



# TOOLING.COM

# HAA5



Workholding



Cutting Tools



Lathe Workholding



Toolholders





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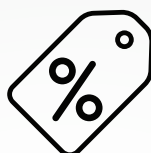


SCAN FOR DETAILS!

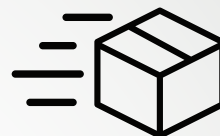
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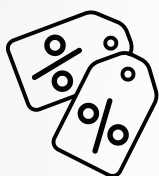
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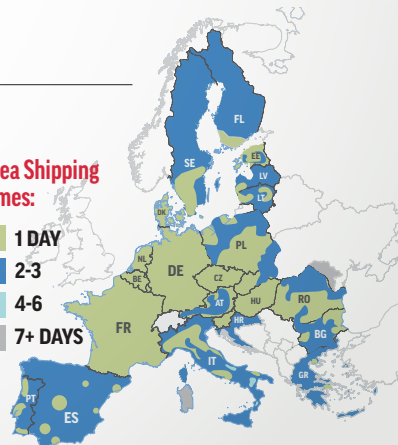
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**To contact your HFO, find their contact information at :**

[www.haascnc.com/about/contact.html](http://www.haascnc.com/about/contact.html)  
**For additional support, you may email:**  
[CustomerSupport@haascnc.com](mailto:CustomerSupport@haascnc.com).

**Area Shipping Times:**

- 1 DAY
- 2-3
- 4-6
- 7+ DAYS



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HAAS

TOOLING.COM

# INSIDE



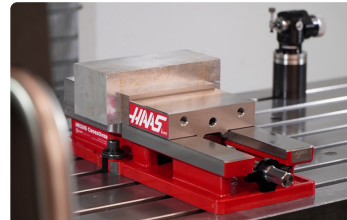
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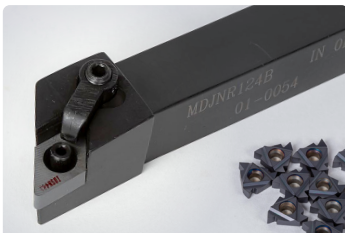
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**TOOLING.COM**

**HAAS**



# TESTED PROVEN.



## HAAS TOOLS ARE TOP-QUALITY TOOLS, MADE BY TOP MANUFACTURERS AROUND THE WORLD

Every Haas tool is reviewed, tested, and proven by our Product Specialists before being offered for sale.

Cutting data is provided for every tool on HaasTooling.com, and is the result of actual cut testing performed here at Haas.

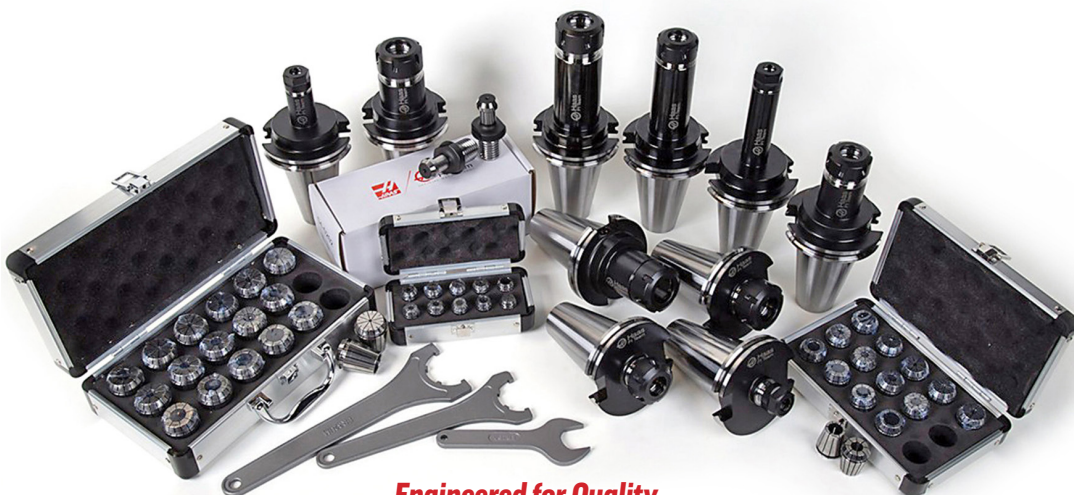
All specs and drawings have been checked and verified by Haas Tooling Product Specialists.

We've used these tools in our own machine shop for years . . . odds are, most of the parts on your Haas machine were made using the same tools.



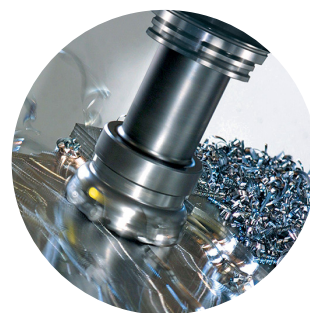
## Real Haas Tooling Benefits

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](http://HaasTooling.com), order with your new Haas machine, or purchase through your local Haas Factory Outlet. Pay by invoice terms available.



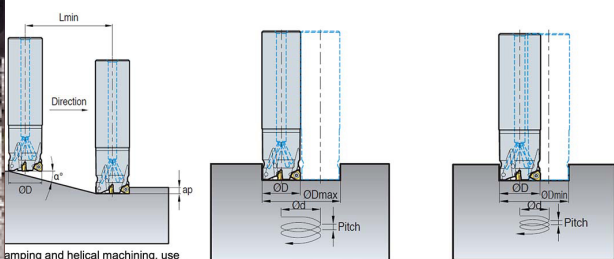
### Engineered for Quality

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



### TESTED AND PROVEN

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



Ramping and helical machining, use coolant and air.  $L_{min} = ap/\tan(\alpha^*)$

#	Tool Diameter ØD	ap	1. Ramping		2. Helical Cutting for Blind Holes				3. Helical Cutting for Through Holes	
			Max. Rake Angle $\alpha^*$	L min	Min Machining Dia. ØDmin	Maximum Pitch	Max Machining Dia. ØDmax	Maximum Pitch	Min Machining Dia.	Maximum Pitch
56	0.75	0.217	17.5	0.708	1.4	0.217	1.44	0.217	1.212	0.22
57	1	0.217	9.5	1.294	1.9	0.217	1.94	0.217	1.712	0.22
58	1.25	0.217	6.5	1.901	2.4	0.217	2.44	0.217	2.212	0.22

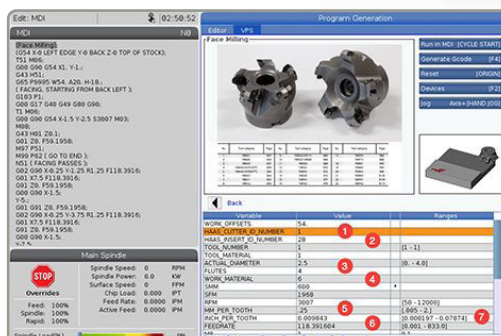
### DATA-BACKED TOOLING

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.



### 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.



### 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.





**Available for SK40/DIN,  
BT40, and HSK63A**

**Haas Mill Toolholders Include:**

- End Mill Holders
- Shell Mill Holders
- Shrink Fit Holders
- ER Collet Holders  
ER16, ER25, ER32
- Keyless Drill Chucks
- Milling Chucks
- Hydraulic Milling Chucks
- Pull Studs



1.



4.



3.



2.



5.

1. Keyless NC Drill Chucks | 2. ER Collet Chucks | 3. Milling Chucks, Collets & Kits | 4. End Mill Holders | 5. Pull Studs

For the complete product line of Haas Mill Toolholders, go to [www.HaasTooling.com](http://www.HaasTooling.com).



HaasTooling.com

# Mill Toolholding

Haas toolholders, cutting tools, and accessories are thoroughly tested on Haas machines in our very own machine shop. These products provide great quality and value, while delivering the performance you demand.



*Check out our fast-heating, high-efficiency, Bench Top Shrink Fit Machine on Page 41*



6. Shrink Fit Holders | 7. ER Collet Chucks | 8. Shell Mill Holders

For the complete product line of Haas Mill Toolholders, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Mill Toolholding kits

## ER Collet Toolholder Kits

### 10 Toolholders

**Includes:** ER16, ER25, and ER32 Collet Chucks, Complete Collet Sets, Wrenches, and 10 Pull Studs

**Included Sizes:** ER16, ER25, and ER32

**Available Tapers:** SK40/DIN, BT40, HSK63A



### 6 Toolholders

**Includes:** 6 high-quality ER Holders

**Available Sizes:** ER16, ER25, or ER32

**Available Tapers:** SK40/DIN, BT40, HSK63A

Not ready to invest in a shrink-fit machine yet? These high-accuracy Hydraulic Milling Chuck Kits are perfect for shops looking for an affordable high-performance milling alternative. Each complete kit includes the hydraulic milling chuck, a set of collets, and a TSC pull stud.

**Available Tapers:** SK40/DIN, BT40, HSK63A

### Single Hydraulic Milling Chuck Holder kits



HSK63A hydraulic milling chucks include coolant transfer tubes and a coolant transfer wrench.

### Multipiece Hydraulic Milling Chuck Holder kits



**Collets Included!**

For the complete product line of Haas Mill Toolholding kits, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Milling Starter Kit

**Includes:** Collet Chucks, Complete Collet Sets, End Mill Holders, Shell Mill Holders, Collet Wrenches, and Pull Studs

**Available Tapers:** SK40/DIN and BT40



## 10 Toolholders

**Includes:** Complete Collet Sets, End Mill Holders, Shell Mill Holders, Wrenches, and Pull Studs

**Included Collet Sets:** ER16, ER25, and ER32 Collet Sets

**Available Tapers:** SK40/DIN, BT40, HSK63A



## 20 Toolholders

**Includes:** Collet Chucks, Complete Collet Sets, End Mill Holders, Shell Mill Holders, Wrenches, and Pull Studs

**Included Collet Sets:** ER16, ER25, and ER32 Collet Sets

**Available Tapers:** SK40/DIN, BT40, HSK63A



## Milling Chuck & Collet Kit

**Includes:** 4 Collets, Wrench, and Pull Stud

**Tapers:** SK40/DIN or BT40



HaasTooling.com

# Mill Cutting Tools

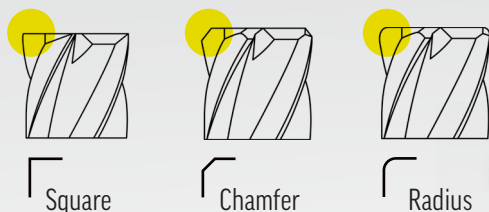
**SUBSCRIBE 2 SAVE!**

## Carbide Tools

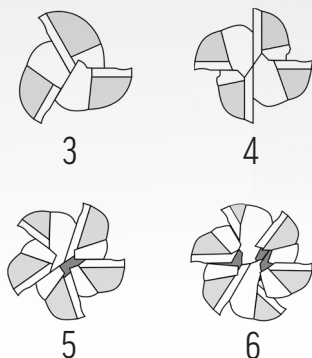
### COATINGS:

- Aluminum Chromium Nitride (Hybrid AlCrN)
- Aluminum Titanium Nitride (AlTiN)
- Diamond-Like Carbon (DLC)
- Bright/Uncoated Finish

### END MILL CORNER TYPES:



### NUMBER OF FLUTES:



1. End Mills | 2. Corner Rounding End Mills | 3. Chamfer End Mills  
4. Ball End Mills | 5. Dovetail Cutters | 6. Roughing End Mills | 7. Carbide Burr Kit

For the complete product line of Haas Milling Tools, go to [www.HaasTooling.com](http://www.HaasTooling.com).



## Q&A User Submissions

At HaasTooling.com, we're dedicated to providing you with the best buying experience possible. Simply submit your questions about the product you're viewing, and our tooling experts, as well as others who have used the product, will provide the answers.

### Product Reviews

### Questions & Answers

#### ASK A QUESTION

Haas Question Man

Feb 02 2021

**Q: Holemaking/Indexable Drill Bodies**

Why do I need two kinds of inserts for these indexable drills?

1 Answer [▼](#) Reply

**Haas Answerman**

Feb 02 2021

You need two different insert styles for these drills. The geometry of these inserts is different for each one. The "center" insert is designed to cut starting from the center of the drill, and not allow the chips to pack. The "Periphery" insert is designed for slightly faster surface speed and easier chip removal.

