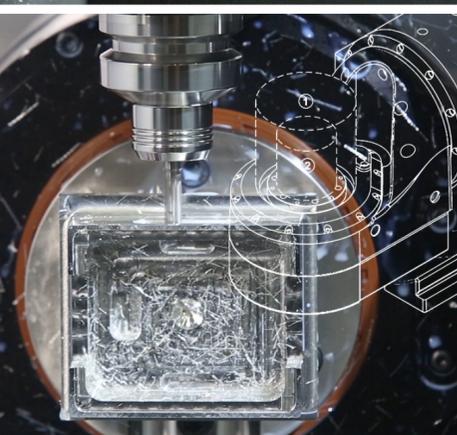
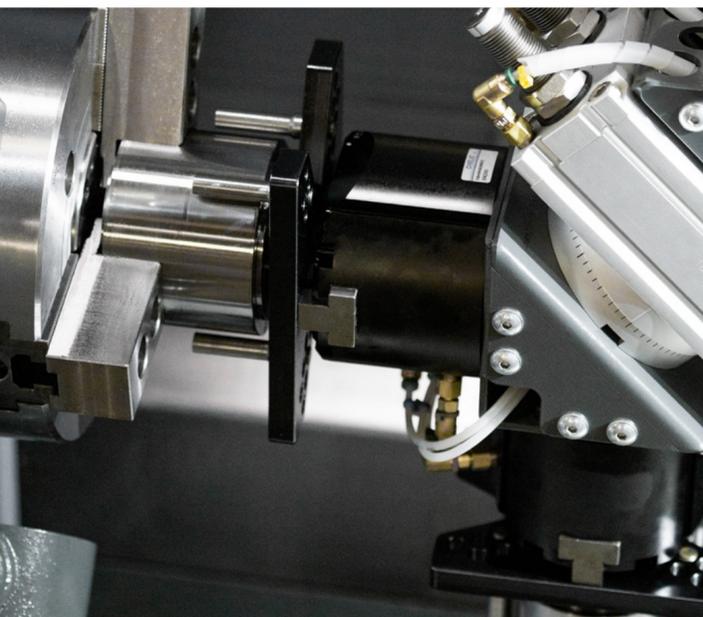


**GET AUTOMATED**



**AUTOMATION IS IN OUR DNA**



## AUTOMATE LATHE PART PRODUCTION

The Haas Bar Feeder is a simple and affordable way to automate part production on Haas turning centers to boost productivity. Designed and built for use with Haas ST and DS series CNC turning centers, the Haas Bar Feeder integrates seamlessly with the Haas control.

### AUTOMATIC COOLANT REFILL

The Haas Automatic Coolant Refill System monitors the machine coolant level, and automatically adds correctly mixed coolant to the tank. This saves the machine operator valuable time for other tasks, such as keeping the machine running and producing parts.

### DUAL-STAGE PARTS CATCHER >>

Our two-stage automatic parts catcher moves completely out of the primary work envelope during machining, and quickly moves into place when commanded at the end of a cycle. For parts with short cycle times, the arm can be left in the extended position, with only the tray rotating up to catch parts at the end of cycle.

The catch tray is easily adjusted for different part-off locations, and can be positioned to catch parts from either the main spindle or optional sub-spindle.



