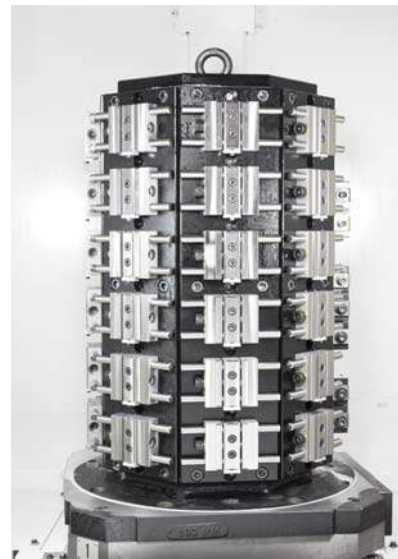
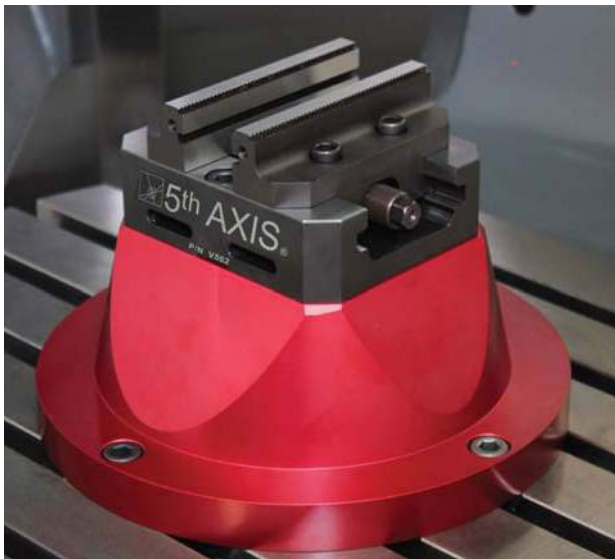


# 5<sup>th</sup> AXIS<sup>®</sup>

## Workholding Catalog

2016



**Innovative Workholding Solutions**



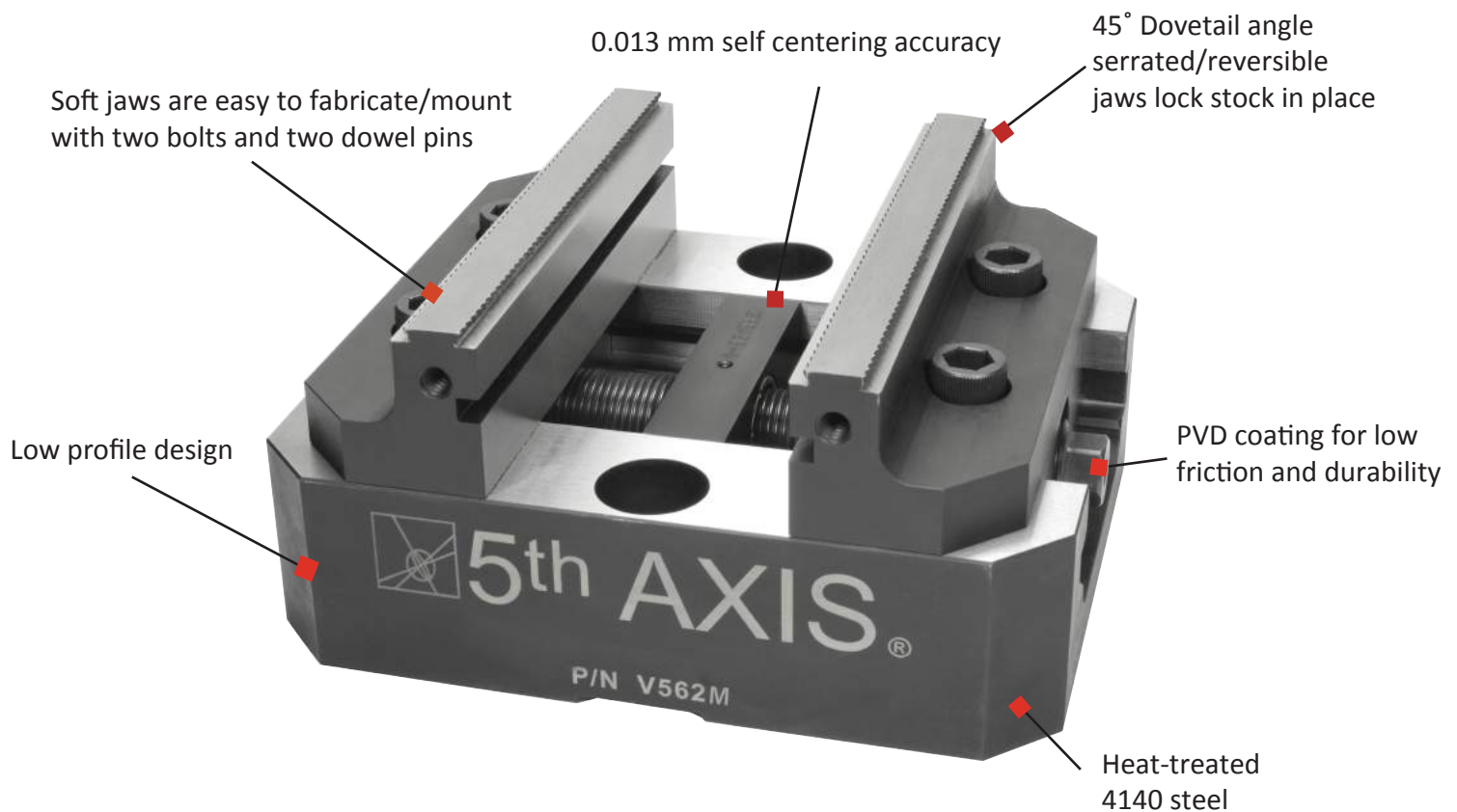
[facebook.com/5thaxisfixtures](https://facebook.com/5thaxisfixtures)



[instagram.com/5thaxis](https://instagram.com/5thaxis)



# SELF-CENTERING VISES



**1** Low profile self-centering vise

**2** 0.013 mm Centering accuracy

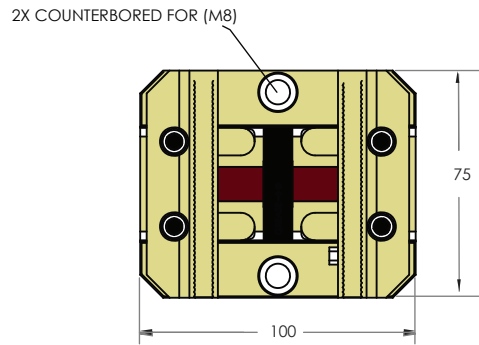
**3** Direct mounting with standard 50 mm spacing to rotary, T-slot, and tombstones

**4** Built-in dovetail can be utilized for increased clamping force

**5** Compatible with all horizontal and vertical 3, 4 and 5 axis CNC machines

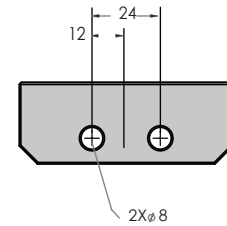
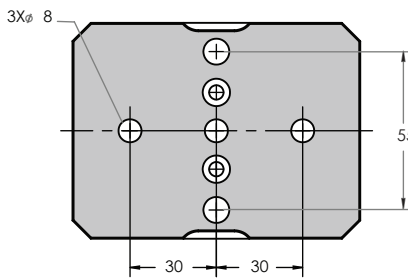
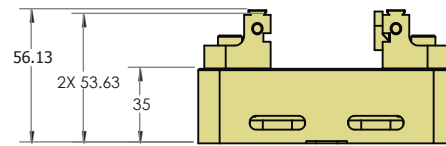
**6** Largest leadscrew in its class

# V75100



## V75100 75mm x 100mm Metric Vise

Technical Data	V75100
Jaw Length	75mm
Clamping Force (61 Nm)	13.5 kN
Jaw Opening	0-105 mm
Step Depth	2.50 mm
Jaw Height	21 mm
Centering Accuracy	0.013 mm