## Indexable Tools



1. HIE Indexable End Mill | 2. HEHF Indexable End Mill | 3. 60° Indexable Dovetail Cutter | 4. HIE Indexable End Mill  
5. Indexable Ball End Mill | 6. HMIEM Indexable End Mill



# Haas Tooling Shell Mill/Insert Chart

## TOOLPATH TYPE



FACE MILLING



SHOULDER MILLING



SLOTTING



RAMPING

## ISO MATERIAL TYPE

P - STEEL

M - STAINLESS STEEL

K - CAST IRON

## 90° CUTTING EDGE

### HRNP – Haas Rectangle Negative Positive



Toolpath Type: Face Milling, Shoulder Milling



90° cutting edge | D.O.C. max. .571" (14.50mm)

- Negative axial rake, positive radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes 50mm, 63mm, 80mm, 100mm

#### AVAILABLE HAAS GRADES

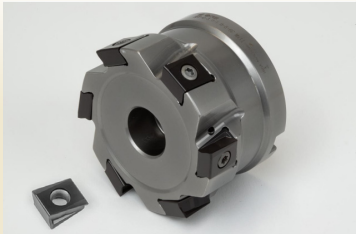
HP30 HMP20 HMP35 HN25 HK25

#### APPLICABLE WORKPIECE MATERIALS



\*Maximum RPM may be limited for smaller diameter tools.

### HPP – Haas Positive Positive



Toolpath Type: Face Milling, Shoulder Milling



90° cutting edge | D.O.C. max. .591" (15.00mm)

- Positive axial rake, positive radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes 50mm, 63mm, 80mm, 100mm

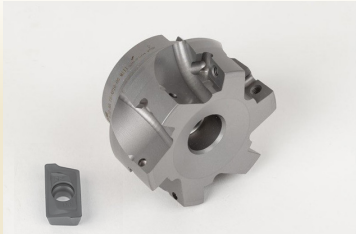
#### AVAILABLE HAAS GRADES

HP30 HMP20 HMP35 HK25

#### APPLICABLE WORKPIECE MATERIALS



### HAPN – Parallelogram Positive Negative



Toolpath Type: Face Milling, Shoulder Milling



90° cutting edge | D.O.C. max. .630" (16.00mm)

- Positive axial rake, negative radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes 50mm, 63mm, 80mm, and 100mm

#### AVAILABLE HAAS GRADES

HP30 HMP20 HN25

#### APPLICABLE WORKPIECE MATERIALS



### HS6NP – Haas Sq Shoulder 6 Negative Positive



Toolpath Type: Face Milling, Shoulder Milling, Slotting



90° cutting edge | D.O.C. max. .303" (7.70mm)

- Negative axial rake, positive radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes 63mm, 80mm, 100mm

#### AVAILABLE HAAS GRADES

HP30 HMP20 HMP35 HN25 HK25

#### APPLICABLE WORKPIECE MATERIALS



\*Maximum RPM may be limited for smaller diameter tools.

## 45° CUTTING EDGE

### HOP – Haas Octagon Positive



Toolpath Type: Face Milling



45° cutting edge | D.O.C. max. .138" (3.50mm)

- Positive axial rake, positive radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes: 50mm, 63mm, 80mm, 100mm

#### AVAILABLE HAAS GRADES

HP30 HMP20 HMP35 HN25 HK25

#### APPLICABLE WORKPIECE MATERIALS



\*Maximum RPM may be limited for smaller diameter tools.

### HSPP – Haas Square Positive Positive



Toolpath Type: Face Milling



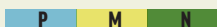
45° cutting edge | D.O.C. max. .236" (5.99mm)

- Positive axial rake, positive radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes 50mm, 63mm, 80mm, and 100mm

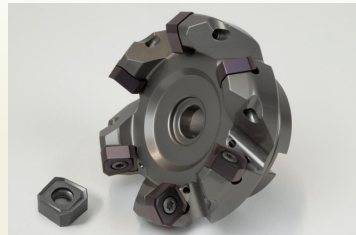
#### AVAILABLE HAAS GRADES

HP30 HMP20 HN25

#### APPLICABLE WORKPIECE MATERIALS



### HSNP – Haas Square Negative Positive



Toolpath Type: Face Milling



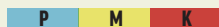
45° cutting edge | D.O.C. max. .275" (6.99mm)

- Negative axial rake, positive radial rake
- Inch sizes 2.0", 2.5", 3.0", and 4.0"
- Metric sizes 50mm, 63mm, 80mm, 100mm

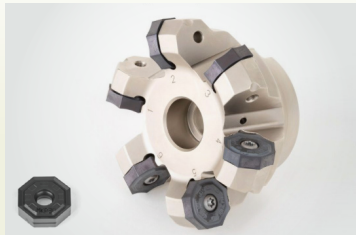
#### AVAILABLE HAAS GRADES

HP30 HMP20 HMP35 HK25

#### APPLICABLE WORKPIECE MATERIALS



### HONP – Haas Octagon Negative Positive



Toolpath Type: Face Milling



45° cutting edge | D.O.C. max. .216" (5.50mm)

- Negative axial rake, positive radial rake
- Inch sizes: 2.5", 3.0", and 4.0"
- Metric sizes: 63mm, 80mm, 100mm

#### AVAILABLE HAAS GRADES

HU30 HU40 HN25A MKP30 HMP40C

#### APPLICABLE WORKPIECE MATERIALS







HELICAL MILLING



COPY MILLING



PLUNGE MILLING



CHAMFER MILLING

## N - ALUMINUM / NON-FERROUS

## S - HIGH-TEMP ALLOYS

## H - HARDENED METALS

### HVPP – Haas 35° Rhombic (V) Positive Positive



**Toolpath Type:** Ramping, Shoulder Milling, Axial Plunge Milling



90° cutting edge | D.O.C. max. .0394" (10mm)

- Positive axial rake, positive radial rake
- Inch sizes: 2.0", 2.5", 3.0", and 4.0"
- Metric sizes: 40mm, 50mm, 63mm, and 80mm

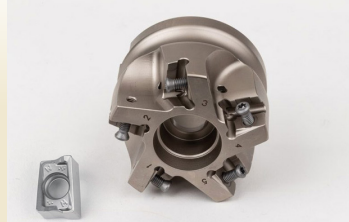
#### AVAILABLE HAAS GRADES

HN25

#### APPLICABLE WORKPIECE MATERIALS

N

### HLNP – Haas Rectangle Negative Positive



**Toolpath Type:** Axial Plunge Milling, Face Milling, Shoulder Milling, Slotting, Helical Milling



90° cutting edge | D.O.C. max. .059"/.098 (1.5/2.5mm)

- Negative axial rake, positive radial rake
- Inch sizes: 1.5", 2.0", 2.5", 3.0", and 4.0"
- Metric sizes: 40mm, 50mm, 63mm, 80mm, and 100mm

#### AVAILABLE HAAS GRADES

HU30 HMK15 HMP40C

#### APPLICABLE WORKPIECE MATERIALS

P M K S H

### HPAL – Haas High Positive for Aluminum



**Toolpath Type:** Face Milling, Shoulder Milling, Slotting, Ramping, Helical Milling, Copy Milling



90° cutting edge | D.O.C. max. .670" (17.00mm)

- Positive axial rake, positive radial rake
- Inch sizes: 2.0" and 3.0"
- Metric sizes: 50mm and 80mm

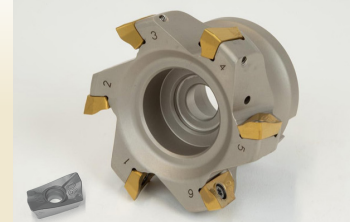
#### AVAILABLE HAAS GRADES

HN25

#### APPLICABLE WORKPIECE MATERIALS

N

### HPSM – Haas High Positive Shell Mill



**Toolpath Type:** Face Milling, Shoulder Milling, Slotting, Ramping, Helical Milling, Copy Milling



90° cutting edge | D.O.C. max. .649" (16.48mm)

- Positive axial rake, positive radial rake
- Inch sizes: 2.0", 2.5", and 3"
- Metric sizes: 40mm, 50mm, 63mm, and 80mm

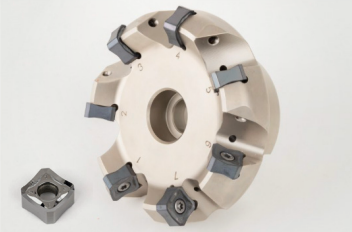
#### AVAILABLE HAAS GRADES

HU30 HP25 MKP30

#### APPLICABLE WORKPIECE MATERIALS

P M K

### HCSNP – Haas C Square Negative Positive



**Toolpath Type:** Face Milling



45° cutting edge | D.O.C. max. .236" (5.99mm)

- Negative axial rake, positive radial rake
- Inch sizes: 2.0", 2.5", 3.0", and 4.0"
- Metric sizes: 50mm, 63mm, 80mm, 100mm

#### AVAILABLE HAAS GRADES

HU30 HU40 HN25A MKP30 HMP40C

#### APPLICABLE WORKPIECE MATERIALS

P M K N

### 17° CUTTING EDGE

### HCSHF – Haas Double Square High Feed



**Toolpath Type:** Face Milling, Ramping, Helical Milling, Copy Milling, Axial Plunge Milling



17° cutting edge | D.O.C. max. .07" (1.8mm)

- Negative axial rake, negative radial rake
- Inch sizes: 2.0", 2.5", and 3.0"

#### AVAILABLE HAAS GRADES

HMP20 HMP35

#### APPLICABLE WORKPIECE MATERIALS

P M

### 15° CUTTING EDGE

### HSHF – Haas Square High Feed



**Toolpath Type:** Face Milling, Slotting, Ramping, Helical Milling, Copy Milling, Axial Plunge Milling



15° cutting edge | D.O.C. max. .071" (1.80mm)

- Positive axial rake, negative radial rake
- Inch sizes: 2.0" and 3.0"
- Metric sizes: 50mm and 80mm

#### AVAILABLE HAAS GRADES

HP30 HMP20 HMP35

#### APPLICABLE WORKPIECE MATERIALS

P M

### ROUND EDGE

### HRPP – Haas Round Positive Positive



**Toolpath Type:** Face Milling, Shoulder Milling, Slotting, Ramping, Helical Milling, Copy Milling



Round edge | D.O.C. max. .236" (5.99mm)

- Positive axial rake, positive radial rake
- Inch sizes: 2.0", 2.5", and 3.0"
- Metric sizes: 50mm, 63mm, and 80mm

#### AVAILABLE HAAS GRADES

HU30 HU40 HP25 HN25A HH10

#### APPLICABLE WORKPIECE MATERIALS

P M K N



# Shell Mill Kits



No more searching for individual tooling components for your shell mills, we provide everything you need in one spot, with our **Ready2Run kits**. With these kits, you get everything from pull stud to cutting tip, so you can spend less time searching, and more time making chips.

## Quickly Find Your Complete Shell Mill Kit With Our Category Filters:

### Category Filter

**Milling Cutter Series**

☒ HOP - Haas Octagon +
   
☐ HRNP - Haas Rectangle - / +
   
☐ HPAL - Haas HP Aluminum
   
☐ HSGNP - Haas Sq Shoulder 6 -/+

**Application**

☒ P - Steel
   
☐ N - Aluminum

**Taper**

☒ 50.0 mm
   
☐ 63.0 mm

**[°] Lead Angle**

☒ 45
   
☐ 90

**[ØDC] Cutting Diameter**

☒ 50.0 mm
   
☐ 63.0 mm

- Select Your Cutter Series:**  
 We provide a handy chart and videos to help in your selection
- Select Your Application Material**  
 Choose the ISO material type: [P] Steel, [N] Aluminum
- Select Your Tool Taper and Gage Length**  
 We offer milling kits in a variety of tool tapers, with several gage lengths to meet your needs.
- Select Your Cutting Diameter**  
 Choose the cutter size that best matches your application.



The category filters present the tools that fit your criteria in mere seconds!



HRNP, 50mm Diameter Complete Shell Mill Kit, SK40/DIN Holder, 35mm Gage Length, Grade HMP35, TSC  
Part #: 08-1733

1

ADD TO CART



# YOU GET IT ALL WHEN YOU PURCHASE BY THE KIT!

HAAS SHELL MILL KITS INCLUDE:



For the complete product line of Haas Shell Mill Kits, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Indexable End Mill Kits

Available in SK40/DIN, BT40, and CT50 for Steel or Aluminum



## Ready to go right out of the box!

Streamline your tooling purchasing process with these Indexable End Mill Kits.

