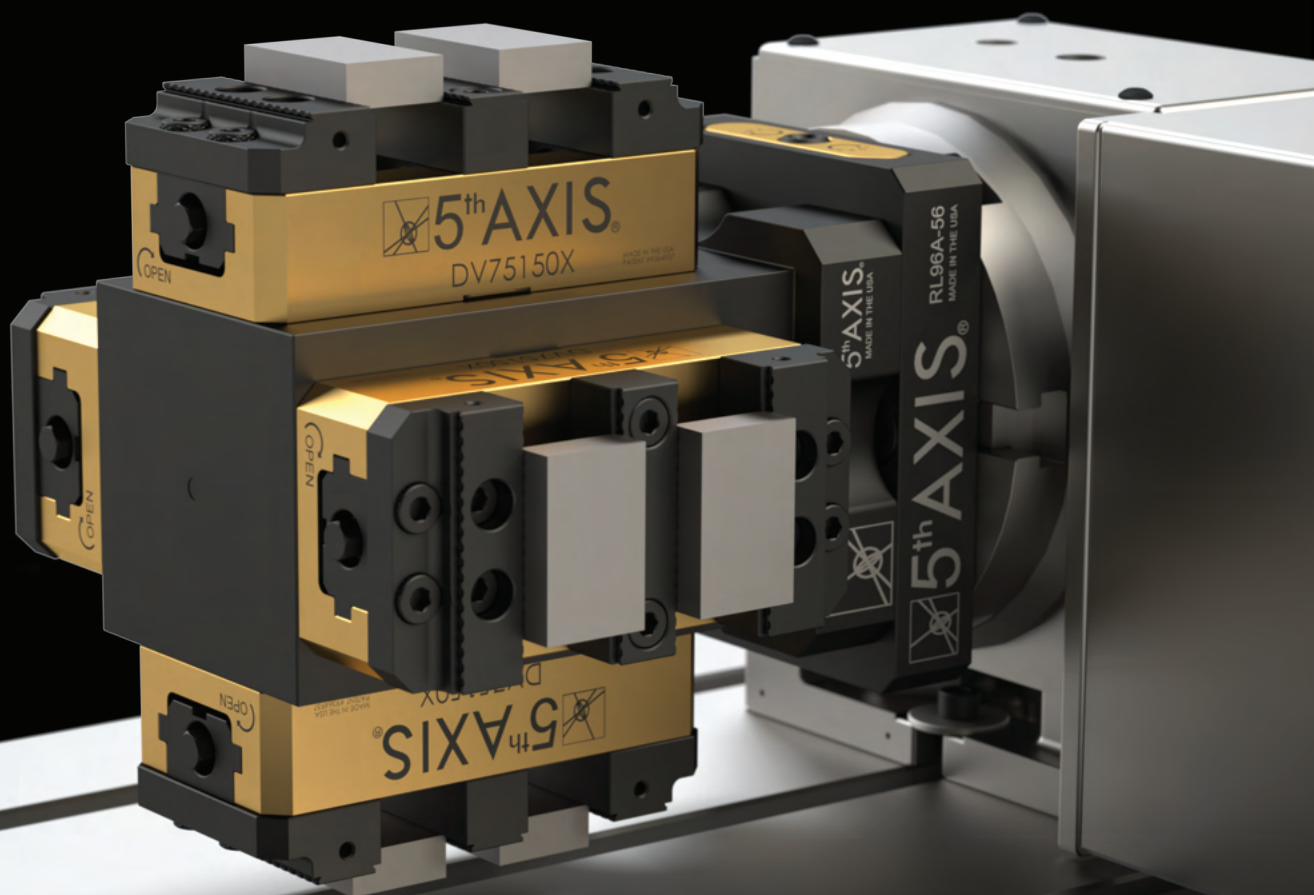


# **5<sup>th</sup> AXIS®**

Workholding Evolved.