## V75100 Vise Adapters:

**VPY75:**  
147mm Diameter x 40mm Tall  
Compatible with V75100

Direct mounting:  
Haas TR-160  
Haas TR-210

**VPY75 & R347:**  
8" Diameter x 3" Tall  
Compatible with V552

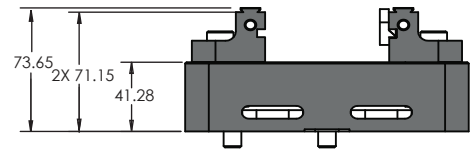
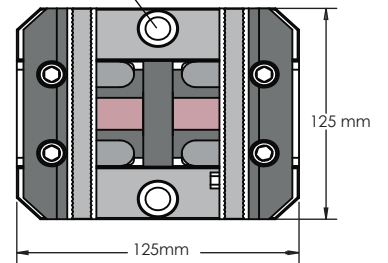
Direct mounting:  
Haas UMC-750



# V552M

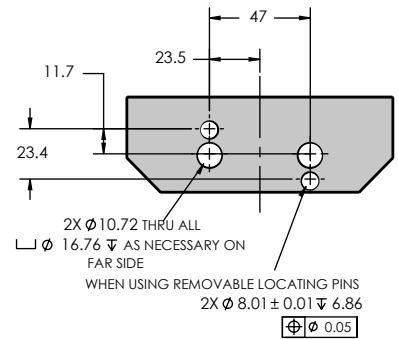
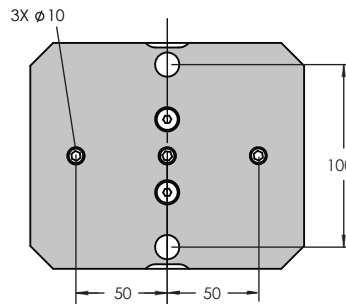


2X COUNTERBORED FOR (M12)



## V552M 125mm x 125mm Metric Vise

Technical Data	V552M
Jaw Length	125 mm
Clamping Force (61 Nm)	16.01 kN
Jaw Opening	0-155 mm
Step Depth	2.5 mm
Jaw Height	32.37 mm
Centering Accuracy	0.013 mm



## V552M Vise Adapters:

### VP56M:

280 mm Diameter x 102 mm Tall  
Compatible with V562

### Direct mounting:

Haas UMC-750  
DMG DMU 70  
DMG DMU 50



### R347M:

201.93 mm Diameter x 76.20 mm Tall  
Compatible with V562

### Direct mounting:

Haas UMC-750  
Haas TR-210  
Haas TR-310



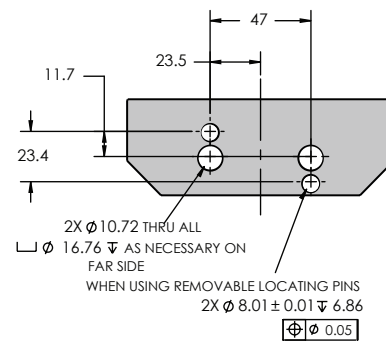
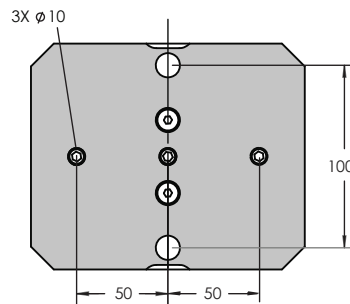
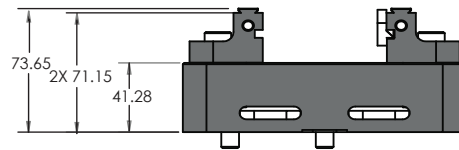
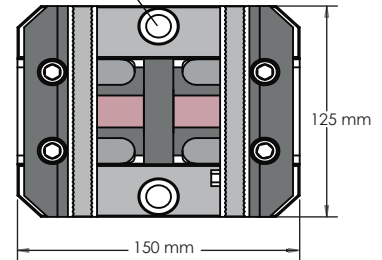
# V562M



## V562M 125mm x 150mm Metric Vise

Technical Data	V562M
Jaw Length	125 mm
Clamping Force (61 Nm)	16.01 kN
Jaw Opening	0-155 mm
Step Depth	2.5 mm
Jaw Height	32.37 mm
Centering Accuracy	0.013 mm

2X COUNTERBORED FOR (M12)



## V562M Vise Adapters:

### VP56M:

280 mm Diameter x 102 mm Tall  
Compatible with V562M

### Direct mounting:

Haas UMC-750  
DMG DMU 70  
DMG DMU 50



### R347M:

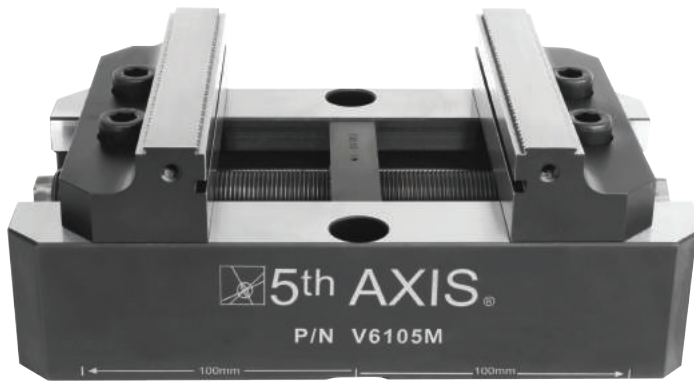
201.93 mm Diameter x 76.20 mm Tall  
Compatible with V562M

### Direct mounting:

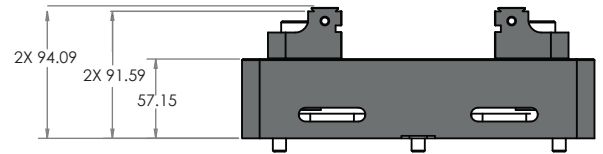
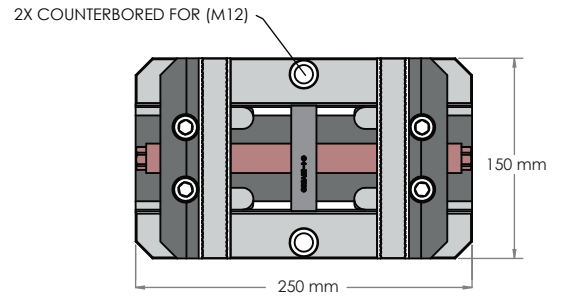
Haas UMC-750  
Haas TR-210  
Haas TR-310



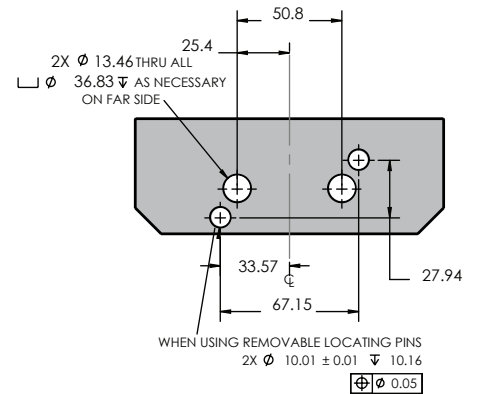
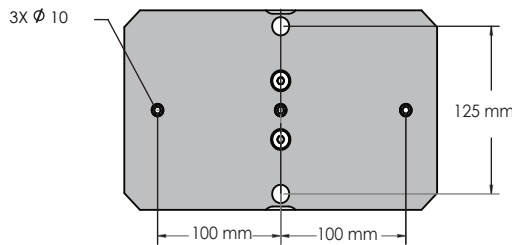
# V6105M



**V6105M 150mm x 250mm Metric Vise**



Technical Data	V6105M
Jaw Length	150 mm
Clamping Force (61Nm)	16.01 kN
Jaw Opening	0-260.35 mm
Step Depth	2.5 mm
Jaw Height	36.94 mm
Centering Accuracy	0.013 mm