Kits come with all of the items you need to make chips – from pull stud to cutting tip.

## Complete Indexable End Mill Kit

for Steel Machining  
SK40/DIN



## Complete Indexable End Mill Kit

for Aluminum Machining  
SK40/DIN



## Each kit comes with:

- 3-Flute, Indexable End Mill
- Carbide Indexable Inserts - Pack of 10
- End Mill Holder
- TSC Pull Stud

For the complete product line of Haas Indexable End Mill Kits, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Chamfer End Mill Kits



These indexable chamfer mills feature a tool steel body and one or more replaceable inserts. They are available in a variety of sizes, with various flute counts and angles.

Select the appropriate chamfering tool based on the requirements of your part design, and the material being cut. The chamfer angle is determined by the angle of the cutter body.

## Complete Chamfer End Mill Kit SK40/DIN

Our pre-configured Chamfer Milling Kits include everything you need to start making chips. No need to order individual parts or go to multiple vendors, it's all in the box – just assemble and go.



### Each kit comes with:

- Chamfer End Mill Body
- Pack of Inserts
- Toolholder
- Pull Stud

## Other Available Chamfer Cutter Bodies



1.

2.



3.



1. Indexable Chamfer Mill, 2 Insert | 2. Indexable Chamfer Mill, 1 Insert | 3. Indexable Chamfer Mill, 3 Insert

For the complete product line of Haas Chamfer End Mill Kits, go to [www.HaasTooling.com](http://www.HaasTooling.com).



HaasTooling.com

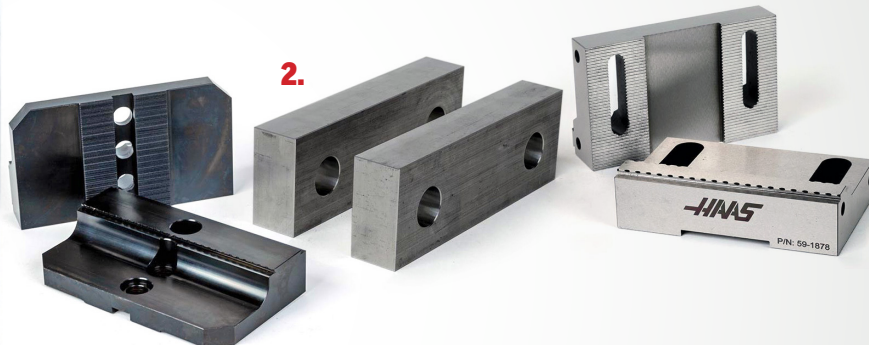
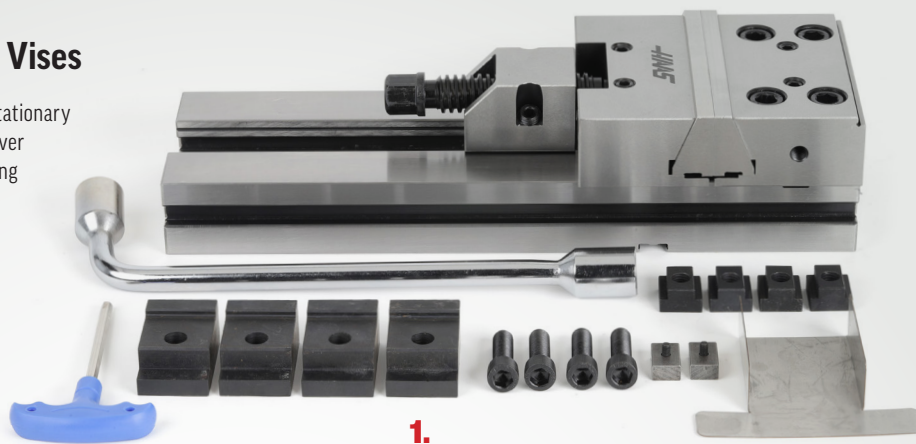
# Mill Workholding

COMPLETE WORKHOLDING SOLUTIONS -  
RIGHT OUT OF THE BOX

## Single-Station, Modular Fixed-Jaw Vises

Haas modular vises are a single-station design, with one stationary jaw and one moveable jaw. These vises offer advantages over standard single-station vises, due to their versatile clamping design.

**Vise Includes:**  
Toe Clamps  
T-Nuts  
Chip Cover  
Vise Handle  
Accessory Wrench



1. Haas Modular Fixed-Jaw Vise | 2. Vise Jaws | 3. 58-Piece, Metric Toe Clamp Kit  
4. Parallels | 5. Part Stop for Self-Centering Vises

For our latest product line of Haas Vises, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Vise Kits

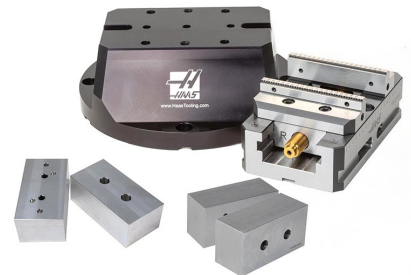


## Mill Workholding Kit, 150mm Manual Vise

Part #: 08-1820

This kit includes:

- Haas Workholding by Kurt 150mm Single-Station Fixed-Jaw Vise
- Haas SK40/DIN (CT40) Toolholder Fixture/Vise
- Toe Clamp Kit for 16mm T-Slot Tables
- Aluminum and Soft Steel Machinable Vise Jaws



## 130 mm Self-Centering Vise and Riser

Part #: 08-1168

This kit includes:

- Haas 130 mm Manual Self-Centering Vise
- Haas Riser for 130 mm Self-Centering Vise
- Machinable Jaws - 130 mm x 64 mm, Aluminum
- Machinable Jaws - 130 mm x 64 mm, Steel



## Medium and Large Multi-Axis Mill Vise Stops

Haas Workholding by Kurt

### Pack of 3, 150 mm Single-Station

**Fixed-Jaw Vise**, 230mm Opening, Flange Style,

Part #: 08-1089



Haas Workholding by Kurt

### Pack of 4, 100 mm Single-Station

**Fixed-Jaw Vise**, 165mm Opening, Flange Style,

Part #: 08-1088



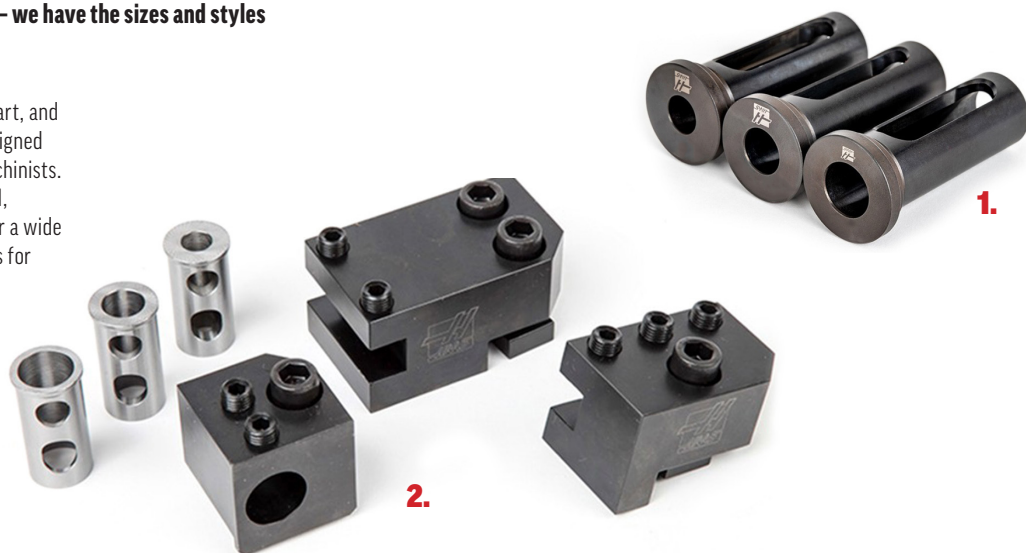


# Lathe Toolholding

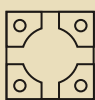
## A Toolholder For Every Turning Application

Designed by Haas for Haas machines – we have the sizes and styles you need to get the job done.

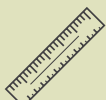
Haas Automation is a machine shop at heart, and our high-quality lathe toolholders are designed to meet the high demands of our own machinists. Whether you're looking for BMT, BOT, VDI, gang-style, or driven toolholders, we offer a wide selection of high-quality, OEM toolholders for every cutting application.



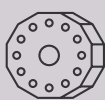
### Lathe Compatibility



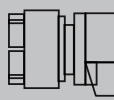
BMT45  
BMT65



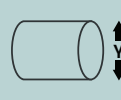
METRIC



12-STATION  
24-STATION



SUB-SPINDLE



Y-AXIS

1. Reduction Sleeves | 2. TL & CL Toolholding | 3. BMT Toolholding | 4. BOT Toolholding | 5. Live / Driven Toolholding | 6. VDI Live Toolholding

For the complete product line of Haas Lathe Toolholding, go to [www.HaasTooling.com](http://www.HaasTooling.com).





4.

Lathe Compatibility			
<p>BOT 10, 20, 24, 40 &amp; 50</p>	<p>METRIC</p>	<p>12-STATION</p>	<p>SUB-SPINDLE</p>



5.



6.

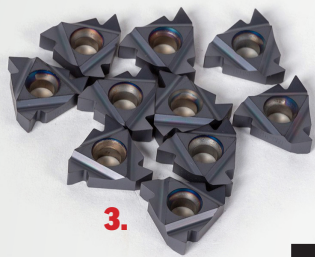




1.



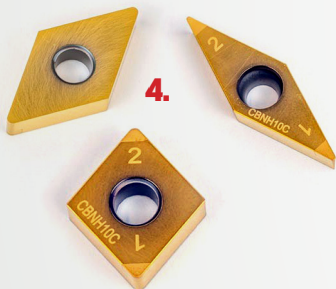
2.



3.

# HaasTooling.com LATHE TOOLING AND INSERTS

Haas Tooling offers a wide selection of lathe tooling and inserts to meet all of your turning needs – from standard tools and inserts to handle your essential turning and boring processes, to more specific operations, such as grooving, parting, threading, and more.



4.



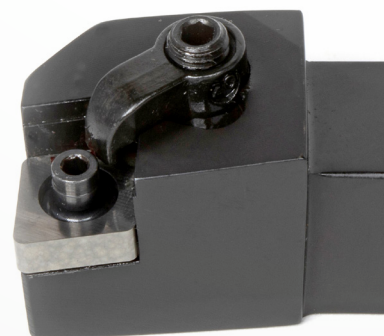
7.



5.



8.



1. Threading Tools | 2. Cut-Off Tooling Kits | 3. Threading Inserts | 4. CBN Turning Inserts | 5. Small ID Grooving & Threading Tools





6. Grooving Tools | 7. Haas Notch Grooving Tool | 8. Notch Grooving Inserts | 9. OD Turning Tool | 10. Indexable Keyway Broaching Tool

For the latest product line of Haas Lathe Tooling, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# SUBSCRIBE 2 SAVE!

- ✓ NO MINIMUM
- ✓ SAVE 5%
- ✓ ORDER AS OFTEN AS YOU WANT

HaasTooling.com

## Choosing the correct TURNING INSERTS

There are many variables that go into choosing the correct insert for your turning operations: insert shape, geometry, grade, and more. The goal is to select an insert that meets your requirements for quality and performance, while providing good chip control, and a reasonable combination of wear resistance and toughness.

### 3 Category Filters quickly narrow your insert search

**1**

**Insert Style**

☒ C Style Inserts

☐ D Style Inserts

☐ T Style Inserts

☐ V Style Inserts

**Choose the insert style** (shape and size) based on the features of the part and the desired depth of cut. A larger nose radius is stronger, but requires more machine power, and increases the tendency for vibration. A smaller nose radius increases the access to fine part features, but has a weaker cutting edge.