VOLUME **4**

VICES - FIXTURES - QUICK CHANGE SYSTEMS

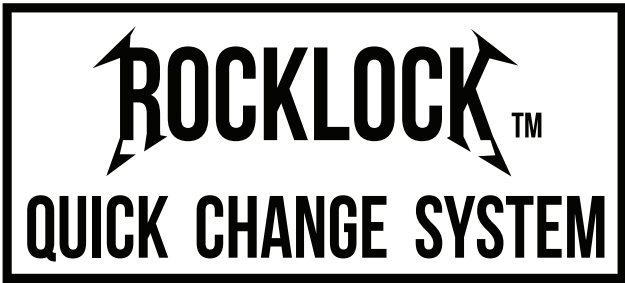


# 52mm RockLock Overview

ROCKLOCK™ 52mm

52mm RockLock

Maximum efficiency  
with 52mm



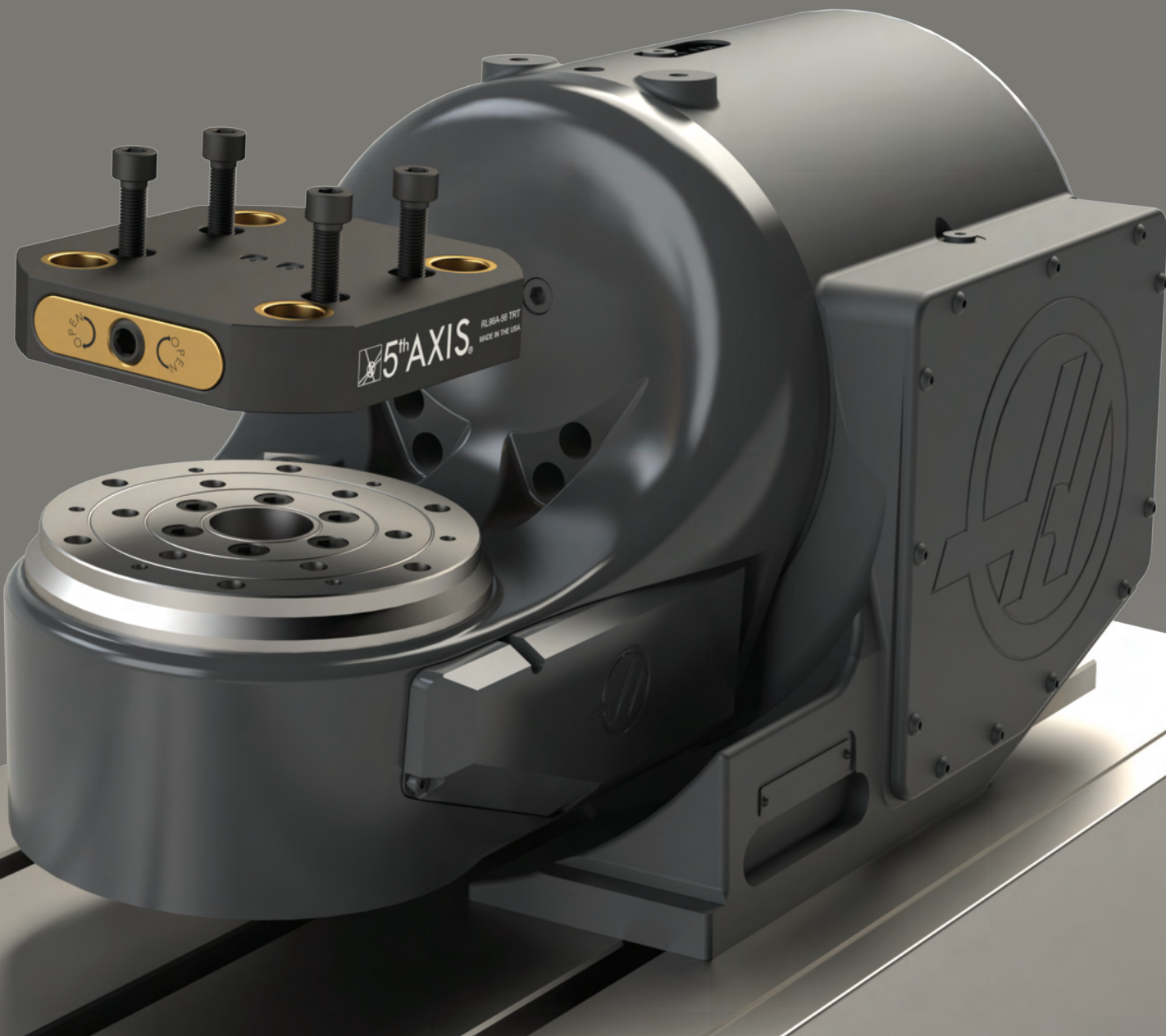
Reduce Setup and  
Changeover Time



Simple Modular  
Design



Solutions Available  
for 3, 4, & 5 Axis  
Machines

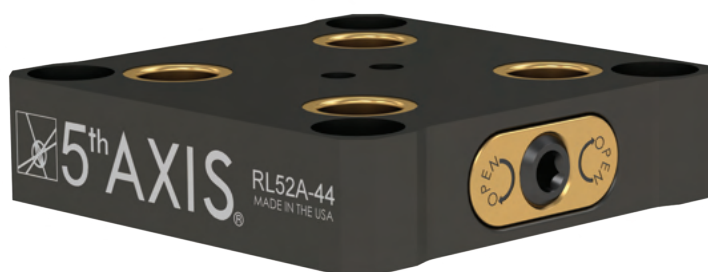


## ROCKLOCK™ QUICK CHANGE SYSTEM

■ Repeatability less than 8  $\mu$ m

■ Industry standard 52mm pull stud spacing

■ Steel or aluminum body construction



**52mm Pull Stud Spacing**



**Robust Single Actuation Screw**






**Steel Locating Features**




Patented free float design ensures equal force on all 4 pull studs. Compatible with other 52mm 4 pull stud systems. Simply change out the pull studs to ensure that the manufacturer's base plate and pull studs match.

## Double Station Vises

Part Number	DV75150X-J1	DV75150X-J2	DV75150X-J3
			
Fixture Size	75mm x 150mm x 56mm	75mm x 150mm x 64mm	75mm x 150mm x 64mm
Jaw Width	75mm	75mm	75mm
Jaw Set	Hardened Steel 3 Piece Master Jaw Set Serrated Dovetail	6061 Aluminum Machinable Jaw Set	1018 Steel Machinable Jaw Set
Vise Type	Double Station	Double Station	Double Station
Compatible Pull Studs	4x PS16F (Sold separately)	4x PS16F (Sold separately)	4x PS16F (Sold separately)
Additional Vise Specs	See Page 39	See Page 39	See Page 39

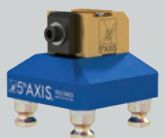
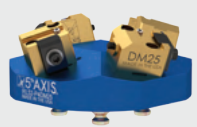

## Self-Centering Vises and Round Bar Fixture

Part Number	V75100X	V75150X	R52-CERX-32	R52-CERX-40
				
Size	75mm x 100mm x 56mm	75mm x 150mm x 56mm	75mm x 75mm x 68mm	75mm x 75mm x 68mm
Jaw Width	75mm	75mm	Utilizes Standard ER32 Collet Nut	Utilizes Standard ER40 Collet Nut
Fixture	V75100X	V75150X	CER32	CER40
Overall Clamping Range	0 - 76.3mm	0 - 128.8mm	Accepts Only ER40 Size Collet	Accepts Only ER40 Size Collet
Vise Type	Self-Centering	Self-Centering	Round Bar Fixture	Round Bar Fixture
Compatible Pull Studs	4x PS16F (Sold separately)	4x PS16F (Sold separately)	4x PS16F (Included)	4x PS16F (Included)
Additional Vise Specs	See Page 47	See Page 47	See Page 59	See Page 59



## Metric Dovetail Fixtures




Part Number	R52-DM12	R52-2DM12	R52-P12DM12
			
Size	75mm x 75mm x 51mm	75mm x 75mm x 51mm	126mm x 126mm x 134mm
Fixture	DM12	2x DM12	12x DM12
Stock	12mm and Above	12mm and Above	12mm and Above
Compatible Pull Studs	4x PS16F (Included)	4x PS16F (Included)	4x PS16F (Included)
Additional Fixture Specs	See Page 54	See Page 54	See Page 57

Part Number	R52-DM25	R52-P4DM25	R52-DM50
			
Size	75mm x 75mm x 55mm	Ø152mm x 65mm	75mm x 75mm x 63mm
Fixture	DM25	4x DM25	DM50
Stock	25mm and Above	25mm and Above	50mm and Above
Compatible Pull Studs	4x PS16F (Included)	4x PS16F (Included)	4x PS16F (Included)
Additional Fixture Specs	See Page 53	See Page 54	See Page 54