## V6105M Vise Adapters:

**VP610M:**  
343 mm Diameter x 76 mm Tall  
Compatible with V6105M



**Direct mounting:**  
Haas UMC-750  
DMG DMU 70  
DMG DMU 50



# HARDWARE

## Machinable 6061 Aluminum Jaws



### **Metric**

**VAJ75-** 75 x 45 x 25 Compatible with V75100

**VAJ52M-** 125 x 50 x 34 Compatible with V562M/V552M

**VAJ610M-** 151 x 78 x 47 Compatible with V6105M

### **Imperial**

**VAJ52-** 4.95" x 1.95" x 1.35" Compatible with V562/V552

**VAJ610-** 5.95" x 3.00" x 1.85" Compatible with V6105

---

## Machinable 1018 Steel Jaws



### **Metric**

**VSJ75-** 75 x 45 x 25 Compatible with V75100

**VSJ52M-** 125 x 50 x 34 Compatible with V562M/V552M

**VSJ610M-** 151 x 78 x 47 Compatible with V6105M

### **Imperial**

**VSJ52-** 4.95" x 1.95" x 1.35" Compatible with V562/V552

**VSJ610-** 5.95" x 3.00" x 1.85" Compatible with V6105

---

## Thumb Screws



### **Metric**

**TS10-** 10mm socket compatible with V75100

**TS13-** 13mm socket compatible with V562M

**TS17-** 17mm socket compatible with V6105M

### **Imperial**

**TS12-** 1/2" socket compatible with V562/V552

**TS58-** 5/8" socket compatible with V6105

---

## Locating Kits



**LK15-** Compatible with Haas TR-160

**LK20-** Compatible with Haas TR-210

**LKUMC-** Compatible with Haas UMC-750

\*Kit includes T-nuts, 1/2-13 socket head cap screws and locating spud.

# ACCESSORIES



45° Indexable Dovetail Cutter 25mm shank  
**DC1750-M**



45° Indexable Dovetail Cutter 1" shank  
**DC1750-45**

60° Indexable Dovetail Cutter 1" shank  
**DC1750-60**

Inserts for Dovetail Cutter  
**DC1750-B**

\*Compatible with DC1750-45, DC1750-60  
and DC1750-M



Snap-On® Torque Wrench (Nm)  
**QD2R100**



Snap-On® Ratchet  
**F80**





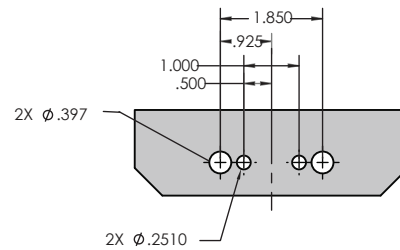
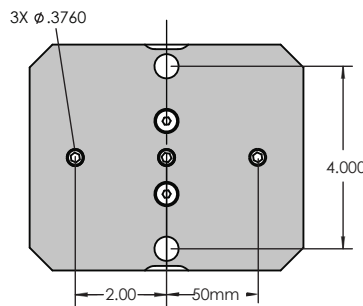
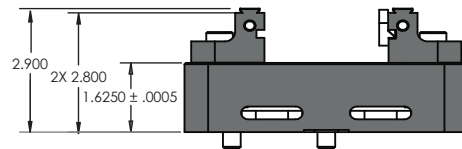
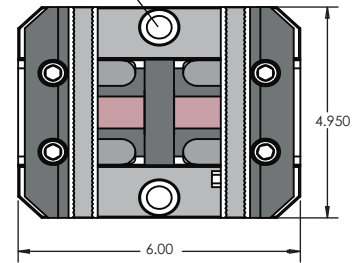
# V552



## V552 5" x 5" Imperial Vise

Technical Data	V552
Jaw Length	5"
Clamping Force (10-60 ft lbs torque)	600-4000 lbs
Jaw Opening	0-5.8"
Step Depth	.100"
Jaw Height	1.275"
Centering Accuracy	.0005"

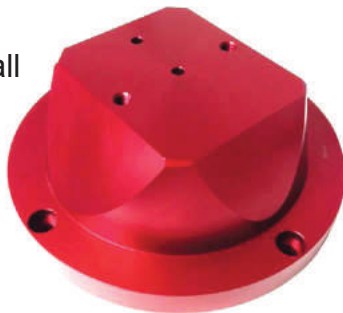
2X COUNTERBORED FOR 1/2" (M12)



## V552 Vise Adapters:

**VPY56:**  
10.95" Diameter x 4" Tall  
Compatible with V552

Direct mounting:  
Haas UMC-750  
DMG DMU 70  
DMG DMU 50



**R347:**  
8" Diameter x 3" Tall  
Compatible with V552

Direct mounting:  
Haas UMC-750  
Haas TR-210  
Haas TR-310

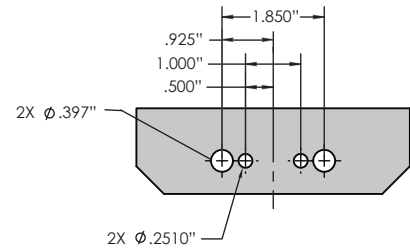
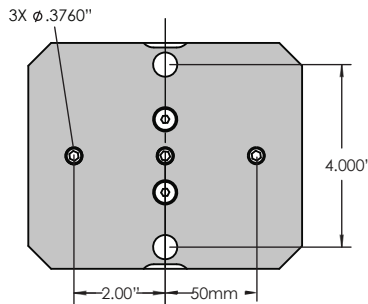
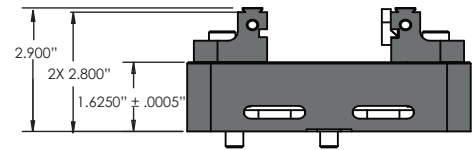
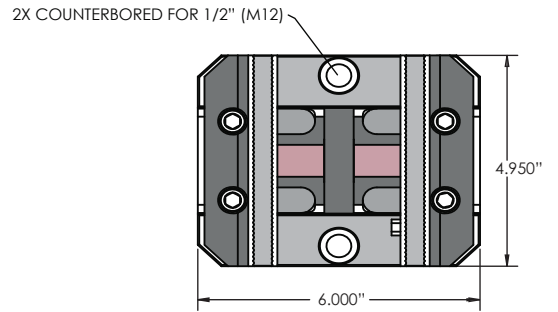


# V562



**V562 5" x 6" Imperial Vise**

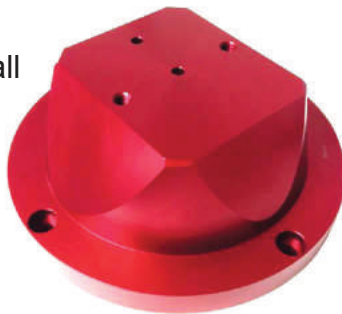
Technical Data	V562
Jaw Length	5"
Clamping Force (10-60 ft lbs torque)	600-4000 lbs
Jaw Opening	0-5.8"
Step Depth	.100"
Jaw Height	1.275"
Centering Accuracy	.0005"



## V562 Vise Adapters:

**VPY56:**  
10.95" Diameter x 4" Tall  
Compatible with V562

Direct mounting:  
Haas UMC-750  
DMG DMU 70  
DMG DMU 50



**R347:**  
8" Diameter x 3" Tall  
Compatible with V562

Direct mounting:  
Haas UMC-750  
Haas TR-210  
Haas TR-310

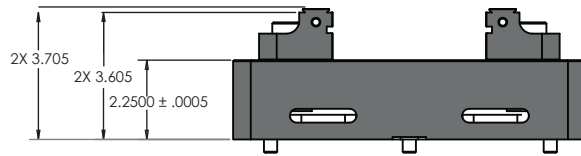
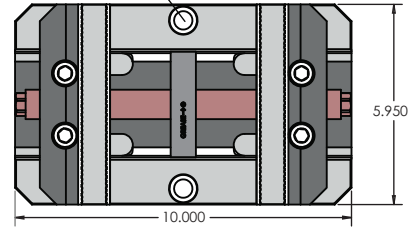


# V6105

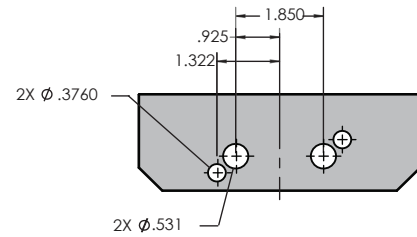
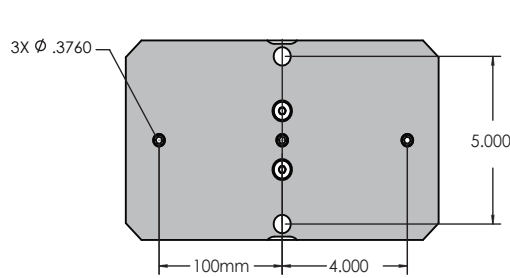