**2**

**Chip Breaker**

☒ HAL - Aluminum High Positive

☐ HFF - Fine Finishing

☐ HFP - Finish Positive

☐ HFS - Finishing High-Temp

**Choose the chip breaker** (geometry) based on the selected machining operation: finishing, medium, or roughing. Roughing with high depths of cut and feedrates requires an insert with a stronger cutting edge. Finishing operations with light depths of cut and lower feedrates produce lower cutting forces, so cutting-edge strength is not as important. Medium turning operations, with a wide range of depths of cut and feedrate, require a more versatile geometry.

**3**

**Grade**

☒ HK10C - Light Interrupted

☐ HK20 - Med Interrupted

☐ HM15C - Light Interrupted

☐ HM25C - Med Interrupted

**Choose the insert grade** (coatings) based on the type of material being cut, the specific machining operation (finishing, medium, roughing), and the cutting conditions (smooth, lightly interrupted, heavily interrupted). The insert grade and the chip breaker complement each other to provide specific performance characteristics. A tougher grade can compensate for a cutting edge with less strength, while a more wear-resistant grade can provide longer tool life on a stronger cutting edge.

## 1 INSERT STYLES



### C-Style Inserts – 80° Rhombic

For external machining and facing. The large point angle is very rigid, and good for rough machining. This is the most commonly used insert.



### D-Style Inserts – 55° Rhombic

The smaller point angle of this insert is more versatile for finishing and detail work, but it has less cutting-edge strength than other geometries.



### V-Style Inserts – 35° Rhombic

The smaller point angle of this insert is more versatile for finishing and detail work, but it has less cutting-edge strength than other geometries.



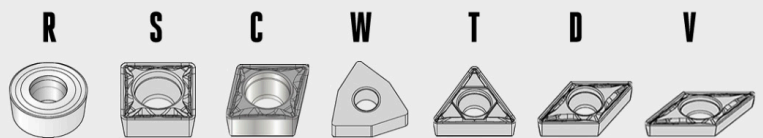
### T-Style Inserts – 60° Triangle

For internal machining. The 60° cutting angle provides medium cutting-edge strength that allows for both ID roughing and finishing applications.



### W-Style Inserts – Trigon 80°

This insert has 3 cutting edges per side. The 80° cutting angle provides high cutting-edge strength for roughing, but the depth of cut is limited by the short cutting edge.



### LARGE NOSE ANGLE

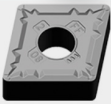
- Stronger cutting edge
- Higher cutting forces
- More vibration
- Higher feedrates

### SMALL NOSE ANGLE

- Better access to features
- Lower cutting forces
- Weaker cutting edge
- Lower vibrations



## 2 CHIP BREAKERS



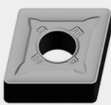
**HFF** - Fine Finishing  
For finish turning, producing smooth, accurate surfaces. Very good chip control, especially at low depths of cut.



**HKR** - Flat Top  
Flat top geometry for machining cast iron. For finishing and roughing applications.



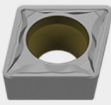
**HMR** - Light to Medium Roughing  
For light to medium roughing of steels, difficult-to-machine high-alloy titanium, and aluminum materials. High strength to deal with heavy chip deformation.



**HRH** - Roughing Heavy  
For medium-duty to roughing. Outstanding chip control. High edge strength for interrupted cuts, forging skin, or scale. Preferred for all cast iron, such as gray, malleable, and nodular.



**HUR** - Universal Roughing  
Roughing geometry, with smooth chip forming and improved coolant flow for increased tool life. Positive geometry reduces cutting forces, and improves depth-of-cut notching resistance. Ideally suited for stainless steel applications, and for smooth machining of steel.



**HFP** - Finishing Positive (Single-Sided)  
For finishing to medium turning operations, with optimal chip control over a wide range of cutting conditions and workpiece materials.



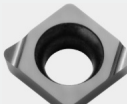
**HML** - Medium Light  
For finishing to medium machining, with a negative, stable cutting edge.



**HMS** - Medium High-Temp  
For medium machining in high-temp materials. Utilizes a micro-finished edge preparation to increase edge toughness.



**HUF** - Ultra-Fine Finishing  
For finishing, with a positive cutting edge for reduced cutting forces and superior surface quality.



**CCET** - Finishing Positive (Single-Sided)  
For finishing turning operations, with optimal chip control over a wide range of cutting conditions and workpiece materials.



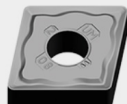
**HFS** - Finishing High-Temp  
For finishing applications. Ground periphery with positive cutting edge. Ideally suited for high-temp alloys. Micro-finished edge on the ground periphery adds just a slight hone for improved edge integrity and reliability.



**HMP** - Medium Positive (Single-Sided)  
For medium to rough turning, with reduced cutting forces and improved chip control for high feedrates. Suitable for high metal removal rates.



**HMU** - Medium Universal  
A medium universal geometry with a soft cutting action due to its positive geometry. Has a versatile application range, and is suited for turning unstable components and for boring applications.



**HUM** - Universal Medium  
For medium-duty turning operations. Soft-cutting chip breaker. Used in applications producing varying chip sections, such as profile or copy turning. Good dimensional accuracy. For soft steel materials and stainless steels.

## 3

## INSERT GRADES

Choose the grade that best matches your application and workpiece material.

Coating	Grade Description		05	10	15	20	25	30	35	40	45	50
<b>HTP15</b>	Coated Carbide. MT-CVD/CVD - TiN-TiCN-Al2O3-ZrCN. Good balance of wear resistance and toughness properties. High-productivity machining on smooth to lightly interrupted cuts. For steels.	P										
		M										
		K										
		N										
		S										
		H										

**H** = Brand  
HAAS

**T** = Application  
TURNING

**P** = Primary Workpiece Material

P	STEEL
M	STAINLESS STEEL
K	CAST IRON
N	NON-FERROUS
S	HIGH-TEMP ALLOYS
H	HARDENED MATERIALS
U	UNIVERSAL MACHINING

**15** = Application Range

10	UNINTERRUPTED
15	LIGHT INTERRUPTED
20	MEDIUM INTERRUPTED
25	MEDIUM INTERRUPTED
35	HEAVY INTERRUPTED

# Lathe Workholding

TESTED.  
HAAS PROVEN.



1. 5C Round Smooth Collet Kit | 2. Live Centers | 3. Lathe Soft Jaws | 4. Adjustable Boring Ring | 5. Sliding-Type Boring Ring | 6. Lathe Spindle Liners

For the complete product line of Haas ER Collets and Chucks, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# ER Collets & Holders

## Collet Selection Guidelines:

- Collets are available individually or in kits
- Collet series is determined by the toolholder ER-taper size (11, 16, 25, 32)
- Collet bore diameter is determined by the cutting tool shank diameter

## ER Straight Bore: Collets

- Can be used to hold any type of round shank tool
- Flexibility to clamp a wide range of tool shanks
- High accuracy and concentricity

**NOTE: These collets have a clamping range.** Use the tightest collet available for any given tool shank, to provide the greatest tool-to-collet contact area, while minimizing runout. (e.g. 12 mm Tool Shank = 12 -11 mm ER Collet)

## ER Collet Clamping Range:

- **ER11:** 0.5 – 8 mm
- **ER16:** 0.5 – 10 mm
- **ER25:** 1 – 16 mm
- **ER32:** 2 – 20 mm

## ER Tap Collets:

**NOTE: Collet bore is the exact diameter of the tool shank. These collets have no clamping range.**

- Collet bore is the exact tool diameter, with a square drive
- Special design locks flat-sided tap shanks into the collet
- Provides maximum concentricity, with positive driving force
- Reduces tapping clearance requirements

## ER Sealed Collets

**NOTE: Collet bore is the exact diameter of the tool shank. These collets have no clamping range.**

- Fit all Haas ER collet chuck holders
- Ensure that 100% of through-tool coolant gets to the tip of the cutting tool
- Approved for high-pressure coolant to 1100 psi
- Short rear collet slots provide a mechanical seal, blocking coolant flow
- Mechanical seal design is superior to silicone/rubber sealed collets
- Do not require a coolant ring or special ER nut
- To seal properly, the entire tool shank must be in the collet and cover all slots



1. ER Sealed Collets | 2. ER Collets | 3. Straight Shank ER Collet Chucks | 4. ER Tap Collets

For the complete product line of Haas ER Collets and Chucks, go to [www.HaasTooling.com](http://www.HaasTooling.com).

# ER Collet Kits



## 117-Piece, Metric Master ER Collet Kit; ER16, ER25, and ER32

Part #: 08-1760

Complete 117-piece ER collet kit

- Includes ER16, ER25, and ER32 collet sets
- Straight bore, tap, and sealed collets are included
- Compatible spanner wrenches

*\* Images shown are for illustration purposes only.  
Actual product appearance may differ.*





## COLLET SELECTION GUIDELINES:

- Collets are available individually or in kits
- Collet series is determined by the toolholder ER-taper size (11, 16, 25, 32)
- Match the collet bore diameter to the cutting tool shank diameter



5.



4.



6.

1. 46-Piece ER Straight Bore Collet Kit; ER16, ER25, and ER32 | 2. 7-Piece ER16 Tap Collet Set | 3. 5-Piece ER16 Straight Bore Sealed Collet Set  
4. 18-Piece ER32 Straight Bore Collet Set | 5. 15-Piece ER25 Straight Bore Collet Set | 6. 10-Piece ER16 Straight Bore Collet Set

For the complete product line of Haas Collets, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Carbide Drills



1.



2.



3.

4.



## 1. High-Performance Carbide Drills (General Purpose):

**Primary Applications:** Cast Iron, Steel  
**Secondary Applications:** Stainless Steel



**Available in:** 3xD, 5xD Through-Tool Coolant, 8xD Through-Tool Coolant

These solid-carbide drills have a geometry designed for cast iron and general drilling. They have a 140° point-angle for good centering and low thrust, and wave-shaped cutting edges for low thrust, stable torque, and long tool life. Radius point thinning improves self-centering and chip breaking. The flute shape is optimized for strength and smooth chip evacuation, and a negative land on the cutting edge provides reliable and stable tool life. These drills are coated with TiAlN (Titanium Aluminum Nitride) for high wear resistance and lower friction, as well as higher cutting feeds and speeds, and improved hole quality.

## 2. HP Carbide Drills (Inox):

**Primary Applications:** Stainless Steel  
**Secondary Applications:** High-Temp Alloys, Steel, Aluminum & Non-Ferrous



**Available in:** 5xD Through-Tool Coolant, 8xD Through-Tool Coolant

These solid-carbide drills have a special flute geometry and chip pocket that ensure proper chip curl, with a rigid and strong cutting edge that makes them optimal for stainless steel and pre-hardened steel, as well as aluminum alloys. The 140° point-angle provides good centering and lowers thrust, and the positive axial rake angle and cutting edge with radius thinning enhance centering and chip breaking. These drills are coated with TiAlN (Titanium Aluminum Nitride) for high wear resistance and lower friction, as well as higher cutting feeds and speeds, and improved hole quality.

## 3. DLC-Coated Carbide Drills for Aluminum:

**Primary Applications:** Aluminum and Aluminum Alloys



**Available in:** 5xD Through-Tool Coolant

These solid carbide drills are designed specifically for high-performance drilling in aluminum and aluminum alloys. They feature a Diamond-Like Carbon (DLC) coating that is extremely hard, with a very low coefficient of friction, and excellent adhesion resistance. The flute shape and geometry of these drills are optimized for maximum chip removal, with polished flutes for improved chip control and evacuation, and optimized point thinning to prevent clogging from chip welding. The geometry and smooth finish prevent built-up edge, and allow high-speed drilling in aluminum, with excellent hole quality (roundness, straightness, and surface roughness).

## 4. Through-Tool Coolant (Coolant Fed) Drills:

These drills have internal passages that allow coolant to flow through the tool, directly to the cutting edge, for high-efficiency processing and deep-hole drilling. When used with high-pressure through-spindle coolant systems, these drills provide better chip evacuation, less tool wear, longer tool life, shorter cycle times, and better overall hole quality.

**For the complete product line of Haas Carbide Drills, go to [www.HaasTooling.com](http://www.HaasTooling.com).**



# Indexable Drills

Indexable drills feature a tool steel body, and typically two inserts: a **center insert** that cuts the center of the hole, and a **periphery insert** that cuts the outside hole diameter. Inserts are usually secured to the tool body using screws, and when the cutting edge becomes dull, the insert is indexed to expose a new cutting edge.

**NOTE:** Indexable drill bodies require both periphery and center inserts. The styles are not interchangeable. Remember to order both periphery and center inserts.