## Low Profile Adapters

Part Number	RL52A-4 RL52S-4	RL52A-4-96 RL52S-4-96	RL52A-4-TRT100
			
Size	Ø116mm x 25mm	Ø116mm x 25mm	Ø116mm x 25mm
Subcategory	Low Profile Adapter	Low Profile Adapter	Low Profile Adapter
Materials	Aluminum (RL52A-4) or Steel (RL52S-4)	Aluminum (RL52A-4-96) or Steel (RL52S-4-96)	Aluminum (RL52A-4-TRT100)
Mounting	Drill Your Own M10 @ 50mm-100mm	2x M10 SHCS @ 96mm	HAAS TRT 100
Additional RockLock Specs	See Page 6	See Page 6	See Page 6

## Low Profile Adapters and Integrated Tombstone

Part Number	RL52A-44 RL52S-44	RL52A-4560 RL52S-4560	RL52A-A96	RL52A-T31
				
Size	103.5mm x 103.5mm x 25mm	122.0mm x 102.1mm x 25mm	124.0mm x 124.0mm x 25mm	Ø160mm x 167mm
Subcategory	Low Profile Adapter	Low Profile Adapter	96mm to 52mm Adapter	52mm Integrated Tombstone 96mm Base
Materials	Aluminum (RL52A-44) or Steel (RL52S-44)	Aluminum (RL52A-4560) or Steel (RL52S-4560)	Aluminum (RL52A-A96)	Aluminum (RL52A-T31)
Mounting	2x SB1210 (Included) and 2x M12 or 1/2" @ Ø82mm 90°	4x M10 @ Ø116mm 60°	96mm Spacing and Includes 4x PS20F	96mm Spacing and Includes 4x PS20F
Additional RockLock Specs	See Page 7	See Page 7	See Page 8	See Page 8

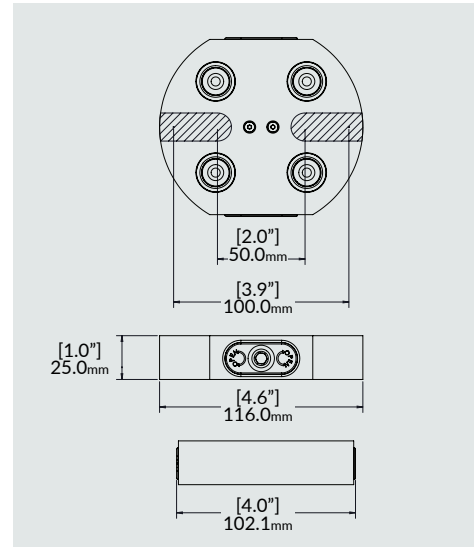
## RL52A-4 / RL52S-4



**Size:** Ø116mm x 25mm  
**Bolt Pattern:** Drill Your Own Custom M10 @ 50mm-100mm  
**Material Construction:**  
 Aluminum (RL52A-4)  
 Steel (RL52S-4)

This circular RockLock adapter is built for small and medium sized rotaries and trunnions with 50mm to 100mm bolt circle.

Repeatability of +/- 8 µm.



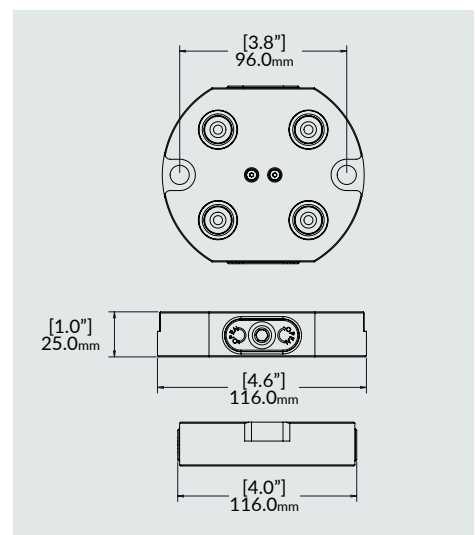
## RL52A-4-96 / RL52S-4-96



**Size:** Ø116mm x 25mm  
**Bolt Pattern:** 2x M10 SHCS @ 96mm  
**Material Construction:**  
 Aluminum (RL52A-4-96)  
 Steel (RL52S-4-96)

This circular RockLock adapter is built for small and medium sized rotaries and trunnions with 96mm bolt circle.

Repeatability of +/- 8 µm.

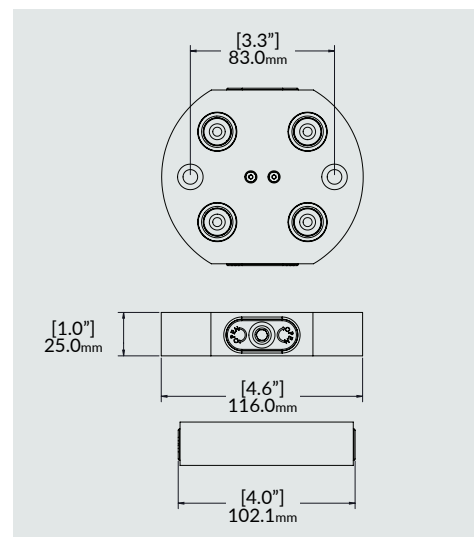


## RL52A-4-TRT100 **Size:** Ø116mm x 25mm **Bolt Pattern:** 2x 5/16" @ 82.98mm **Material Construction:** Aluminum (RL52A-4-TRT100)



This circular RockLock adapter is built for the Haas TRT100 trunnion.

Repeatability of +/- 8 µm.



## RL52A-44 / RL52S-44

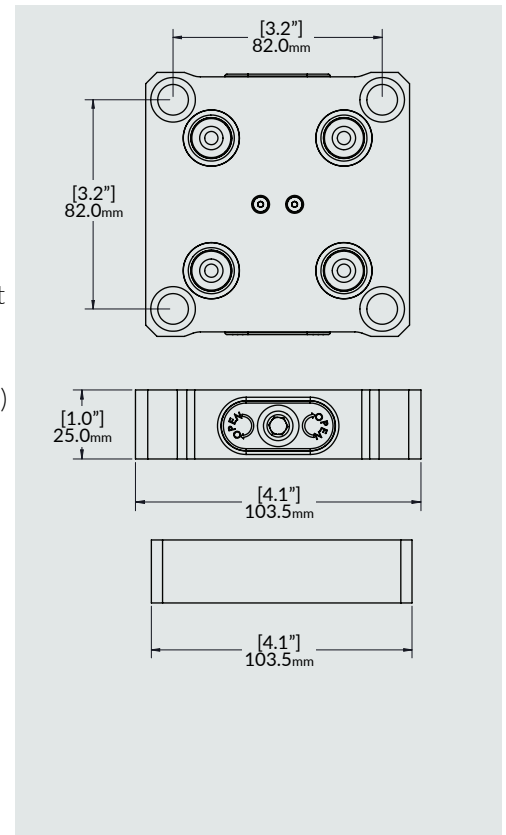


**Size:** 103.5mm x 103.5mm x 25mm  
**Spacing:** 2x SB1210 (Included) and  
 2x M12 or 1/2" @ Ø82mm 90°.  
 Through hole Ø12.02mm  
**Material Construction:**  
 Aluminum (RL52A-44)  
 Steel (RL52S-44)

This square low profile adapter is built for custom tombstones.