**V6105 6" x 10" Imperial Vise**

2X COUNTERBORED FOR 1/2" (M12)



Technical Data	V6105
Jaw Length	6"
Clamping Force (10-60 ft lbs torque)	700-4200 lbs.
Jaw Opening	0-10"
Step Depth	.100"
Jaw Height	1.450"
Centering Accuracy	.0005



## V6105 Vise Adapter:

VP610  
10.95" Diameter x 3.5" Tall  
Compatible with V6105

Direct mounting: Haas UMC-750  
DMG DMU 70  
DMG DMU 50



# AUTOMATION



5th Axis® **V552M** vise mounted on a 148 mm pallet for **Erowa**: ER148S-V



Vises are also available with direct mounting:

- |             |                 |
|-------------|-----------------|
| -System 3R  | <b>V5523R</b>   |
| -Big Kaiser | <b>V552BK</b>   |
| -Schunk     | <b>V552SCH</b>  |
| -Hirschmann | <b>V552HIR</b>  |
| -Lang       | <b>V562-L96</b> |



3 Sided Vise Pyramid

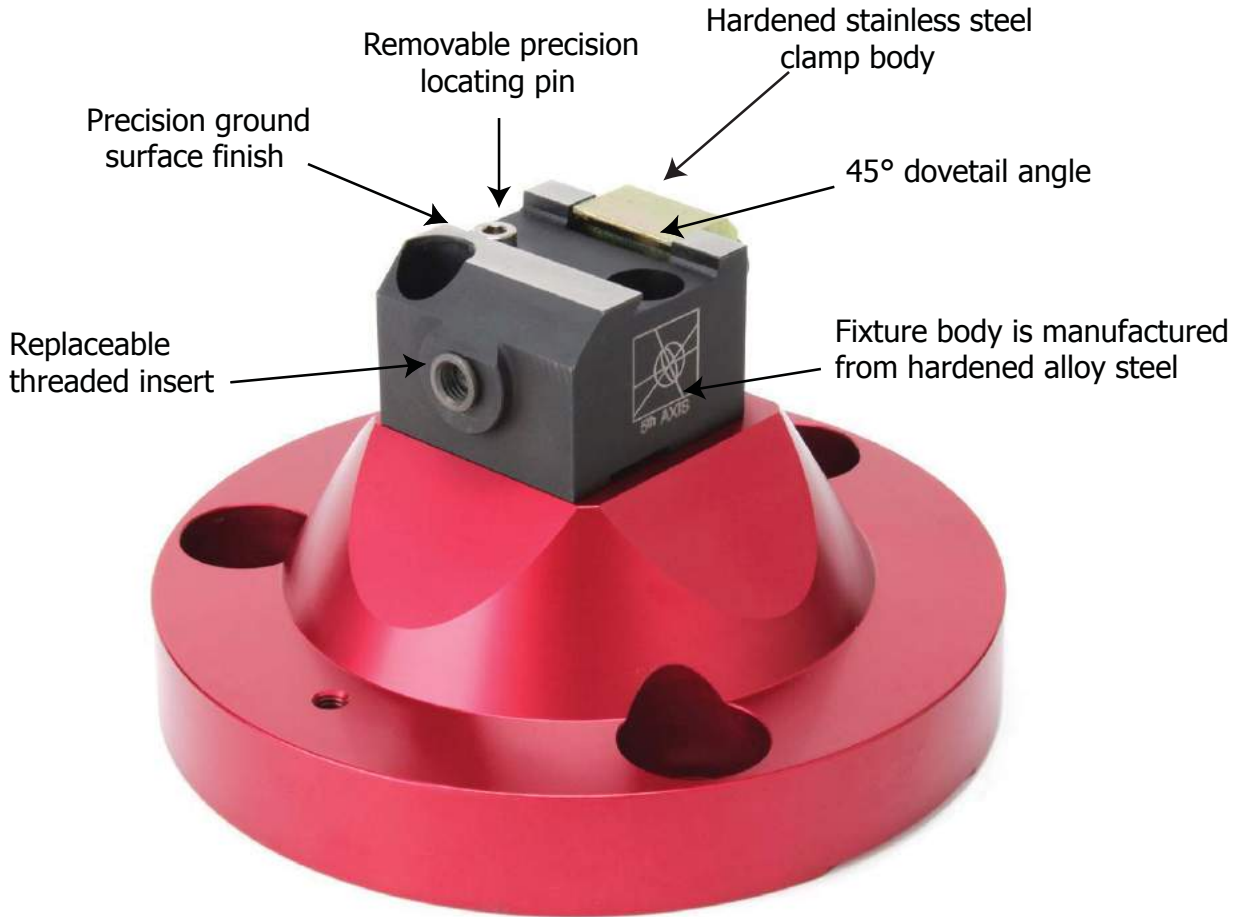
**PY30GBM**  
-30 degree angle

**PY20GBM**  
-20 degree angle

-**PY30GBM** and **PY20GBM** are compatible with **V552M** and **V562M** 5 axis vises.

-Vises can be mounted in vertical or horizontal orientation.

# DOVETAIL FIXTURES



## 1 TOOL CLEARANCE

- Machines multiple features in one operation
- Allows machining access to 5 sides of the workpiece
- Maintains part accuracy by limiting setups

## 2 PRECISE REPEATABILITY

- Parts relocate within +/- .001" from fixture to fixture
- Precision locating pins (1 top, 2 bottom)

## 3 UNSURPASSED CLAMPING STRENGTH

- Unbeatable security for unattended operation
- Securely clamps to a minimum of .080" of stock
- 45° dovetail mechanically locks stock in place

## 4 TOOL CLEARANCE

- Small footprint allows for more parts per cycle
- Minimize pallet and tool change time

# D051251WM

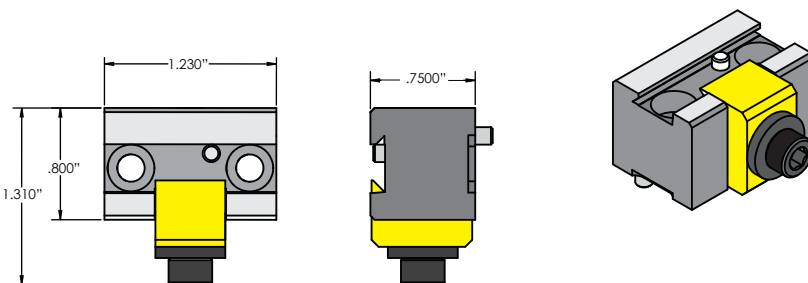
For stock under 1"



D051251WM on P17534D05

The D051251WM is a simple and robust dovetail fixture designed for stock under 1". It features a wedge clamp for superior gripping force and a low profile design that optimizes tool clearance. This micro dovetail fixture is the perfect choice for multi-axis work on smaller parts.

Technical Data	D051251WM
Overall Length	1.230"
Overall Height	.750"
Min. Stock Size	.500"
Dovetail Depth	.100"
Holding Force (2 ft lbs torque)	900 lbs



D051251WM on G164D05



D051251WM on P4344

# D1151S

The D1151S is a simple and robust 1" x 1.5" dovetail fixture designed for all 3, 4 and 5-axis machines. It features a low profile design to optimize tool clearance and minimize second operation cleanup: saving time, cost and material.

The D1151S allows machining access to 5 sides of the workpiece. It is manufactured from hardened alloy steel for rigidity and wear resistance.

The locating pin repeats within .001" so parts can be roughed on lower cost machines and relocated on higher end precision machines, increasing shop throughput.

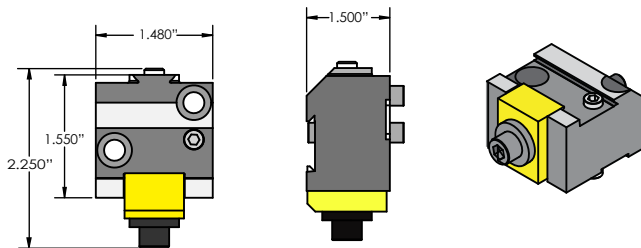
## For 1" to 3" Stock



D1151S on P2353D1151S



D1151S on P17534D115



Technical Data	D1151S
Overall Length	1.480"
Overall Height	1.500"
Min. Stock Size	1.000"
Dovetail Depth	.100"
Holding Force (20 ft lbs torque)	2400 lbs.