## Indexable Drill Bodies

### Features:

- High penetration rates and lower chip friction
- Less accurate than solid carbide
- Higher initial cost, but lower long-term costs
- Available in larger diameters than solid drills
- Inserts can be changed without removing the tool from the holder

### Applications:

- Medium- and large-diameter holes
- Medium tolerance demands
- Blind holes requiring a “flat” bottom
- Plunge drilling operations

**K M P N S**



1. Indexable Drill Bodies | 2. Spare Parts | 3. Indexable Drill Inserts

For the complete product line of Haas Indexable Drills, go to [www.HaasTooling.com](http://www.HaasTooling.com).

## Modular Drill Bodies

Modular drills feature a tool steel body to which a solid carbide drill head is attached. The modular drill heads are easily changed using the included tool.



### APPLICATIONS:

- High-performance drilling of medium-diameter holes
- High-speed drilling in steel, cast iron, and stainless
- Deep-hole drilling (up to 5x diameter)
- Universal geometry for steel, cast iron, and stainless
- Low cutting forces and excellent self-centering capability
- PM25 Grade developed specifically for cost-efficient drilling of steel, cast iron, and stainless steel

### FEATURES:

- Cutting performance similar to solid carbide drills
- No regrinding costs; simply replace the drill head
- Drill heads are easily changed without removing the tool from the holder
- Drill heads may be used on other drill bodies with the same seat size
- Lower cost per hole than carbide
- Higher accuracy than indexable-insert drills
- Allow high feedrates and higher L/D ratios
- No screws or clamps required
- Less susceptible to breakage than solid carbide
- Consistent performance and excellent hole quality

For the complete product line of Haas Modular Drill Bodies, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Modular Drill Heads

For the complete product line of Haas Modular Drill Heads, go to [www.HaasTooling.com](http://www.HaasTooling.com).

**At HaasTooling.com, each product has a detailed information page to help you in your shop**

## Speeds and Feeds



1) Select your material in the ISO colored chart with respect to material description and hardness (HB).  
2) Start with the recommended cutting speed,  $v_c$  (m/min) and feed per revolution,  $f_r$  (mm/rev). Adjust the cutting speed and/or feed rate based on your cutting conditions.

Group	Material Description	Hardness (HB)	Recommended Cutting Speed			Recommended Feed Per Revolution						
			Min	Starting Value	Max	Tool Diameter (mm)						
						8 Ø	10 Ø	12 Ø	14 Ø	16 Ø	20 Ø	25 Ø
P	1 Low-Carbon Steels, Short Chipping	<125	90	125	170	0.11–0.20	0.13–0.25	0.14–0.31	0.17–0.39	0.19–0.45	0.25–0.48	0.30–0.52
	2 Medium- and High-Carbon Steels	<220	105	140	180	0.11–0.28	0.12–0.35	0.16–0.37	0.21–0.46	0.23–0.46	0.28–0.50	0.30–0.52
	3 Alloy Steels and Tool Steels	<330	50	75	100	0.11–0.28	0.12–0.35	0.16–0.37	0.21–0.46	0.23–0.46	0.28–0.50	0.30–0.52
	4 Alloy Steels and Tool Steels	340–450	50	75	100	0.11–0.28	0.12–0.35	0.16–0.37	0.17–0.36	0.19–0.45	0.22–0.48	0.25–0.50
	5 Ferritic, Martensitic, and PH Stainless Steels	<330	50	65	80	0.10–0.20	0.10–0.23	0.10–0.25	0.14–0.29	0.16–0.32	0.18–0.36	0.22–0.42
	6 High-Strength Ferritic, Martensitic, and PH Stainless Steels	350–450	50	65	80	0.10–0.20	0.10–0.23	0.10–0.25	0.14–0.29	0.16–0.32	0.18–0.36	0.22–0.42
M	1 Austenitic Stainless Steel	130–200	40	80	110	0.06–0.22	0.08–0.23	0.09–0.24	0.10–0.25	0.11–0.26	0.13–0.28	0.13–0.32
	2 High-Strength Austenitic Stainless and Cast Stainless Steel	150–230	35	55	75	0.06–0.22	0.08–0.23	0.09–0.24	0.10–0.25	0.11–0.26	0.13–0.28	0.13–0.32
	3 Duplex Stainless Steel	135–275	20	35	50	0.06–0.22	0.08–0.23	0.09–0.24	0.10–0.25	0.11–0.26	0.13–0.28	0.13–0.32
K	1 Gray Cast Iron	120–290	60	95	170	0.15–0.29	0.16–0.32	0.17–0.35	0.21–0.42	0.25–0.48	0.28–0.52	0.32–0.56
	2 Low- and Medium-Strength Ductile Irons (Nodular) and Compacted Graphite Irons	130–260	60	75	90	0.15–0.29	0.16–0.30	0.17–0.33	0.21–0.41	0.25–0.48	0.28–0.52	0.32–0.56
	3 High-Strength Ductile Irons and Austempered Ductile Iron	180–350	40	65	90	0.16–0.30	0.17–0.33	0.18–0.36	0.20–0.41	0.21–0.44	0.23–0.48	0.25–0.50

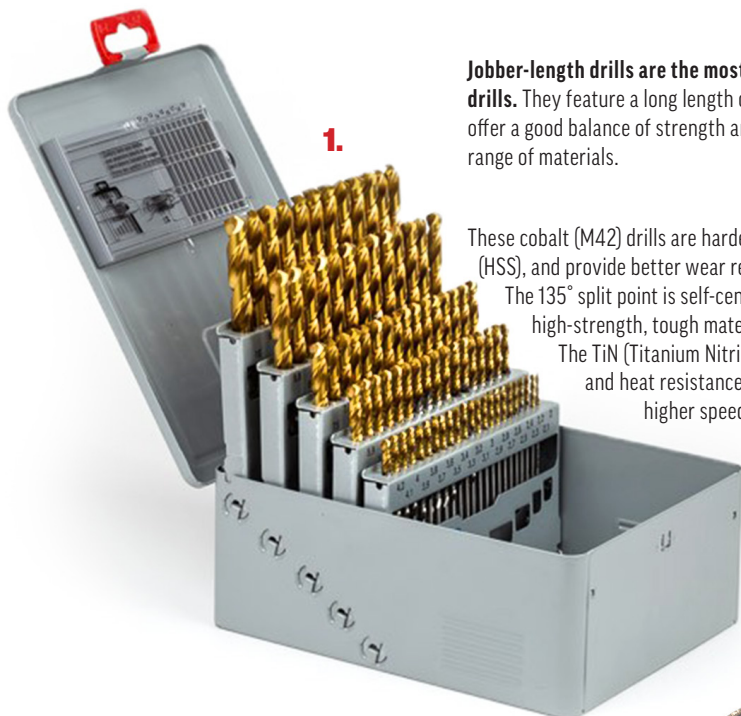
NOTE: Through coolant is recommended for greater than 3XD applications.

**We know the key to a longer tool life –**

### Proper Speeds and Feeds!

We want to provide all the information you need to get the longest life out of your tools. So you'll find a Speeds and Feeds chart for every tool, allowing you to calculate your speeds and feeds based on the material being cut, the material of the tool, and the rigidity of the workpiece.

## Cobalt Drills & More



1.

**Jobber-length drills are the most common, general-purpose drills.** They feature a long length compared to their diameter, and offer a good balance of strength and accuracy for drilling in a wide range of materials.

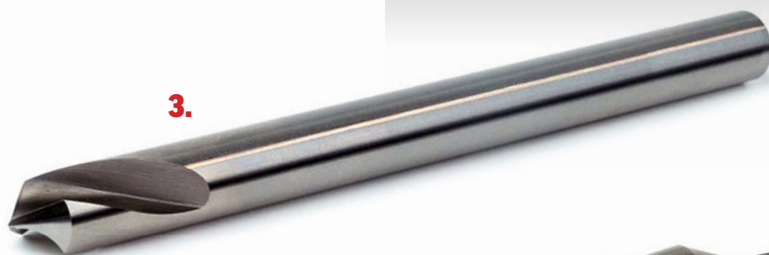
These cobalt (M42) drills are harder than standard high-speed steel (HSS), and provide better wear resistance and higher hardness. The 135° split point is self-centering, and designed to drill hard, high-strength, tough materials.

The TiN (Titanium Nitride) coating increases hardness and heat resistance, allowing these drills to run at higher speeds and feeds than HSS.

2.



3.



4.



5.



1. Cobalt Jobber Drill Sets | 2. Cobalt Drill | 3. Spot Drill | 4. Countersink | 5. Center Drill

For the complete product line of Haas Holemaking, go to [www.HaasTooling.com](http://www.HaasTooling.com).

★★★★★ 5.0

### Great price and quality

These drill bits are well made and hold up great to everyday use, and replacements bits are affordable. I will continue to purchase my drill bits from Haas.

Tristan Jones  
06/07/2023



### HAAS TESTED. HAAS PROVEN.

We've used these tools in our own machine shop for years . . . odds are, most of the parts on your Haas machine were made using the same tools.



# Tapping



## **Straight Flute:**

These taps are used for threading blind holes or through holes. These are general-purpose taps, and can also be used for hand tapping.



## **Spiral Point:**

These taps are used for threading through holes. The flute geometry is designed to push the chips ahead of the cutting action, down into the hole, which prevents chips from loading up the flutes.



## **Spiral Flute:**

These taps are used for threading blind holes in aluminum, brass, and softer steels, and when chip clearing can be an issue. The flute geometry draws the chips upward, out of the hole.



## **Through-Tool Coolant (Coolant Fed) Taps:**

These taps have internal passages that allow coolant to flow through the tool, directly to the cutting edge, for high-efficiency processing and deep-hole tapping. When used with high-pressure through-spindle coolant systems, these taps provide better chip evacuation, less tool wear, longer tool life, shorter cycle times, and better overall thread quality.

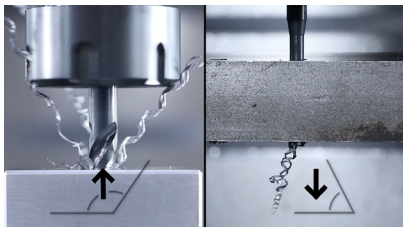
# Tapping



## Taps

Cutting Taps are used to cut screw threads in pre-drilled or punched holes. The cutting edges of the tap remove material from the workpiece, pushing the chips either in front of the tap, or drawing them up the flutes, depending on the type of tap. There are two primary characteristics to consider when choosing the right cutting tap for the job: Cutting Angle and Chamfer Length. There are three primary choices for each of these characteristics.

**Cutting Angles** come in various styles, and the style is always included in the tap name (Spiral Point, Spiral Flute, Straight Flute). The cutting angle determines whether the chips are pushed in front of the tap and into the hole, or drawn up the flutes and out of the hole.



**Chamfer Length** is the second characteristic to consider when buying taps. There are three primary types of chamfer: Taper, Plug, and Bottoming. You can purchase any cutting angle (Spiral Point, Spiral Flute, Straight Flute) tap in any of the chamfer types, but Plug and Bottoming are most commonly used in CNC machine applications.

### Coatings

• Non-Coated/Bright • Hardslick • TiAlN • TiCN • TiN

Primary Workpiece Material: **K M P N S**



1. Roll Tap | 2. Spiral Flute Tap | 3. Spiral Point Tap | 4. Straight Flute Tap

For the complete product line of Haas Taps, go to [www.HaasTooling.com](http://www.HaasTooling.com).



## Tapping Essentials

In this Tip-of-the-Day video, Mark Terryberry goes deep into the art of tapping, giving you valuable insight into which tap to use, and when to use it. Whether you are a beginner or advanced machinist, you will definitely learn something from this video.