Ships with 2x shoulder bolts (SB1210) for locating.

Repeatability of +/- 8 µm.



## RL52A-4560 / RL52S-4560

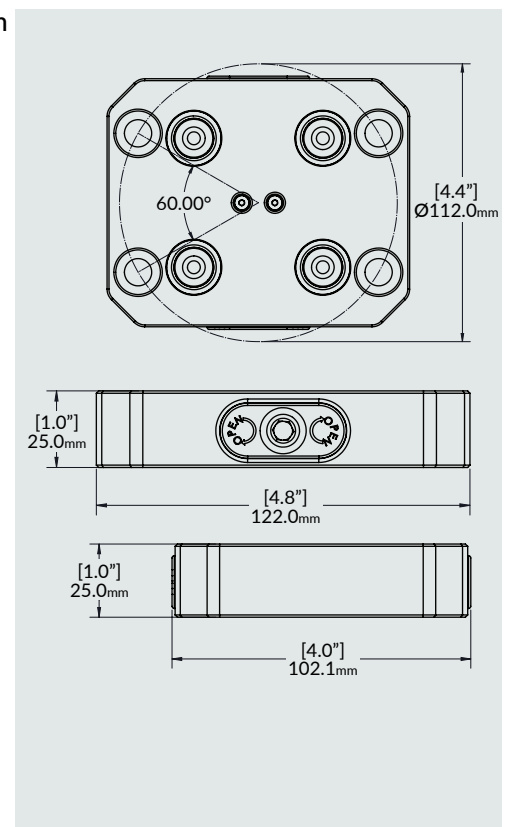


**Size:** 122.0mm x 102.1mm x 25.0mm  
**Spacing:** 4x M10 @ Ø116mm  
**Material Construction:**  
 Aluminum (RL52A-4560)  
 Steel (RL52S-4560)

This rectangular low profile adapter is built for small and medium sized rotaries with 60-degree T-slot spacing.

Ships with 2x rounded T-Slot nuts (14mm x M10) for maximum bolt circle capability.

Repeatability of +/- 8 µm.



## RL52A-A96



**Size:** 124.0mm x 124.0mm x 25.0mm

**Bolt Pattern:** 96mm Spacing and Includes 4x PS20F

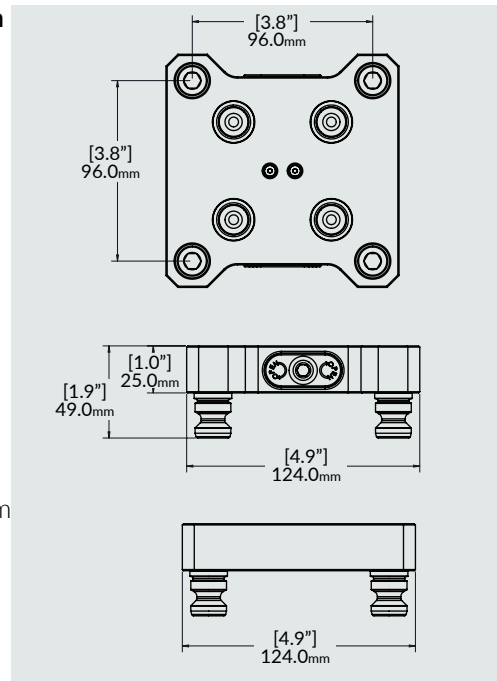
**Material Construction:**  
Aluminum (RL52A-A96)

The RL52A-A96 allows for the quick and easy conversion between the 96mm system and the 52mm system.

96mm spacing on the bottom of the unit and the integrated 52mm system on the top quickly adapts 52mm top tooling to the 96mm risers and adapters.

The unit includes 4x PS20F and 96mm RockLock pattern on the bottom for mounting to any RL96 base.

Repeatability of +/- 8 µm.



## RL52A-T31



**Size:** Ø160mm X 167.0mm

**Spacing:** Includes 4x PS20F

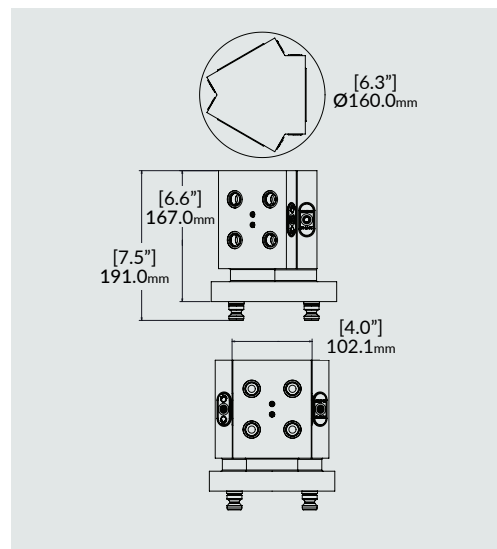
**Material Construction:**  
Aluminum (RL52A-T31)

This 3-sided integrated RockLock tombstone can be mounted onto any RL96 base.

52mm spacing on the 3 faces of the tombstone. 96mm spacing on the bottom of the tombstone.

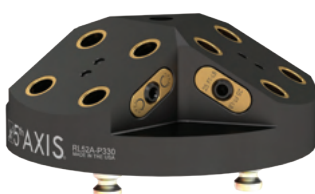
4x PS20F are included.

Repeatability of +/- 8 µm.



## RL52A-P330

**3-Sided Integrated RockLock Pyramid**

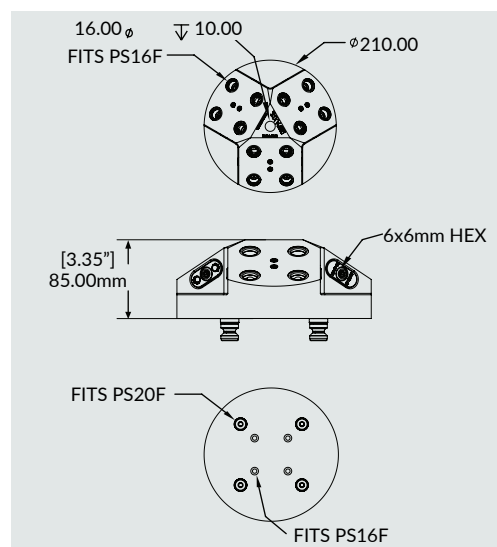


**Size:** Ø210.00mm x 85mm

**Mounting Pattern:** 96mm RockLock

**Material Construction:**  
Aluminum (A)

The RL52A-P300 is a 3-sided (52mm quick change) pyramid ideal for increasing throughput on multi-axis machines. This pyramid was designed and optimized to work with 5 axis universal machines as well as robotic pallet changers.