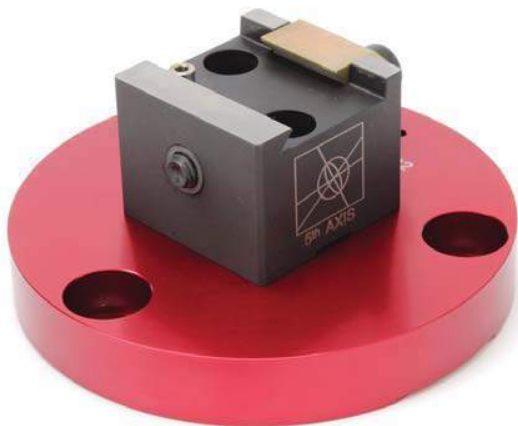


## D1151P

Designed specifically for the firearms industry, these compact units are ideal for running upper receivers or any accessory that features a picatinny.

- Compact
- 45° Dovetail
- Hardened Steel

# D221M



D221M on P7534D22



D221M ON P2547D22

## For 2" to 4" stock

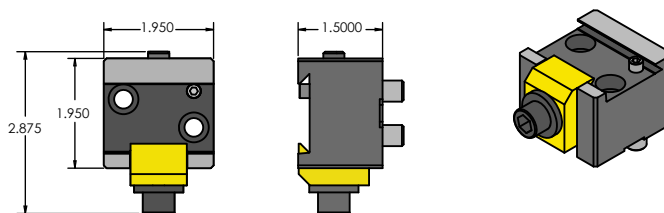
The D221M is a simple and robust 2" x 2" dovetail fixture designed for all 3, 4, and 5-axis cnc machines. It features a low profile design to optimize tool clearance and minimize second operation cleanup: saving time, cost and material.

The D221M allows machining access to 5 sides of the workpiece. It is manufactured from hardened alloy steel for rigidity and wear resistance.

The fixtures utilize a 45° dovetail and feature a removable locating pin, removable dowel pin and are ground to a precise surface finish.

The locating pin repeats within .001" so parts can be roughed on lower cost machines and relocated on higher end precision machines, increasing shop throughput.

\*Adapter not included



Technical Data	D221M
Overall Length	1.950"
Overall Height	1.500"
Min. Stock Size	2.000"
Dovetail Depth	.200"
Holding Force (20 ft. lbs torque)	3800 lbs.



## D362M



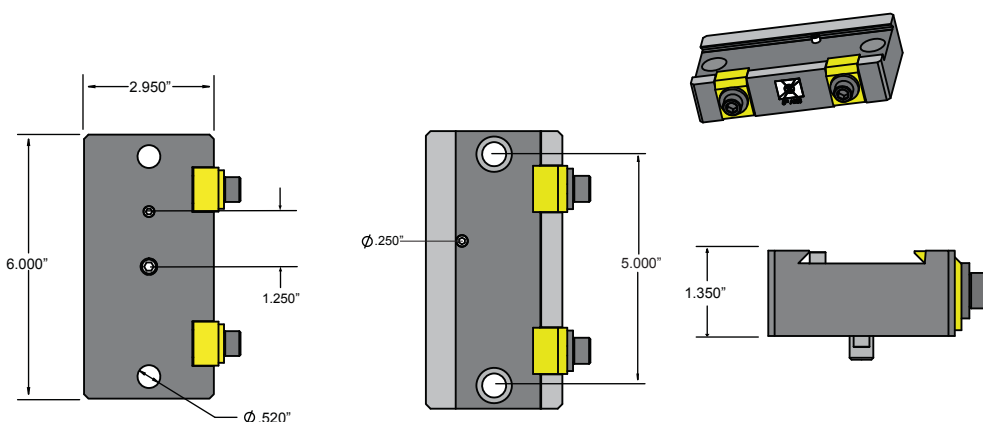
### For stock larger than 3"

The D362M is our largest dovetail fixture at 3" x 6" and is designed for all 3, 4, and 5-axis cnc machines. The low profile design allows machining access to 5 surfaces of the workpiece so parts can be completed in the least number of operations, limiting production time and cost.

As with our smaller dovetail fixtures, the D362M is manufactured from hardened alloy steel for optimal rigidity and wear resistance.

The 45° dovetail feature allows for tremendous clamping force while maintaining a low profile and optimal tool clearance.

The removable locating pin repeats within .001" so parts can be removed from the fixture and precisely relocated for additional operations.



Technical Data	D362M
Overall Length	6"
Overall Height	1.350"
Min. Stock Size	3"
Dovetail Depth	.200"
Holding Force (20 ft lbs torque)	7600 lbs.

# PYRAMIDS

## P4344



### For stock under 1"

The P4344 pyramid fixture utilizes 12 of our D051251WM micro dovetail fixtures. The orientation of the fixtures on the pyramid ensures optimal tool clearance for multiple parts.

The modular design allows fixtures to be added or removed depending on the length of the workpiece. This provides the maximum amount of flexibility. Machine up to 12 parts on this compact unit.

The P4344 is the ultimate solution for machining smaller parts in large quantities.

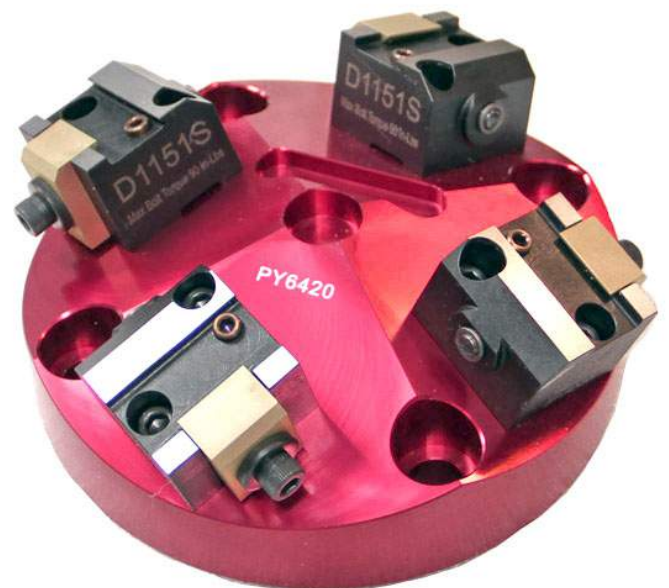
## PY6420

### Maximize pallet efficiency

The PY6420 is a pyramid fixture that utilizes four of our D1151S dovetail fixtures. The orientation of the fixtures optimizes tool clearance and minimizes second operation cleanup: saving time, cost and material.

Space is money. The small footprint of this pyramid ensures no space is wasted, which allows machining of four parts simultaneously in a small area.

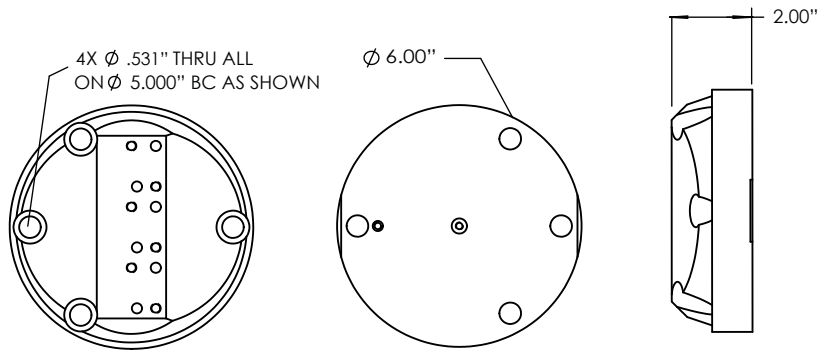
Run more parts per cycle and minimize pallet and tool change time. The PY6420 is the perfect solution for running unattended shifts, saving on labor cost. This versatile fixture can be mounted on trunnions, pallets, machine tables, etc.