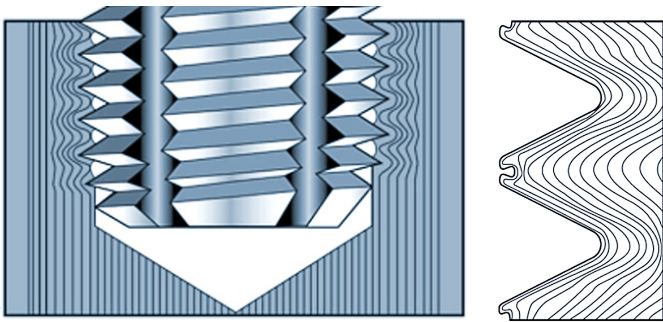
Scan QR to watch video



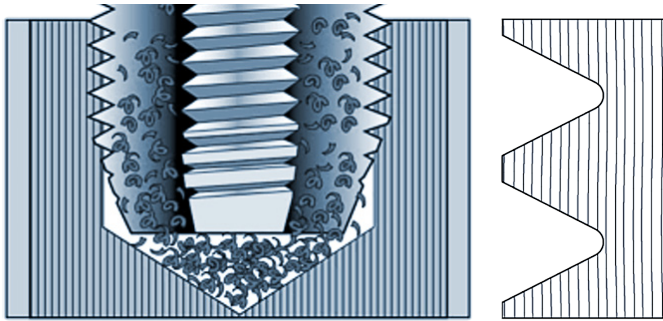
# Roll/Form Taps

**Roll taps**, or **form taps**, unlike conventional cutting taps, form threads through material deformation, rather than by cutting the material. As a result, **no chips are produced in the process**. Since there are no chips to interfere with the tapping process, roll taps produce stronger, cleaner threads, with excellent surface finish. And since there are no chips to clog flutes or collect in blind holes, there's less chance of tap breakage.

**Roll taps require a larger drill than a cutting tap of the same size**, to allow room for the material to flow when creating the threads. The grain flow of the material follows the contour of the formed thread, creating a stronger thread, especially in materials that work harden, like steel and stainless. Generally, roll taps can be run at higher speeds and feeds than cutting taps, and have a significantly longer tool life. They are well suited for smaller holes, and materials that require a stronger tap.



**Roll taps** form threads through material deformation, so there are no chips to interfere with the tapping process.



**Cut taps** form threads by cutting the material, creating chips that can clog flutes or collect in blind holes.

ISO MATERIAL TYPE	TiCN COATING
P - STEEL	●
M - STAINLESS STEEL	●
K - CAST IRON	—
N - NON-FERROUS	●
S - HIGH-TEMP ALLOYS	—
H - HARDENED METALS	—

**Haas roll taps** are constructed of **HSS PM** powder metal high-speed steel, with a high content of vanadium and cobalt, for high-speed tapping and excellent wear resistance. These taps feature a **Titanium Carbonitride (TiCN) coating**, which offers improved wear and resistance to built-up edge. TiCN has good adhesion, toughness, and resistance to chipping, and performs well where moderate temperatures are generated at the cutting edge. They are well suited for tapping in steel, stainless steel, and non-ferrous materials.

# Pipe Taps

Pipe Taps are high-speed cutting tools that are used to cut internal threads in pipes or pipe fittings that will provide an effective seal when mated with the appropriate component. When mated, pipe threads form a pressure-tight seal that allows the flow of liquids, gases, steam, and hydraulic fluid, without leaking.

Haas offers various types of pipe thread taps that are designed to form a seal with or without thread sealants. NPT/NPS and BSPT/BSPP threads are not compatible, due to differing thread pitches. Moreover, NPT/NPS threads follow the Sellers Standard thread form, which has flattened peaks and valleys, as well as a 60° thread angle. BSPT/BSPP threads follow the Whitworth thread form, which has a 55° thread angle, and rounded peaks and valleys.



For the complete product line of Haas Pipe Taps, go to [www.HaasTooling.com](http://www.HaasTooling.com).

# Thread Mills

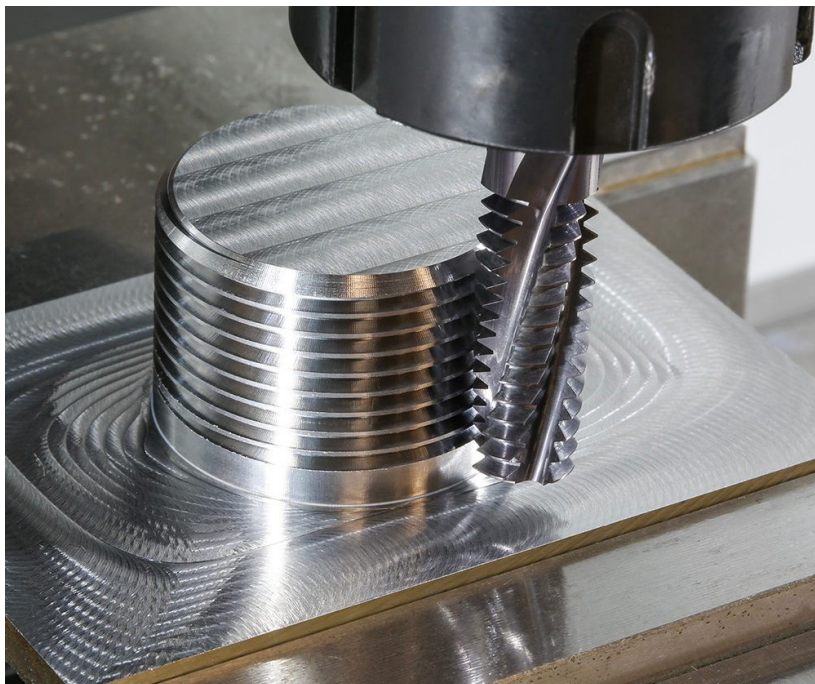
## COMING SOON



### Thread Milling vs. Tapping

Thread mills differ from taps, because they have a smaller diameter than the thread size produced. The thread mill cutter must be able to enter the drilled hole, and then interpolate the thread profile. Because offset adjustments can be used to compensate for tool wear – as long as the thread form is still good – thread mills typically produce more threaded holes per tool than taps.

It also can be very expensive to remove a broken tap from a workpiece, especially if that workpiece is large. Broken thread mills are easily removed, and often, a new thread mill can be used to finish threading the hole, saving the part from having to be scrapped.



### Thread Mills

Haas solid carbide thread mills allow threading of a range of hole sizes, in a wide range of materials, using the same thread mill.

These tools are titanium aluminum nitride (TiAlN) coated, solid carbide cutters with cylindrical shanks, and they feature a hole through the center of the tool to take advantage of through-tool coolant.



1. TPI NPTF Tapered Internal Carbide Thread Mill | 2. UNC Parallel Internal Carbide Thread Mill

For the complete product line of Haas Thread Mills, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Threading Tools & Inserts



**Haas Threading Toolholders** are constructed of hardened tool steel, and feature a precision pocket and screw-on clamping system for the indexable threading inserts. Internal and external threading toolholders are available, for machining a variety of thread shapes at various pitches, while ensuring high-quality performance. The toolholders accommodate laydown thread inserts for a range of IC sizes. The screw-on clamping system includes a shim for 1.5° helix angle, and all relevant wrenches.

**Haas threading inserts** are available for machining various shapes of internal or external threads at various pitches, while ensuring high-quality performance. These laydown thread inserts have 3 cutting edges, and options for different forms of chip breaker, for a range of different IC sizes. Grades are available to machine all ranges of steel, stainless steel, and cast-iron.

**Partial-profile inserts** cut without topping the outer diameter of the thread, allowing the same insert to be used for a range of thread pitches that have a common thread angle.

**Full-profile inserts**, also known as topping inserts, will form a complete thread, including the crest. For every thread pitch and standard, a separate insert is required.

1. Square Steel Shank External Threading Toolholder, Screw-Lock | 2. Steel Shank Internal Threading Bar, Screw-Lock  
3. Full Profile Inserts | 4. Partial Profile Inserts 10 pack

For the complete product line of Haas Threading Tools/Inserts, go to [www.HaasTooling.com](http://www.HaasTooling.com).

# Haas Broaching Tools

For the complete product line of Haas Broaches, go to [www.HaasTooling.com](http://www.HaasTooling.com).



The Haas Broaching line consists of a wide range of tools and inserts to form a variety of shapes in many sizes. Select the application required – such as keyway, hex, or square – and filter through the range of insert sizes to find the one to suite your needs.

Haas broaching holders are manufactured from quenched and tempered tool steel, with the section that houses the insert hardened to 58/60Rc. All of the holders capable of internal machining are manufactured with holes for through-tool coolant, which allows coolant to lubricate and cool the insert, as well as blast away the chips produced during the broaching or slotting process.

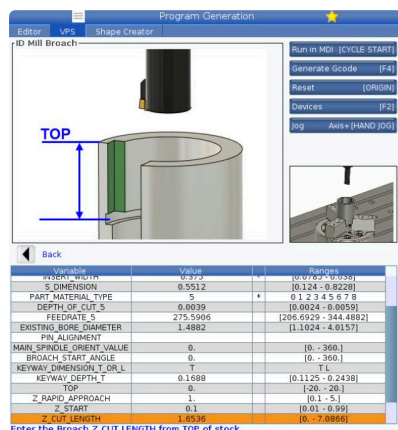
The keyway holders are manufactured with flats on both sides of the shank diameter, allowing the holders to be mounted in either direction to easily machine ID or OD features.

Each holder is available in two lengths: standard and long (with the longer lengths identified with the suffix -L in the code). The holders for internal machining have 25mm diameter shanks, which can easily be mounted in ID toolholders for lathe turrets, or endmill toolholders for mill spindles.

Alignment plates are available for all of the toolholders, to accurately orient the holder to the workpiece on milling centers. Aligning the holders on lathes without Y-axis capability is easily performed using eccentric bushings to finely adjust the holder to workpiece centerline.

## Mill & Lathe Broaching VPS Templates & Video Tips

Quickly and easily start broaching on your Haas mill or lathe! Haas offers an easy-to-follow Visual Programming System template for broaching right on your Haas control.



Scan to see how to align a Broaching Tool on your Haas Mill





# Tool Management

## HTS400 Tool Presetter

The Haas HTS400 is a fully equipped, sturdy, and easy-to-use tool presetter at an amazing price. With its user-friendly Windows-based operating system, measuring tool geometry and getting the values into your Haas CNC are easy and intuitive.

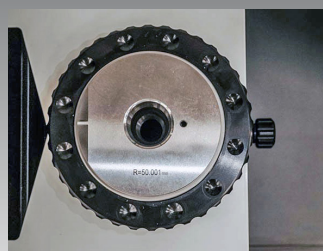


Scan to watch the HTS400 in action



### Industrial Data Matrix Scanner

Entering tool offsets has never been easier. Quickly scan the tool offset data labels for each tool to load the data directly into the Haas control, automatically updating your tool offsets.



### Interchangeable Tool Sleeves

The Haas HTS400 Tool Presetter uses high-precision interchangeable tooling sleeves that can be swapped easily, to accommodate different tooling tapers. Tooling sleeves are available in ISO30, ISO40, ISO50, and HSK63A.



### Tool Tray

Tool tray attaches to the side of your tool presetter cabinet. Tool trays are available to hold (18) ISO40 toolholders, (18) ISO30 toolholders, or (18) HSK63A toolholders.

## Haas Shrink Fit Machine

- Interchangeable tool sleeves are easy to change when heating different taper toolholders
- Fast heating – the eddy current induces heat from the high-frequency magnetic field, for short cycle times and easy operation
- Higher efficiency – the process is timed to apply enough heat to the toolholder to remove cutting tools, without overheating
- Cooling unit uses shop air for ease of connectivity and use
- Clamping range for tool diameters: 3mm to 32mm
- Haas shrink fit holders are available in a wide range of diameters



# Tooling Accessories



Chip Clearing Fan  
Short Blade

Chip Clearing Fan  
Long Blade

## Haas CNC Chip Clearing Fans

Haas CNC Chip Clearing Fans are the perfect complimentary tools for all CNC users, big and small, for short runs or production. They are engineered to provide the best results possible, when it comes to removing machined material chips, coolant, and other debris from your workpiece or fixture. The fans have a steel cylindrical shank that can be mounted into your collet chuck or end mill holder.

Once your new Haas chip clearing fan is installed into your toolholder and mounted in the machine spindle, use your machine control to do the cleaning unattended between machining cycles – eliminating chip accumulation, without compromising labor and machine time.