## PS16F

### PULL STUD

**Size:** 52mm Pull Studs

**Material Construction:** S7 Tool Steel

The PS16F is necessary to use any 5th Axis 52mm base. The 52mm spacing on 5th Axis vises and adapters allow for compatibility with other competitive systems.

\*Please note that pull studs must stay with the corresponding company's base plate. If you are using a 5th Axis 52mm RockLock base plate you will need 5th Axis pull studs (PS16F). The spacing and thread allows the top tooling to be interchangeable between the competitive systems.



## PS16F-PY

### SINGLE PULL STUD WITH POKA-YOKE INSERT

**Size:** 52mm Pull Studs

**Material Construction:** S7 Tool Steel

Poka-yoke is a Japanese term that means "mistake-proofing" or "inadvertent error prevention". The PS16F-PY is a single modified pull stud with an aluminum ring. The ring is placed inside one of the locating holes in the RockLock base, allowing for only the single poka-yoke pull stud to fit inside the locating hole with the corresponding ring. This will prevent operators from changing the orientation and misloading a part.



## PS16F-4PY

### PULL STUDS WITH POKA-YOKE INSERT

**Size:** 52mm Pull Studs

**Material Construction:** S7 Tool Steel

3x Standard PS16F Pull Studs and one Poka-Yoke (PS16F-PY).

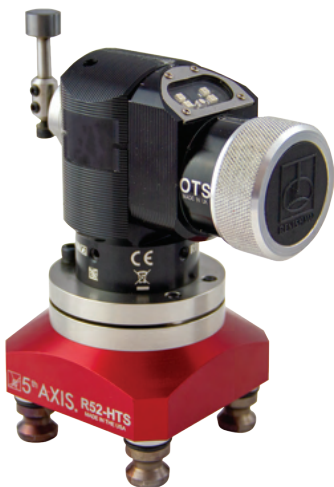


## R52-BLANK

**Size:** 52mm Pull Studs

**Material Construction:** 6061 Aluminum

Blank 6061 aluminum block with 4x PS16F pull studs included. Quickly build your own fixture / subplate with the R52-Blank.



## R52-HTS

**Size:** 52mm Pull Studs

**Material Construction:** 6061 Aluminum

Quick change adapter for the Renishaw OTS Tool Setter. Accurately remove and relocate the tool probe when its not in use. The part number includes the adapter plate and 4x PS16F pull studs.

\*Requires any 52mm RockLock base unit.

\*\*Tool setter sold separately.



## RL52-MP

**52mm Master Pallet**

**Size:** 52mm Pull Studs

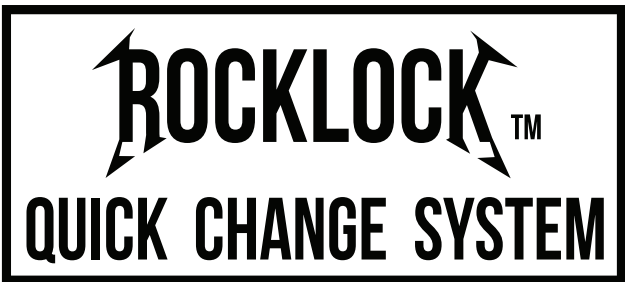
**Material Construction:** 4140 Steel

Mount the RockLock base onto the machine, drop in the master pallet, dial in your setup, and torque your mounting bolts once you have reached the desired location. This is the fastest, most accurate way to set up the RockLock system. Use the bore to find center and the edge to set rotation.

See page 33 for more info.

96mm RockLock

Maximum efficiency  
with 96mm



Reduce Setup and  
Changeover Time



Simple Modular  
Design



Solutions Available  
for 3, 4, & 5 Axis  
Machines

Vise



PS20F



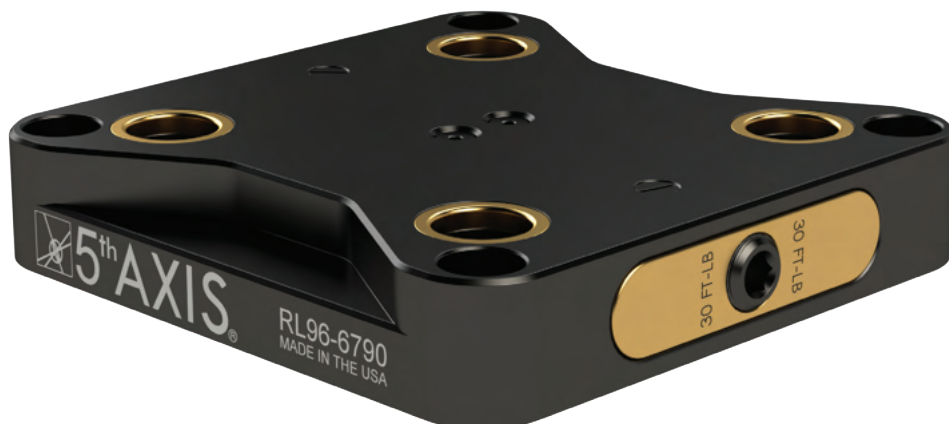
Base



## ROCKLOCK™ QUICK CHANGE SYSTEM

96mm RockLock

- Repeatability less than 8  $\mu$ m
- Industry standard 96mm pull stud spacing
- Steel or aluminum body construction



96mm Pull Stud Spacing



Robust Single Actuation Screw



Steel Locating Features



Patented free float design ensures equal force on all 4 pull studs. Compatible with other 96mm 4 pull stud systems. Simply change out the pull studs to ensure that the manufacturer's base plate and pull studs match.