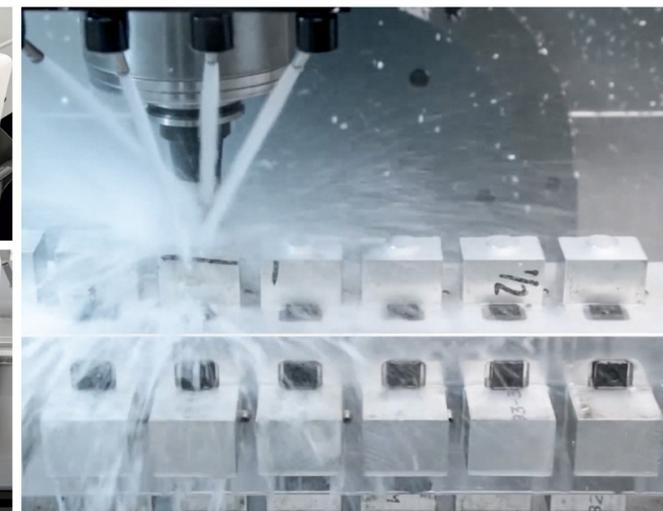
### WIRELESS INTUITIVE PROBING SYSTEM

Automate your setup process with the Haas Wireless Intuitive Probing System (WIPS). WIPS allows you to quickly and easily define work offset coordinates, set tool length offsets, and perform in-process inspection, for both part inspection and tool breakage detection. WIPS is a complete probing package, including everything you'll need, from hardware to software, to get up and running.



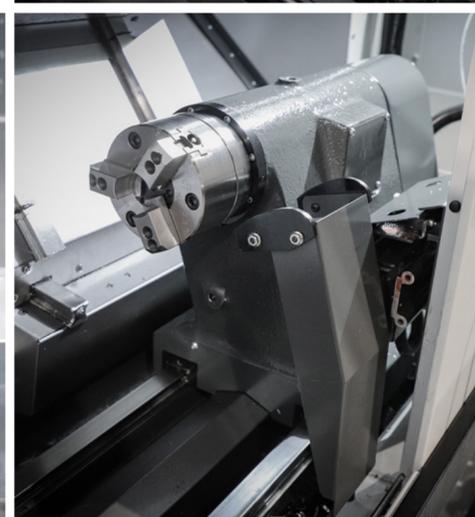
### HAAS AUTO DOOR

Increase productivity and reduce strain on your operators with the Haas Auto Door. This simple, reliable system opens the machine doors automatically via an M-code, or manually via a button on the control pendant. This reduces operator fatigue during repetitive machining operations, and simplifies integration with robotic loaders for unattended operation.



### ROTARY QUIKCHANGE ACCESSORIES

Our QuikChange Rotary Accessories and Tooling Blocks increase productivity by allowing multiple parts to be mounted to the fixtures and blocks, so that more parts and more sides can be machined per setup. This reduces cycle times, boosts throughput, and increases profits. The operator can load/unload parts on one QuikChange cube or plate, while parts are being machined on another.



### SUB-SPINDLE FOR FINISHING

Our sub-spindle for ST-10 through ST-25 turning centers (including Y-axis models) provides new options for finishing the 2nd-op side of your part in a single machine, making you more productive.

This affordable A2-5 spindle features a 5.3" (135 mm) hydraulic chuck, and it fully synchronizes with the main spindle for on-the-fly part handoff, allowing you to finish the backside of your part in a single setup. Simply load a raw workpiece, and you'll have a finished part the next time you open the door. A built-in part ejector propels the finished part into the optional parts catcher for automated operation.

## THE CONTROL IS AT THE CENTER OF YOUR HAAS EXPERIENCE.

Automation touches every part of the Haas CNC experience, but none of it would be possible without our control. The latest generation of the Haas control is crucial to every operation.

### /CONNECT

#### WIRED AND WIRELESS CONNECTION STANDARD

The Haas Control comes standard with built-in Ethernet and WiFi capability, making it easy to connect to your local area network. Set up is quick and easy through a simple and intuitive interface in the Haas Control, and there are no limitations with any common operating systems. Connectivity is fast and reliable.

#### HAAS CONNECT

The Haas Control has the ability to send you, and others you designate, email notifications about the operating status of your Haas machine. HaasConnect is standard with all Haas machines, and free to use. Set up is fast, easy, and free at HaasCNC.com.

Go to HaasCNC.com and click on MyHaas to set up your HaasConnect account.

### /PROGRAM

#### VISUAL PROGRAMMING SYSTEM >>

The Haas Visual Programming System lets you quickly create G-code programs for basic and complex part features, like Y-axis milling/drilling, 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.

### /INTERACT

#### FLEET MANAGEMENT WITH MYHAAS



Your fleet, at your fingertips. With a MyHaas account, you can monitor all the machines in your shop\*, order replacement parts, save machine quotes, and more. Integrate MyHaas with your HaasConnect account and you'll unlock everything you need to keep your shop up and running from the comfort of your laptop.