- High-quality steel cylindrical shank with Weldon flat, for use in a collet chuck or end mill toolholder
- Through-tool coolant capability to wash parts before using the fan
- Durable fan blades made of glass fiber reinforced nylon for wear resistance and durability
- Affordable, automatic cleaning tool designed to be disassembled, if replacement parts are necessary



HSK63A Taper Spindle  
Taper Cleaner

50-Taper Spindle  
Taper Cleaner

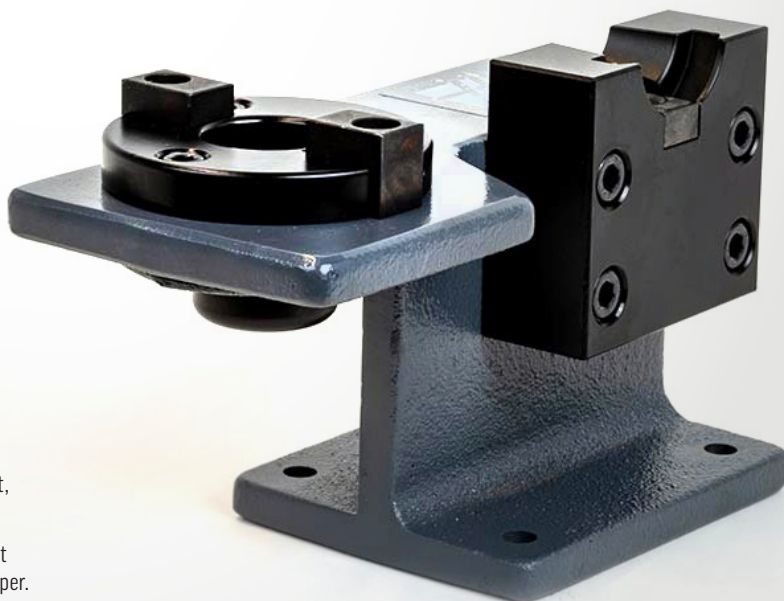
## Spindle Taper Cleaners

A clean spindle taper is essential for maintaining proper contact between the toolholder and the spindle taper. Any buildup of dust, chips, lubricant, or other contaminants in the spindle taper can cause premature wear, increase tool runout, shorten tool life, and reduce part accuracy.

These easy-to-use spindle taper cleaners are constructed of rigid plastic, with soft fiber pads that quickly remove debris and contaminants, without damaging the taper. Regular use can help maintain the overall precision of the machine, and prolong the life of your spindle, toolholders, and cutting tools.

## Haas Toolholder Fixture / Vise

Available Tapers: SK40/DIN, SK50/DIN, BT30, BT40, BT50



For the complete product line of Haas Chip Clearing Fans, Spindle Cleaners, and Toolholder Fixtures, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Deburring & Abrasives

## Haas Tooling Abrasive Pads

Haas Tooling Durable Non-Woven Abrasive Hand Pads are perfect for cleaning, deburring, hand-finishing, surface preparation, and even light rust removal. Haas Tooling now offers abrasive pads for all your deburring and finishing needs. The two most common abrasive pad types are aluminum oxide and silicon carbide. Both types have unique properties, work well for their specific materials, and are offered in multiple grades.

### Benefits:

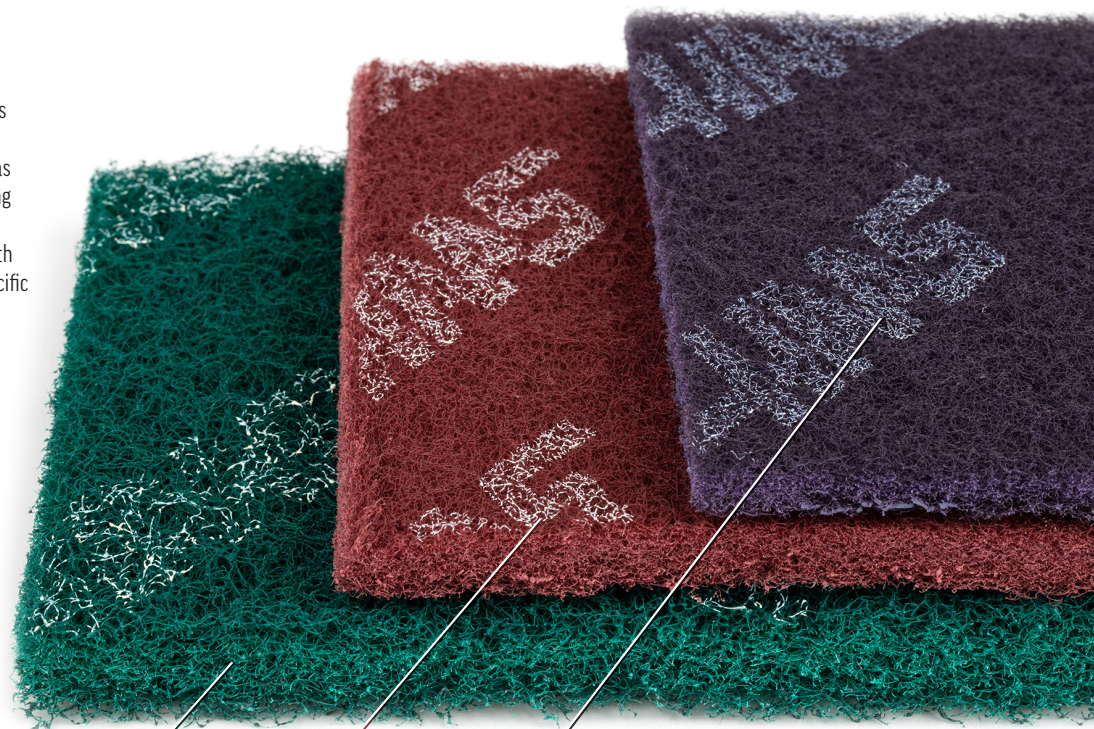
- Long lasting and resistant to chemicals
- Flexible and will not shred like other pads
- Sold in packs of 10 or packs of 30
- Multiple grits available
- 152mm x 229mm pads

### ALUMINUM OXIDE (AlOx)

- General deburring and finishing
- High cut rate and durability

### SILICON CARBIDE (SiC)

- Sharp and abrasive grain
- Provides a high cut rate for nonferrous materials



Color  
Coded  
Grits

180 Grit  
Coarse  
AlOx

320 Grit  
Medium  
AlOx

600 Grit  
Fine  
SiC



Available in 180-600 Grit - Pack of 30 variety kit

## Hand Deburring Tools



Removes burrs and imperfections, and smooths edges for a perfect finish. The cutter consists of two pieces: the blade and the handle. The handle has a swivel head that allows the deburr blade to rotate 360° for ease of use.

The blades are made of high-speed steel (E100 Deburr Blades) for increased tool life, and are built for heavy-duty deburring of copper, plastic, steel, and aluminum. Extra blades are included, and we offer a standalone replacement pack, if you need additional blades.



# HSK Toolholders

## HSK63A Taper

### BENEFITS:

- Dual-contact taper for high rigidity and high accuracy
- More rigid toolholders for long-reach tools
- Increased performance for 3D profiling
- Increased performance when using small cutting tools



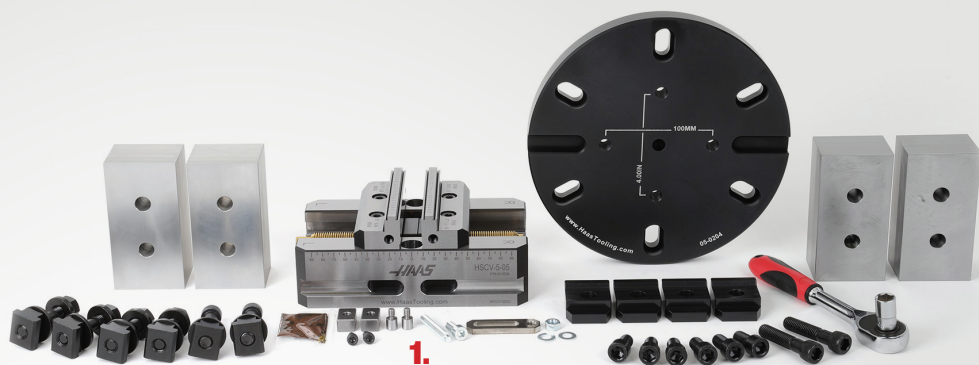
1. HSK63A Shrink Fit Holders | 2. HSK63A ER Collet Chucks | 3. HSK63A Shell Mill Holders

For the complete product line of Haas HSK Toolholders, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Package Kits

- Chip Clearing Fan Kits
- Cutting Tool Kits
- Toolholding Kits
- Workholding Kits
- Self-Centering Vise Kits for Rotaries



2.



3.



4.



5.



1. Self-Centering Vise Kit for Rotaries | 2. Vise Kits | 3. Cutting Tool Kits | 4. Chip Clearing Fan Kits | 5. Toolholding Kits

For the complete product line of Haas Package Kits, go to [www.HaasTooling.com](http://www.HaasTooling.com).



# Other Kits



## Complete Chip Clearing Fan Kit

Short or long blade length

SK40/DIN, BT40, and HSK63A

### Fan kits include:

- Straight Bore Collet
- Haas Chip Clearing Fan
- Collet Chuck
- Spanner Wrench
- Haas Pull Stud/Retention Knob



**READY 2 RUN**



## 5-Piece Specialty Kit

- 2 Complete Milling Chucks, with Collets and Wrenches
- 2 Keyless Drill Chucks with Wrench
- Long Blade Chip Fan
- All holders are Complete with Pull Studs
- SK40/DIN or BT40

## Reduction Sleeve Kit, 4-Piece

Part #: 08-1779

- Slotted side holes for a versatile fit
- Great for holding round shank tools
- Expands the capabilities of your ID toolholders
- Includes 10mm, 12mm, 14mm, and 16 mm sleeves
- Black oxide coating







*Conveniently store and transport your tools around your shop with our Haas tool carts.*

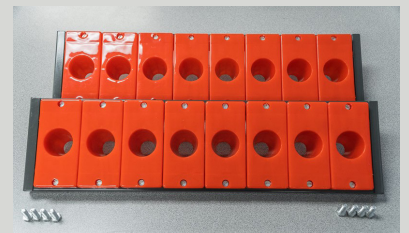
These heavy-duty rolling carts help you keep your tools more organized. The Haas Tool Cart is constructed of heavy-gauge sheet metal, with a powder coat finish for long life and corrosion resistance. Sturdy plastic tool pockets hold toolholders securely, and protect the tool tapers from damage. Each cart includes adjustable toolholder trays. Additional toolholder trays (of the same or differing taper) may be purchased separately, in packs of 2. Mix and match trays of different tapers for additional versatility.



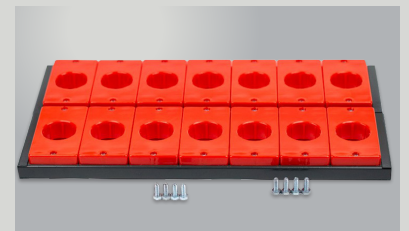
HaasTooling.com

# Tool Storage

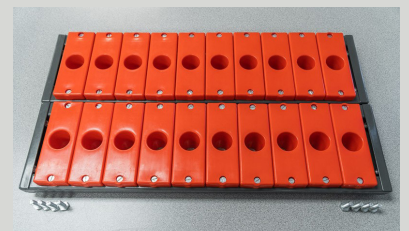
## Tool Trays for the Haas Tool Cart



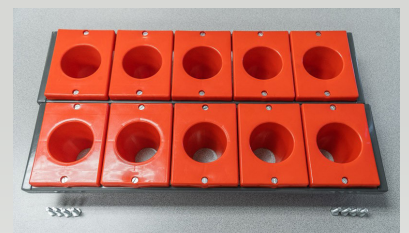
**ISO40-Taper Tool Tray - Pack of 2**



**HSK63A Tool Tray - Pack of 2**



**ISO30-Taper Tool Tray - Pack of 2**



**ISO50-Taper Tool Tray - Pack of 2**

Expand the capacity of your Haas Tool Cart with additional tool trays. Each adjustable tray gives you additional pockets for tool storage. The sturdy plastic tool pockets hold toolholders securely, and protect the tool tapers from damage. Mix and match trays of different tapers to increase the versatility of your Haas Tool Cart. Sold in packs of 2.



# New! Measuring & Inspection

## Calipers



1.



### 1. Digital Calipers

2. Digital Inside Groove Calipers | 3. Digital Outside Groove Calipers | 4. Dial Calipers | 5. Digital Tube Calipers | 6. Digital Depth Calipers





## Height Gauges



1.



2.