## RockLock 96mm Compatible Self-Centering Vises

Part Number	V562X	V510X
		
Size	126mm x 152mm x 74mm	126mm x 254mm x 74mm
Compatible Pull Studs	4x PS20F (Sold separately)	4x PS20F (Sold separately)
Overall Clamping Range	0 - 153.6mm	0 - 254.8mm
Additional Vise Specs	See Page 46	See Page 50



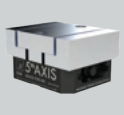





Part Number	R96-V75100X	R96-2V75100X	R96-V75150X	R96-2V75150X	R96-V75100T4	R96-V75XT4
						
Size	125mm x 126mm x 88mm	150mm x 177mm x 78mm	126mm x 150mm x 88mm	150mm x 177mm x 78mm	126mm x 126mm x 267mm	126mm x 126mm x 200mm
Vise	V75100X	2x V75100X	V75150X	2x V75150X	Compatible with V75100X (Vises Sold Separately)	Compatible with V75100X, V75150X, & DV75150X (Vises Sold Separately)
Vise Overall Clamping Range	0 - 76.3mm	N/A	0 - 128.8mm	N/A	N/A	N/A
Compatible Pull Studs	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)
Vise Type	Self-Centering	Self-Centering	Self-Centering	Self-Centering	Self-Centering	Self-Centering or Double Station
Additional Vise Specs	See Page 48	See Page 48	See Page 48	See Page 48	See Page 27	See Page 29



## RockLock 96mm Double Station Vises

Part Number	R96-DV75150X-J1	R96-2DV75150X-J1	DV56-J1*	DV510-J1*	DV510-J4*
					
Size	126mm x 150mm x 88mm	150mm x 177mm x 78mm	126mm x 152mm x 73mm	126mm x 258mm x 73mm	126mm x 258mm x 73mm
Vise	DV75150X-J1	2x DV75150-J1	DV56-J1	DV510-J1	DV510-J4
Jaw Set	Hardened Steel 3 Piece Master Jaw Set	Hardened Steel 3 Piece Master Jaw Set	Hardened Steel 3 Piece Master Jaw Set	Hardened Steel 3 Piece Master Jaw Set with 2 inch center	Hardened Steel 3 Piece Master Jaw Set with 1 inch center
Compatible Pull Studs	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Sold separately)	4x PS20F (Sold separately)	4x PS20F (Sold separately)
Vise Type	Double Station	Double Station	Fixed Jaw / Double Station	Fixed Jaw / Double Station	Fixed Jaw / Double Station
Additional Vise Specs	See Page 41	See Page 42	See Page 43	See Page 45	See Page 45

96mm RockLock

Part Number	R96-DV75150X-J2	R96-2DV75150X-J2	DV56-J2*	DV510-J2*	R96-DV75150X-J3	R96-2DV75150X-J3	DV56-J3*	DV510-J3*
								
Size	126mm x 151mm x 88mm	150mm x 177mm x 78mm	126mm x 152mm x 89mm	126mm x 258mm x 89mm	126mm x 151mm x 88mm	150mm x 177mm x 78mm	126mm x 152mm x 89mm	126mm x 258mm x 89mm
Vise	DV75150-J2	2x DV75150-J2	DV56-J2	DV510-J2	DV75150-J3	2x DV75150-J3	DV56-J3	DV510-J3
Jaw Set	6061 Aluminum Soft Jaw Set	6061 Aluminum Soft Jaw Set	6061 Aluminum Soft Jaw Set	6061 Aluminum Soft Jaw Set	1018 Steel Machinable Jaws	1018 Steel Machinable Jaws	1018 Steel Machinable Jaws	1018 Steel Machinable Jaws
Compatible Pull Studs	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Sold separately)	4x PS20F (Sold separately)	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Sold separately)	4x PS20F (Sold separately)
Vise Type	Double Station	Double Station	Double Station	Double Station	Double Station	Double Station	Double Station	Double Station
Additional Vise Specs	See Page 39	See Page 39	See Page 40	See Page 42	See Page 41	See Page 41	See Page 42	See Page 45

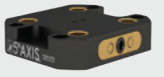
## Dovetail Fixtures

Part Number	R96-DM12	R96-2DM12	R96-P12DM12	R96-DM25
				
Size	126mm x 126mm x 67mm	126mm x 126mm x 67mm	126mm x 126mm x 133mm	126mm x 126mm x 75mm
Fixture	DM12	2x DM12	12x DM12	DM25
Stock Size	12mm and Above	12mm and Above	12mm and Above	25mm and Above
Compatible Pull Studs	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)
Additional Fixture Specs	See Page 53	See Page 53	See Page 57	See Page 54

## Dovetail Fixtures

Part Number	R96-P4DM25	R96-DM50	R96-D115T41	R96-CERX-40
				
Size	Ø152mm x 65mm	126mm x 126mm x 76mm	126mm x 126mm x 107mm	126mm x 126mm x 81mm
Fixture	4x DM25	DM50	4x D115 *Fixtures sold separate*	CER40
Stock Size	25mm and Above	50mm and Above	25mm and Above	Utilizes Standard ER40 Collet Nut
Compatible Pull Studs	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)	4x PS20F (Included)
Additional Fixture Specs	See Page 57	See Page 54	See Page 30	See Page 59

## Low Profile Bases

Part Number	RL96A-56 RL96S-56	RL96A-6760 RL96S-6760	RL96A-6790 RL96S-6790	RL96A-67 RL96S-67	RL96S-67M	RL96A-60100 RL96S-60100	RL96A-66 RL96S-66
							
Size	158mm x 126mm x 30mm	174mm x 158mm x 30mm	156mm x 158mm x 30mm	158mm x 176mm x 30mm	158mm x 176mm x 30mm	158mm x 150mm x 30mm	158mm x 150mm x 30mm
Subcategory	Low Profile Adapter	Low Profile Adapter	Low Profile Adapter	Low Profile Adapter	Low Profile Adapter	Low Profile Adapter	Low Profile Adapter
Materials	Aluminum (RL96A-56) or Steel (RL96S-56)	Aluminum (RL96A-6760) or Steel (RL96S-6760)	Aluminum (RL96A-6790) or Steel (RL96S-6790)	Aluminum (RL96A-67) or Steel (RL96S-67)	Steel (RL96S-67M)	Aluminum (RL96A-60100) or Steel (RL96S-60100)	Aluminum (RL96A-66) or Steel (RL96S-66)
Mounting	2x M12 SHCS @ 100mm - 101.6mm	4x M12 @ Ø170.0mm 60°	4x M10 @ Ø184.5mm 90°	4x 1/2" SB @ 6.0" x 4.0"	4x M12 SB @ 150mm x 100mm	4x M10 @ Ø100mm 90°	Drill your own mounting holes
Additional RockLock Specs	See Page 18	See Page 18	See Page 19	See Page 19	See Page 19	See Page 20	See Page 20