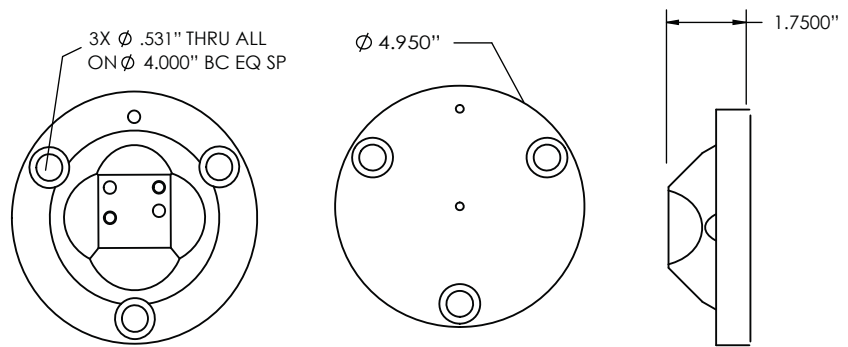
# FIXTURE ADAPTERS



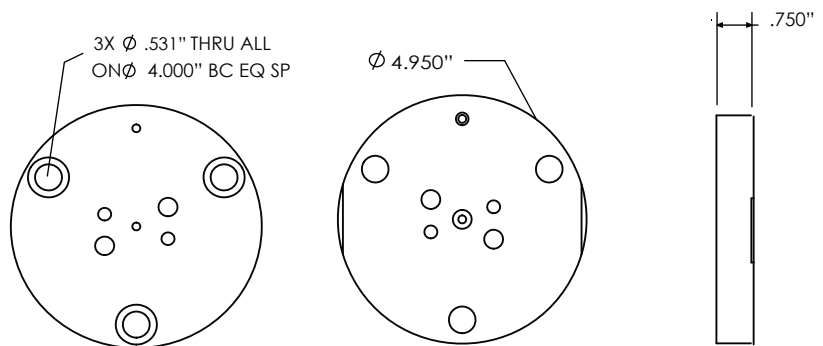
**P2353D115S**



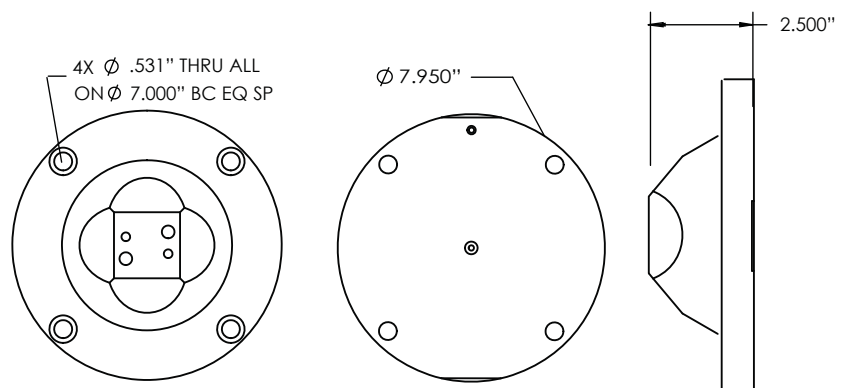
**P17534D115**



**P7534D22**



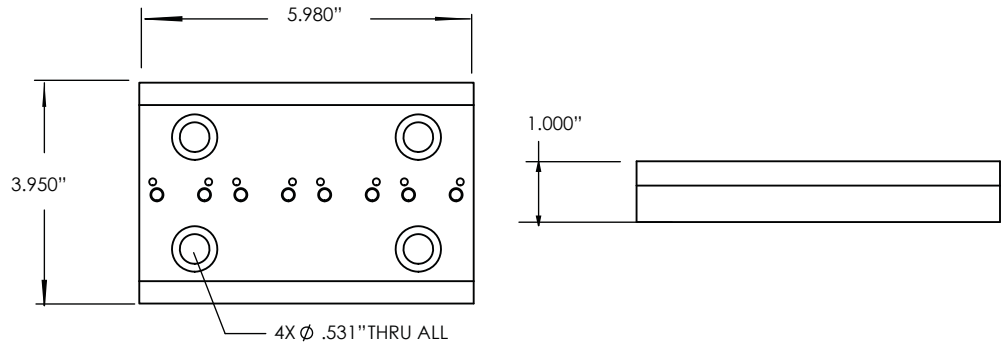
**P2547D22**



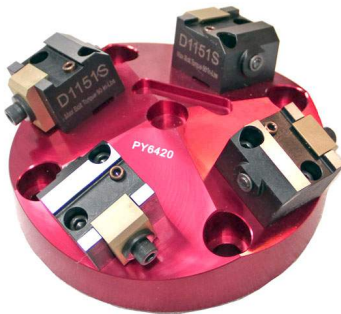
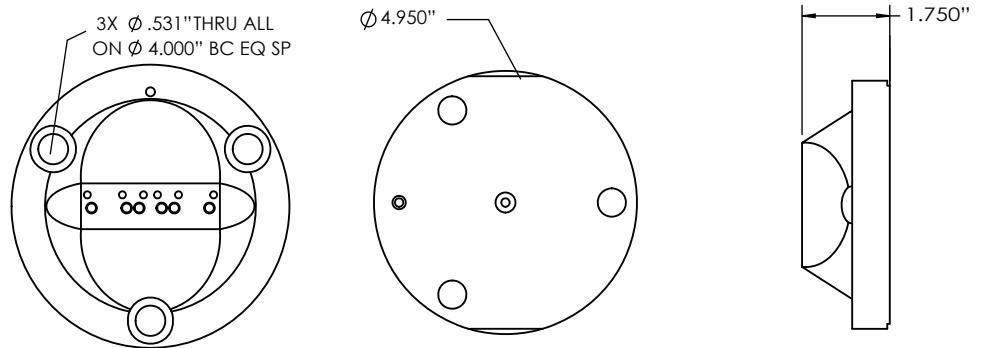
# FIXTURE ADAPTERS