1. Dial Height Gauge - Metric | 2. Digital Height Gauge

# Indicators



1. Dial Bore Gauges | 2. Holding Accessories | 3. Dial Drop Indicators | 4. Dial Test Indicators



# New! Measuring & Inspection

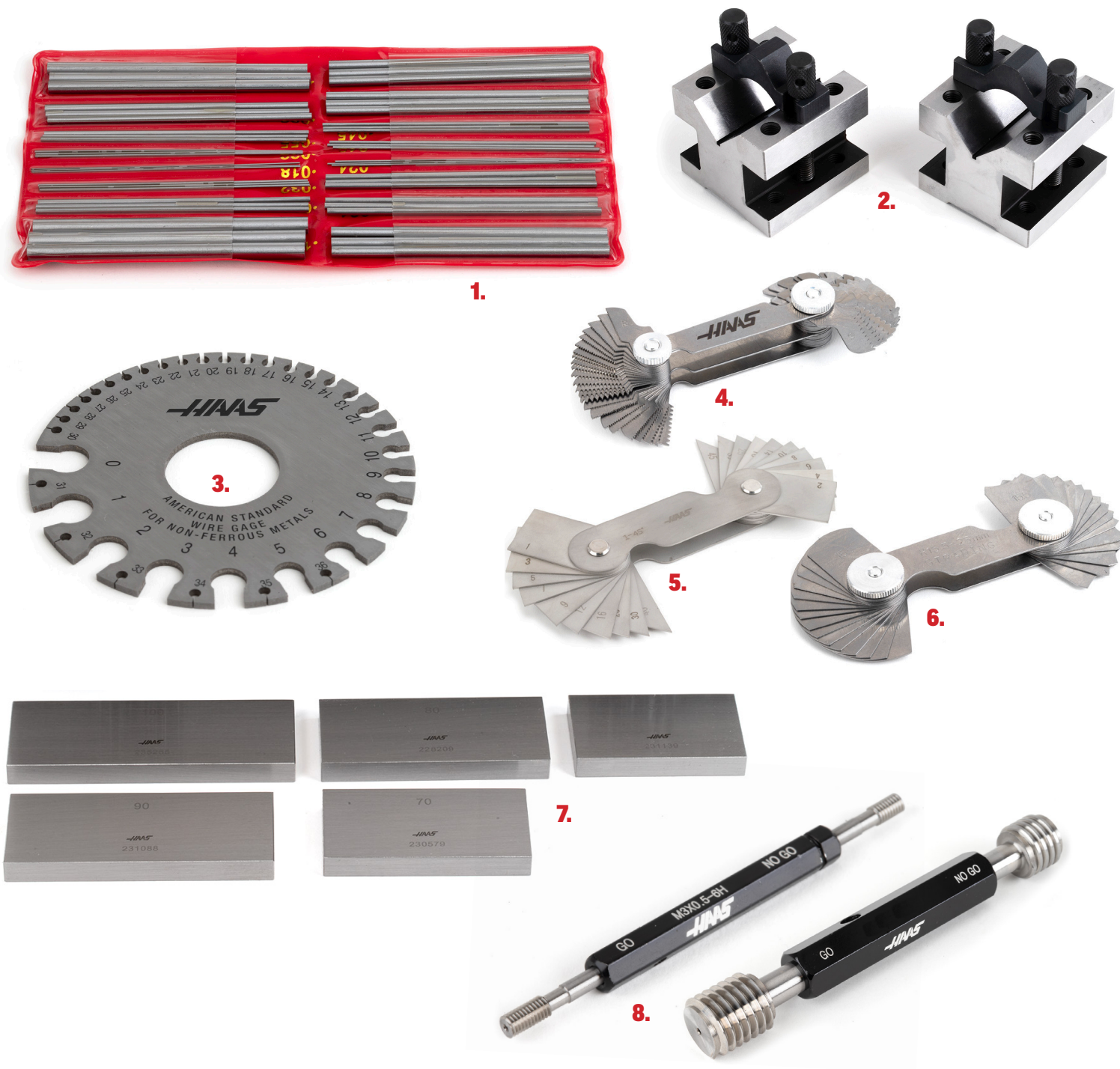
## Micrometers



1. Digital V-Anvil Micrometers | 2. 3-Point Micrometers | 3. Gear Tooth Micrometer Anvils | 4. Standard Micrometers  
5. Depth Micrometers | 6. Screw Thread Micrometers

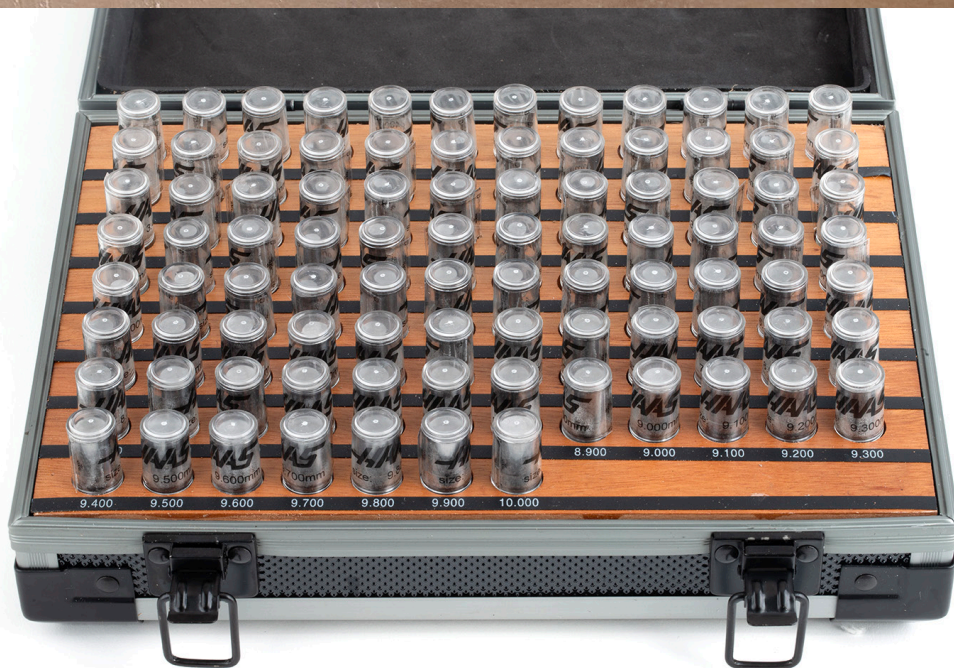
# New! Measuring & Inspection

## More Measuring Tools



1. Thread Measuring Wires | 2. V-Blocks | 3. Sheet Metal/Wire Gauges | 4. Thread Pitch Gauges | 5. Angle Gauge | 6. Radius Gauges  
7. Gauge Blocks | 8. Thread Plug Gauges





9.



10.



11.



12.



13.

9 Pin Gauges | 10. Thread Ring Gauges | 11. 1-2-3 Blocks | 12. Tool Makers' Vise | 13. Small Hole Gauge



# Measuring & Inspection

## Haas Universal 3D Sensor, by Haimer

Finding edges, corners, and hole centers has never been easier than with the **Haas Universal 3D Sensor, by Haimer**. This 3-dimensional edge finder allows you to locate and tram-in surfaces quickly, easily, and more accurately – on the first attempt. No more touch-and-feel with a piece of paper or a spinning edge finder. No more adding or subtracting half the diameter of the probe tip. Simply zero the sensor on the part and then zero the machine. Zero on the sensor = zero on the part! And, because you don't have to run the spindle, like you do with a traditional edge-finder, you can use the Haas Universal 3D Sensor with the machine doors open.

And don't worry about over-traveling while touching off. The sensor has a large travel range, and the ceramic probe tip is designed to fracture if over-traveled, to avoid damaging the sensor itself. Simply unscrew and replace the broken probe tip and you're back on the job. No tools necessary.



### Compatible with:

WIPS – Wireless Intuitive Probing System

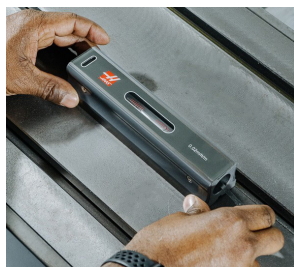
WIPS-L – Wireless Intuitive Probing System for Lathes

VQCPS – Visual Quick Code Probing System

OMP40 / RMP40 Spindle Probes

## 3-Pack, Haas WIPS replacement Stylus Kit, 6mm Diameter Ruby Ball x 50mm Ceramic Stem, with M4 Threads

These replacement styluses for **Haas Probing Systems** are a direct fitment for the spindle probes that come with Haas wireless and wired part probing systems. The straight stylus is designed to inspect simple features where direct, unobstructed contact with the measured surface is possible. The industry-standard ruby tip is suitable for most applications, and the lightweight ceramic stem is very stiff, and offers built-in crash protection. These styluses can be used with Renishaw Spindle Probe PN 93-60-0050 and 60-0024.



For the complete product line of Haas Measuring Tools, go to [www.HaasTooling.com](http://www.HaasTooling.com).





# HOW TO MAKE YOUR BUYING EXPERIENCE BETTER THAN EVER!



- ✓ EASY TO BUY
- ✓ EVERYTHING YOU NEED IN ONE KIT
- ✓ SHIPS DIRECTLY TO YOU
- ✓ FREE SHIPPING

## Everything You Need to Start Making Chips. Now.

Buying tooling can be complicated and time-consuming. We've streamlined the buying process with our **Ready2Run** products. At Haas, we want to make getting your machines and tooling easy, so you can focus on what matters – your business.

No more searching through multiple catalogs to assemble a complete kit yourself. Our **Ready2Run** kits contain everything you need to start machining today. No one makes machining as easy and affordable as Haas, and that's Haas value.



- ✓ NO MINIMUM
- ✓ SAVE 5%
- ✓ ORDER AS OFTEN AS YOU WANT

## With the Click of a Button, Never Run Out of Tooling – and Save.

Never experience the frustration of starting a job and finding out you don't have all the right tools – again. Use our new subscription feature to automatically **reorder the tools and inserts you use most often, on a schedule of your choosing** – so you're always ready to run.



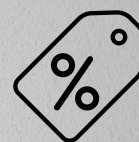
- ✓ SHIPS WITH YOUR NEW MACHINE
- ✓ MAY BE INCLUDED IN YOUR FINANCING
- ✓ READY2MACHINE AT INSTALL

## Start Machining Right After Installation with Haas Ready2Machine Kits

Every new machine needs tooling and workholding. You may not know what jobs you'll be running, or the exact cutting tools you'll need, but you do know you'll need toolholders, a vise, a shell mill or two, and maybe a chip fan. With Haas **Ready2Machine** kits, you can order the tooling and workholding you need with your machine, and be ready to start making chips as soon as your machine is installed.



**FREE**  
EXPRESS DELIVERY



**5% OFF**  
ENTIRE ORDER

## INTRODUCING THE HAAS TOOLING WINNER'S CIRCLE

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



**ORDER 2 WAYS**  
Online or Through  
your HFO



**SCAN FOR DETAILS!**

# DON'T FORGET, WE STILL SELL CNC MACHINE TOOLS



## VERTICAL MILLS

VF Series  
Universal Machines  
VR Series  
Pallet-Changing VMCs  
Mini Mills  
Mold Machines  
Drill/ Tap/ Mill Series  
Toolroom Mills  
Compact Mills  
Gantry Series  
Vertical Mill/Turn  
Extra-Large VMC  
Double-Column Mills  
Desktop Mill  
Control Simulator  
Mill Automatic Parts Loader

## MULTI-AXIS SOLUTIONS

5-Axis Mills  
Y-Axis Lathes

## LATHES

ST Series  
Dual-Spindle  
Toolroom Lathes  
Chuck Lathe  
Bar Feeder  
Lathe Automatic Parts Loader

## HORIZONTAL MILLS

50-Taper  
40-Taper

## ROTARIES & INDEXERS

Rotary Tables  
Indexers  
5-Axis Rotaries  
Extra-Large Rotaries

## AUTOMATION SYSTEMS

Robot Systems  
Automatic Parts Loaders  
Pallet Pool Systems  
Haas Bar Feeder

## *Take your production to a higher level.*

Haas delivers a complete line of high-performance machines at unbeatable prices to make your buying experience exceptional. From model selection, machine options, and tooling packages, to unbeatable financing plans, we make it easy to find the right solution for your shop.

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