96mm RockLock

## Risers

Part Number	RL96A-38	RL96A-411	RL96A-3915	RL96A-4816
				
Size	Ø 201.9mm x 75.0mm	Ø 276mm x 100mm	381mm x 230mm x 80mm	400mm x 200mm x 100mm
Subcategory	Single Position Riser	Single Position Riser	Multi-Position Riser	Multi-Position Riser
Materials	Aluminum (RL96A-38)	Aluminum (RL96A-411)	Aluminum (RL96A-3915)	Aluminum (RL96A-4816)
Mounting	4x M12 bolts @ 90° on Ø 178.0mm or 3x M12 bolts @ 120° on Ø 178.0mm	4x M12 bolts @ 90° on Ø 9.92"	4x M16 bolts @ 200mm square	4x M12 @ 320mm x 160mm rectangle (80mm T-slots) or 4x M16 @ 360mm x 126mm rectangle (63mm T-slots)
Additional RockLock Specs	See Page 21	See Page 21	See Page 22	See Page 22

## Multi-Position Plates

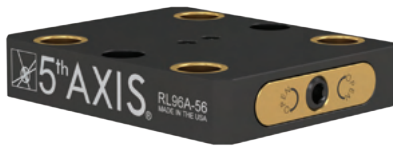
Part Number	RL96A-3613S1	RL96A-3613S2	RL96A-3613S3
			
Size	158mm x 338mm x 30mm	158mm x 338mm x 30mm	158mm x 338mm x 30mm
Subcategory	Multi-Position Horizontal Plate	Multi-Position Horizontal Plate	Multi-Position Horizontal Plate
Materials	Aluminum (RL96A-3613S1)	Aluminum (RL96A-3613S2)	Aluminum (RL96A-3613S3)
Mounting	2x M12 SHCS @ 96mm or 250mm	4x M12 SHCS Equally Spaced @ 80mm	4x M12 SHCS Equally Spaced @ 100mm
Additional RockLock Specs	See Page 23	See Page 23	See Page 23

## Tombstones, Right Angle Plate, and Single Position Riser

Part Number	RL96A-4004	RL96A-3002 RL96S-3002	RL96A-3003 RL96S-3003	RL96A-90DEG	RL96A-356* RL96S-356*
					
Size	230mm x 230mm x 600mm	300mm x 300mm x 400mm	300mm x 300mm x 400mm	149.4mm x 158mm x 200mm	158mm x 126mm x 75mm
Subcategory	96mm Integrated Tombstone	96mm Integrated Tombstone	96mm Integrated Tombstone	Right Angle Plate	Single Position Riser
Materials	Aluminum	Aluminum (RL96A-3002) or 1018 Steel (RL96S-3002)	Aluminum (RL96A-3003) or 1018 Steel (RL96S-3003)	Aluminum (RL96A-90DEG)	Aluminum (RL96A-356) or Steel (RL96S-356)
Mounting	80mm Grid	Machine Specific*	Machine Specific*	4x PS20F (Included) or 2x M12 SHCS @ 100mm - 101.6mm (4")	4x PS20F (Included)
Additional RockLock Specs	See Page 27	See Page 27	See Page 27	See Page 28	See Page 28

\*Submit table drawing upon inquiry.

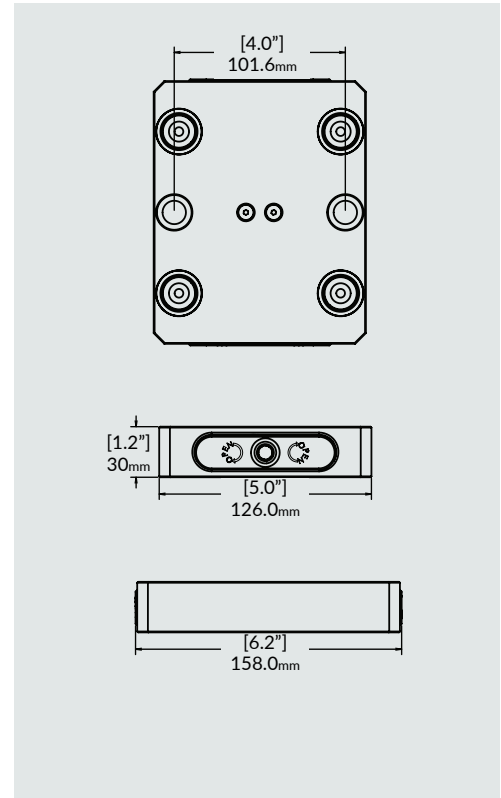
## RL96A-56 / RL96S-56



**Size:** 158mm x 126mm x 30mm  
**Spacing:** 2x M12 SHCS @ 100mm - 101.6mm  
**Material Construction:**  
 Aluminum (RL96A-56)  
 Steel (RL96S-56)

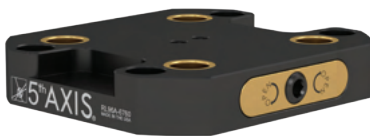
The adapter has two enlarged counterbores to allow mounting from 100mm to 101.6mm for M12 or 1/2-13 SHCS for simple mounting to T-slots.

Repeatability of +/- 8 µm.



96mm RockLock

## RL96A-6760 / RL96S-6760

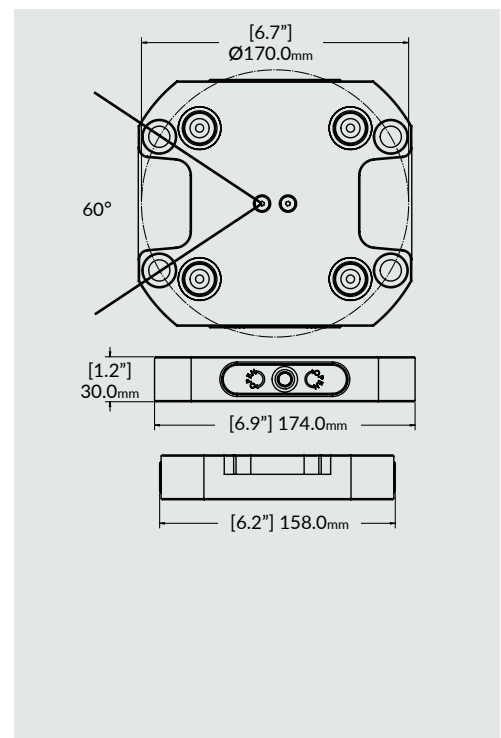


**Size:** 174mm x 158mm x 30mm  
**Spacing:** 4x M12 @ Ø170.0mm on 60°  
**Material Construction:**  
 Aluminum (RL96A-6760)  
 Steel (RL96S-6760)

The RL96-6760 series quick change adapter was built for the Haas TR-210 series rotaries, Hurco VMX30 series rotaries, and any other rotary with 60 degree radial T-slots.