\*Haas NGC machines only. Must be connected to the internet.

#### M130 MEDIA DISPLAY

The Haas M130 Media Display M-Code is a powerful tool for communicating with machine operators and programmers directly from the Haas control. Use M130 to call up setup instructions, tool lists, 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.

#### ALARM VIDEOS >>

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

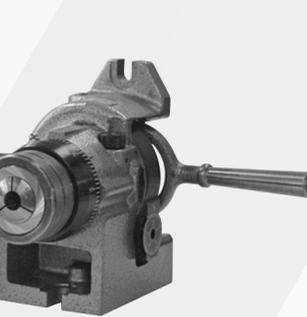


# OUR BEGINNINGS IN AUTOMATION

United States Patent [19]  
Haas et al.

[11] Patent Number: **4,576,530**  
[45] Date of Patent: **Mar. 18, 1986**

[54] INDEXING DEVICE  
[76] Inventors: Gene F. Haas, Northridge, Calif., Kurt P. Zierhut, 10 Chatsworth, Calif.



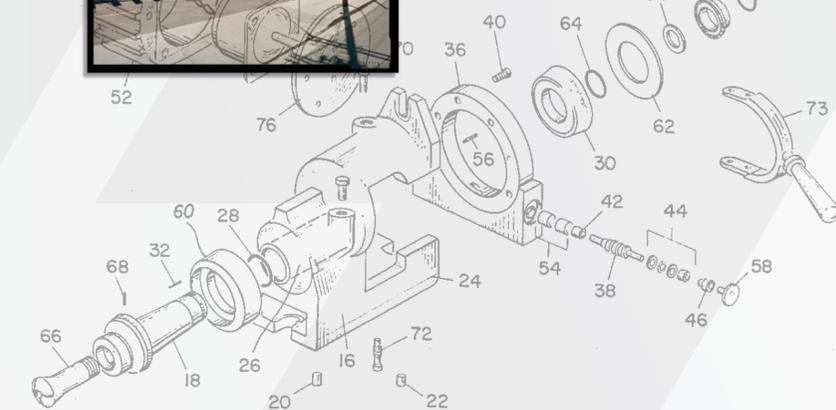
[21] Appl. No.: 586,425  
[22] Filed: Mar. 5, 1984  
[51] Int. Cl.<sup>4</sup>: B23D 7/08  
[52] U.S. Cl.: 409/223; 29/48.5 R; 409/221  
[58] Field of Search: 29/48.5 R, 48.5 A, 49; 279/5; 409/221-223  
[56] References Cited  
U.S. PATENT DOCUMENTS  
2,042,647 6/1936 Hochsneider 409/222 X

## IN 1980,

RECENT COLLEGE GRADUATE, GENE HAAS, OWNED A JOB SHOP IN SIMI VALLEY, CALIFORNIA, MACHINING PARTS FOR THE AEROSPACE INDUSTRY.

One day, he noticed one of his two employees running a job that required indexing a part with a manual 5C collet head. Using the dividing head was a real nuisance, because you had to let go of the quill handle and use both hands to index the part to the next position. Gene thought to himself, "There has to be a way to *automate* this," and so began the development of an automatic indexing head.

The first design incorporated a stepper motor, a manual 5C collet head modified to accommodate a worm and gear housing, and the now-famous black box to control movement. Haas Automation was born.



# AUTOMATION IS 4TH AND 5TH AXIS

Automation is about eliminating operations and simplifying processes, and the fastest way to eliminate operations on your 3-axis mill is to add a Haas single- or dual-axis rotary table. You can reduce or totally eliminate multiple setups, and easily handle multi-sided parts. Haas rotary tables and indexers are the perfect bolt-on solutions for boosting productivity and machining complex parts.

## /INDEXING

### HIGHER PRODUCTIVITY THROUGH AUTOMATION

Haas HA5C single-axis and T5C dual-axis rotary indexers are the ideal choice for holding smaller parts. They are easy to program, interface, and set up; and our precision in-house manufacturing processes ensure high quality and years of dependable operation. With more than three decades of refinement, Haas rotary indexers are the industry benchmark for quality, accuracy, and dependability.