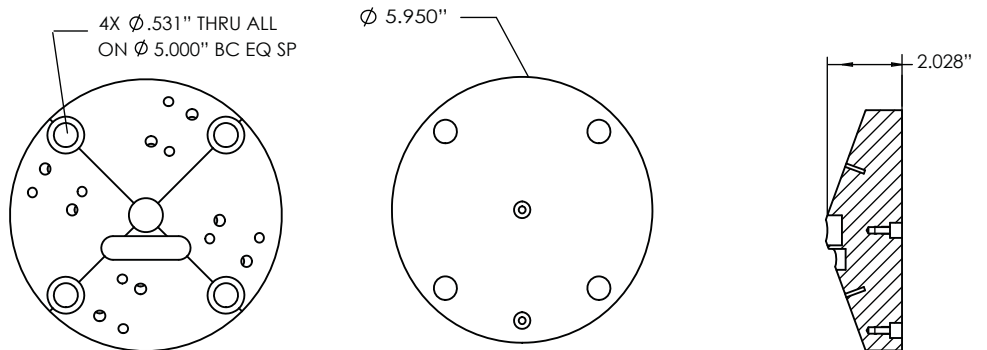
**G164D05**



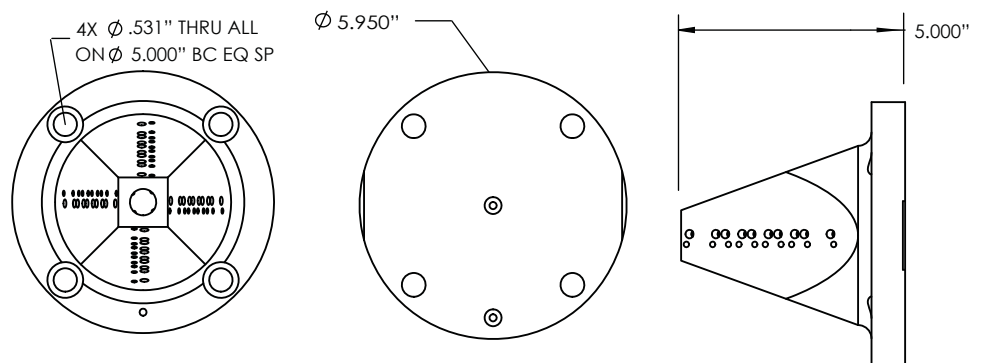
**P17534D05**



**PY6420**



**P4344**

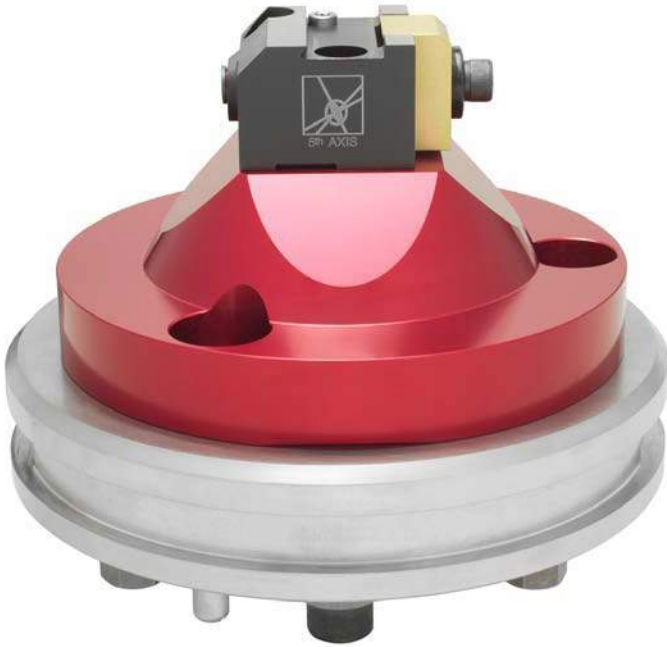


## AUTOMATE

5th Axis dovetail fixtures are available with direct mounting to the following systems:

- Erowa
- System 3R
- Big Kaiser
- Schunk
- Hirschmann
- Lang

\*Please call for details.



## CER40

The CER40 roundbar fixture utilizes a standard ER40 collet with an integrated threaded holder. CER40 accepts all standard ER40 collets up to 1" diameter.

This fixture is the ultimate solution for milling round stock on a vertical or horizontal mill.

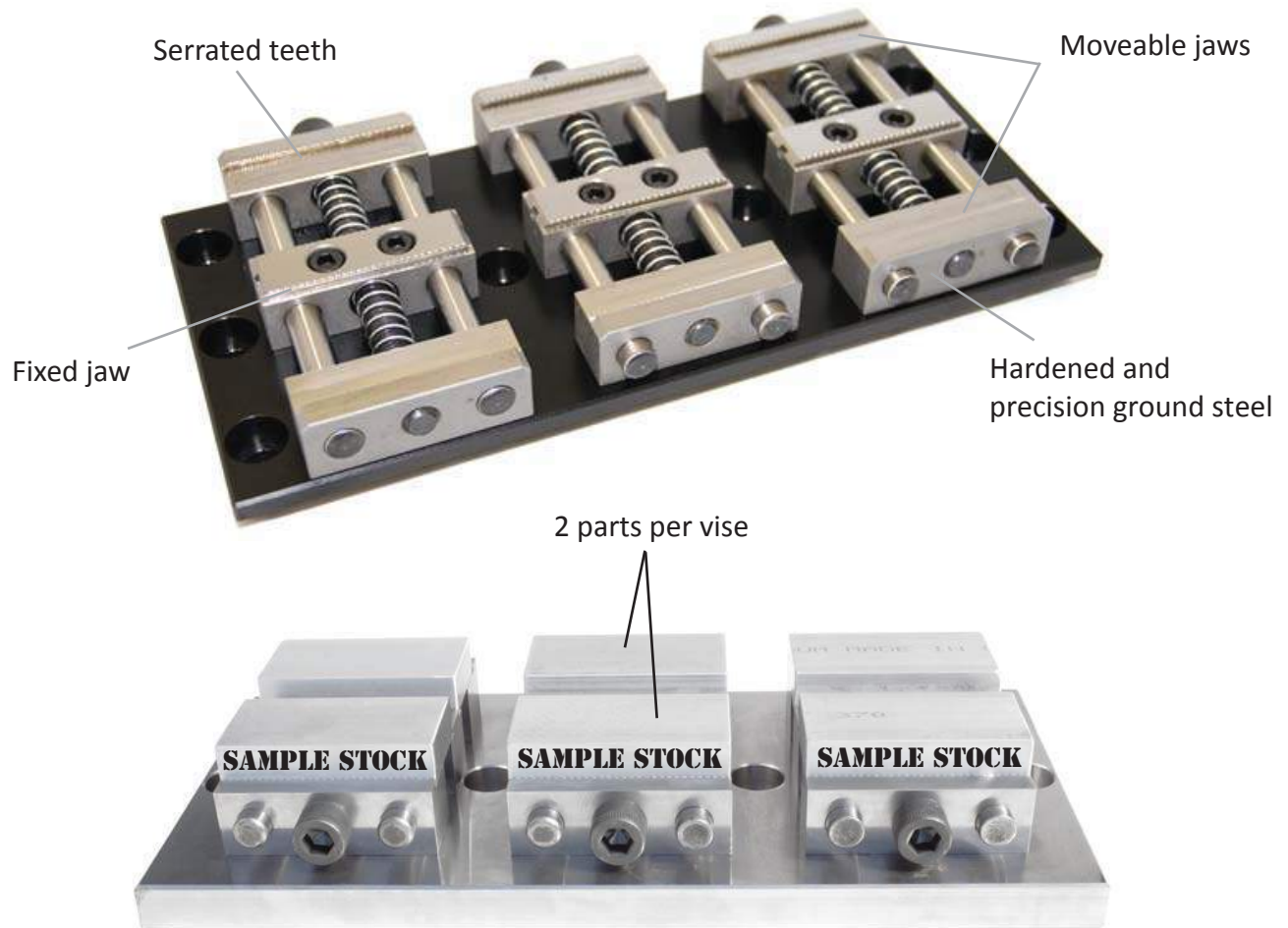
The CER40 is popular with our impeller and dental customers that utilize round stock.

\*Adapter not included.



# OP 1 VISE

## GV-36

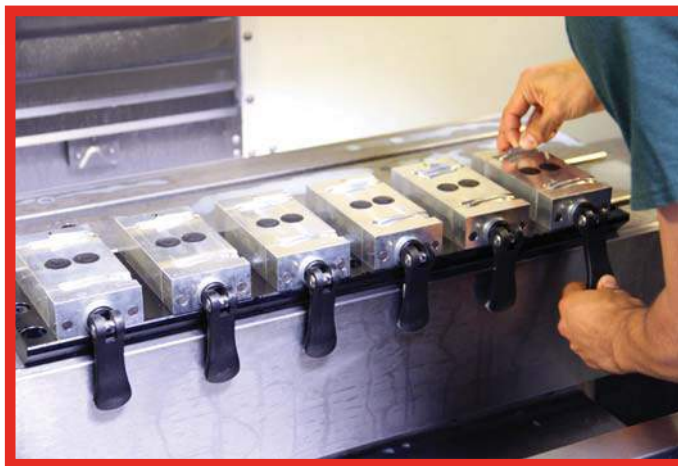


### GV-36

Basic designs are always the best. Our goal was to create the simplest, most compact gripper vise on the market. The double station gripper jaws accommodate workpiece sizes ranging from  $\frac{3}{4}$ " to  $2\frac{1}{4}$ ".

- Compact
- Built-in 45° dovetail
- Precision Ground
- Hardened Steel

## MV-36



Maximize your work envelope with our compact machinable vises. To gain the competitive edge for high volume production runs, we spent years of research and development with the most innovative engineering and machining talent available. We strived to change the mentality of running one part at a time in a big, clunky vise to running multiple parts in a simple, compact dual station machinable vise. Machine your pockets directly onto the vise and never machine a set of jaws again.