- HA5C • HA5C2 • HA5C4 • T5C • T5C3
- HA5CS • HA5C3 • HA2TS • T5C2 • T5C4



## /REDUCE SETUPS

### TRT ROTARY SOLUTIONS

Our TRT tilting rotary tables not only put 5-axis capabilities well within reach of the average job shop, but their new smaller sizes also provide greater mounting flexibility than before. We've completely redesigned the TRT160 to create a much more compact and versatile 5-axis solution for smaller mills, including Haas Mini Mills and Toolroom Mills. The new unit easily fits on one end of a machine's table, leaving the remainder open for additional fixtures or vises.

- TRT70 • TRT160
- TRT100 • TRT210

## /INCREASE CAPACITY

### 5-AXIS MACHINING FOR EVERY SHOP

Haas TR Series dual-axis trunnion rotary tables offer maximum rigidity and accurate performance for 3+2 and full 5-axis machining. The trunnion design provides additional capacity and larger swing to handle medium to large parts. Scale feedback on the A (tilting) axis increases positioning accuracy and repeatability. 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 multi-side machining.

- TR160 • TR210
- TR200Y • TR310

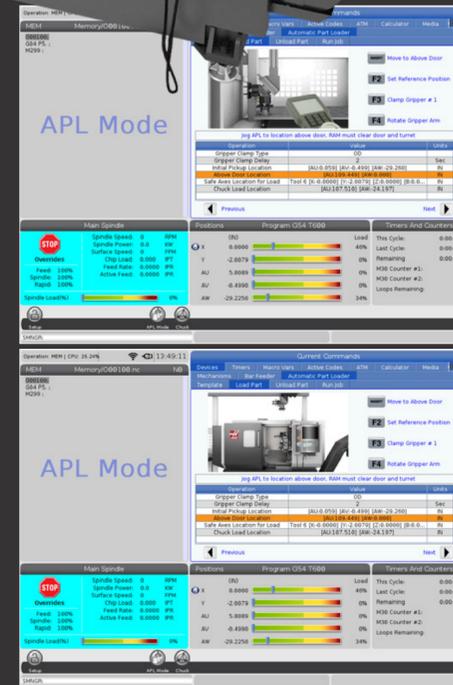


## EASY SETUP

The Haas Automatic Parts Loader (APL) is designed with today's job shop in mind, providing simple and affordable automation on Haas turning centers. The APL integrates seamlessly with the Haas control, and is set up using an intuitive interface that uses graphics, animations, and detailed text to guide the operator through the steps necessary to quickly set up and program the APL. The operator enters basic information by either positioning the part grippers and pushing a single button, or by entering basic numeric dimensions. All values are calculated automatically by the control, and all setup values are saved with the program, making part changeovers fast and easy. Part management is done using one of three included templates, which handle parts from 1.0" to 5.8" (25-147 mm) in diameter.

## AVAILABLE ON

- ST-10 • ST-10Y
- ST-15 • ST-15Y
- ST-20 • ST-20Y
- ST-25 • ST-25Y



## TOTAL CONTROL

Haas Pallet Pool systems are perfect for high-volume production runs, or high-mix/low-volume machining. They integrate seamlessly with the Haas control, which includes a simplified Pallet Schedule Table that allows pallet-scheduling functions from a single dedicated screen. Pallets can be scheduled individually according to priority and sequencing requirements, allowing high-priority parts to be machined first or staged more often. Completed pallets are returned automatically to the holding location, or can be sent to a protected operator station for immediate unloading and reloading.

The Pallet Schedule Table also allows you to define which program is automatically run when a specific pallet is loaded. The M199 code at the end of each program will command a pallet change to load the next scheduled pallet, and then run the program associated with that pallet. This allows the user to start machining on any pallet, and continue uninterrupted machining as long as pallets are scheduled.

## AVAILABLE ON

- EC-400 • UMC-1000 • UMC-1000SS