Compact • Double Station • Pin-Slide Design • Available in Steel/Aluminum

# TOMBSTONE



## GVK36-6

- Machine up to 96 parts on one tombstone
- Available with steel/aluminum vises and sub plates
- Compatible with GV-36, MV-36
- Tombstone sold separately (octagon tombstone shown)

## TS6174

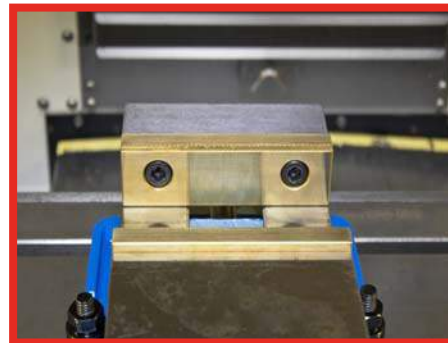
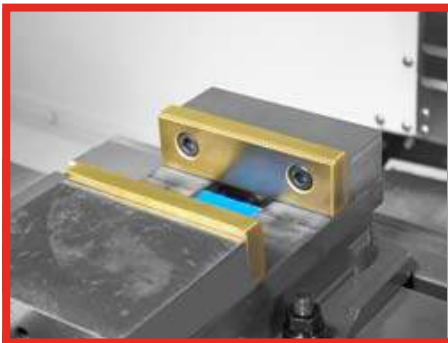
- Machine 24 parts for under \$10,000
- Available with steel/aluminum vises and sub plates
- Machine up to 24 parts on one tombstone
- Aluminum tombstone





# GRIPPER JAWS

## DJ6 & DJ4



### DJ6

The DJ6 dovetail jaws with teeth are the perfect accessory for your 6" machine vise. The ultimate solution for quick and easy set-ups. Jaws are heat treated and precision ground for superior repeatability and longevity.

- .100" Step
- Built-in 45° dovetail
- Jaws are Hardened 55 HRC
- Precision Ground

### DJ4

Also available in 4", these jaws are a great way to add a 45 degree dovetail feature and serrated gripper teeth to almost any other brand of machine vise on the market.

# ACCESSORIES



## Locating Pins

### Metric:

**LPM8:** M8 Precision Locating Pin

**LPM10:** M10 Precision Locating Pin



### Imperial:

**LP250:** Ø .250" Precision Locating Pin

**LPM10:** Ø .375" Precision Locating Pin



## Centering Spud / Locating Kits available for:

Haas

Okuma

DMG / MORI

Agie Charmilles

Mazak

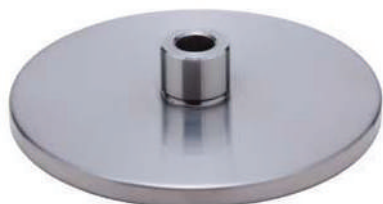
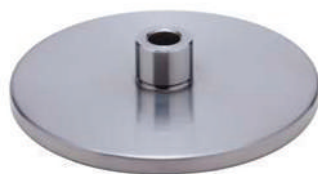
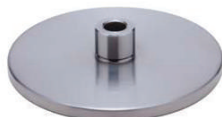
Matsurra

Hurco

Nikken

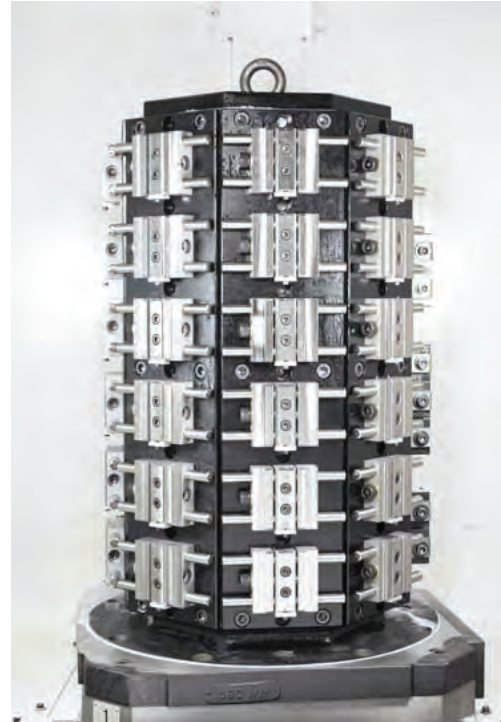
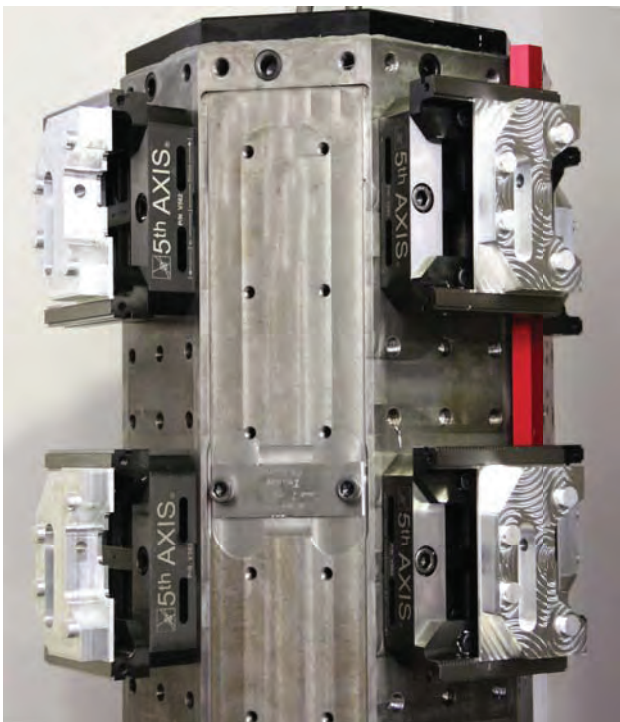
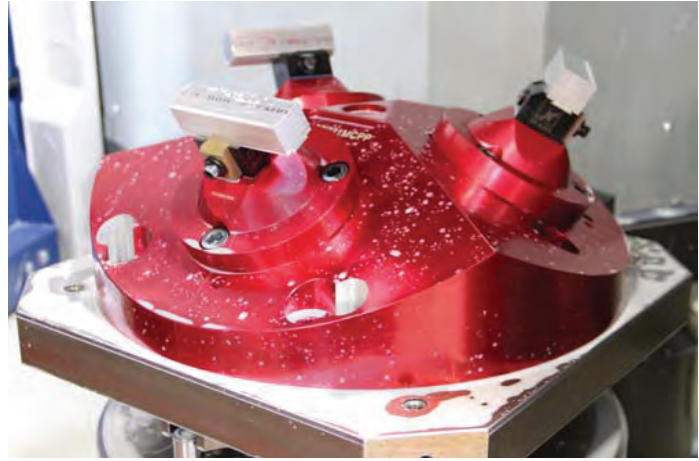
Hermle

Tsudakoma



\*Additional sizes available, please call for details.

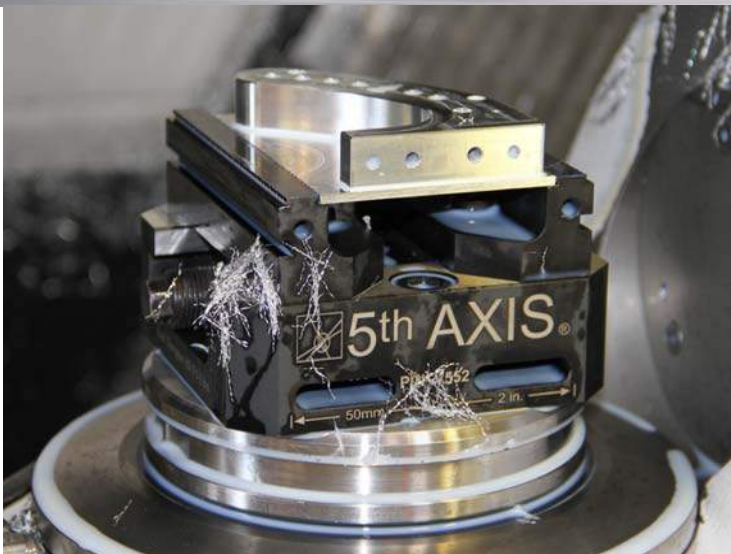
# 5TH AXIS®





# 5<sup>th</sup> AXIS<sup>®</sup>

## Workholding Catalog



**Built by machinists  
for machinists.**



# fifthaxis.com

7140 Engineer Rd. San Diego, CA 92111

Tel: 858-505-0432

Fax: 858-505-9344

Email: [sales@fifthaxis.com](mailto:sales@fifthaxis.com)



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