A quick turn of the wrench actuates the cam mechanism to lock and release your fixtures and vises for fast changeover.

Repeatability of +/- 8 µm.





## RL96A-6790 / RL96S-6790

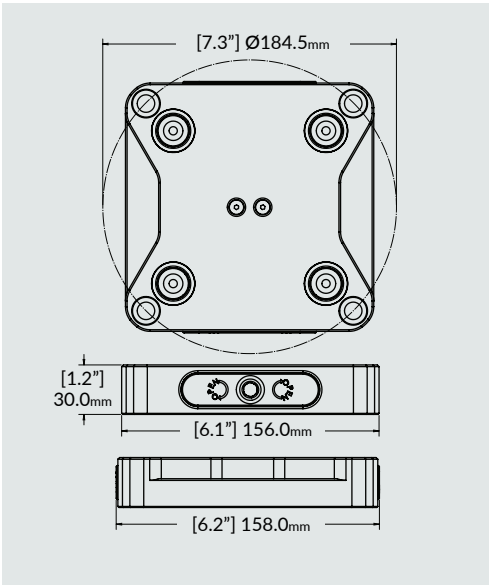


**Size:** 156mm x 158mm x 30mm  
**Spacing:** 4x M10 @ Ø184.5mm  
**Material Construction:**  
 Aluminum (RL96A-6790)  
 Steel (RL96S-6790)

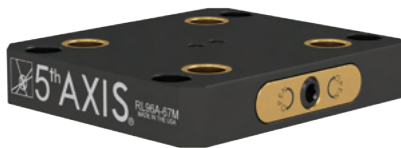
The RL96-6790 quick change adapter was built for any rotary with 90 degree radial T-slots.

A quick turn of the wrench actuates the cam mechanism to lock and release your fixtures and vises for fast changeover.

Repeatability of +/- 8 µm.



## RL96A-67 / RL96S-67

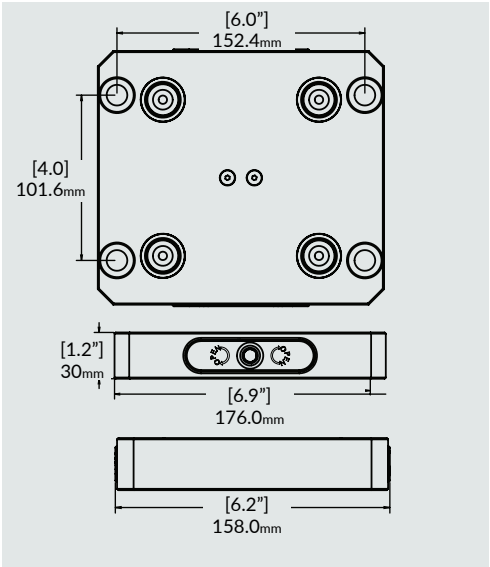


**Size:** 158.0mm x 176.0mm x 30mm  
**Spacing:** 4x 1/2" SB @ 6.0" x 4.0".  
 Through hole Ø0.501"  
**Material Construction:**  
 Aluminum (RL96A-67)  
 Steel (RL96S-67)

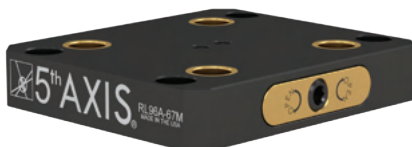
The RL96-67 was built specifically for horizontal machining centers.

Bolt pattern 6.0" x 4.0" allows for easy mounting to most standard tombstone grid pattern spacing.

Repeatability of +/- 8 µm.



## RL96S-67M

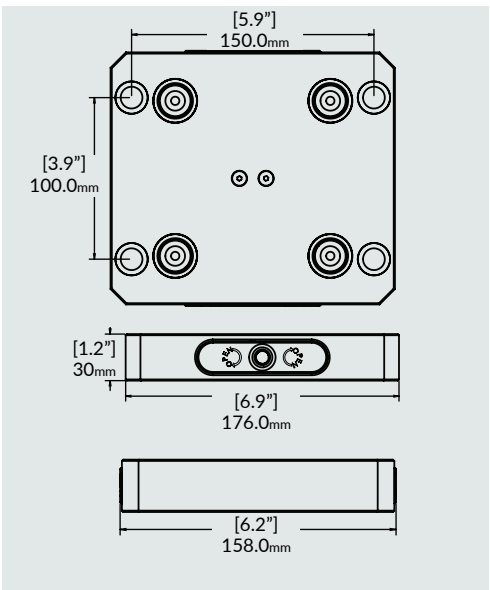


**Size:** 158.0mm x 176.0mm x 30mm  
**Spacing:** 4x M12 @ 150.0mm x 100.0mm. Through hole Ø12.02mm  
**Material Construction:**  
 Steel (RL96S-67)

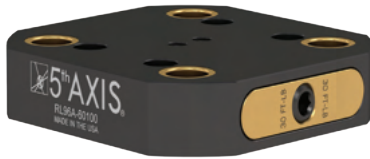
The RL96-67M was built specifically for tombstones on horizontal machining centers.

Bolt pattern 150mm x 100mm allows for easy mounting to most standard tombstone grid pattern spacing.

Repeatability of +/- 8 µm.



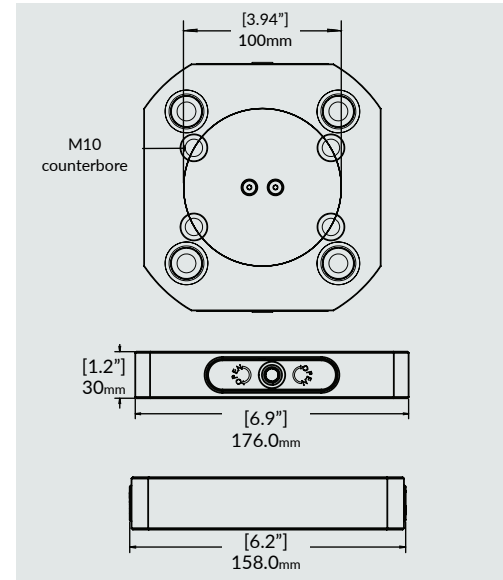
## RL96A-60100 / RL96S-60100



**Size:** 158mm x 150mm x 30mm  
**Spacing:** 4x 100mm  
**Material Construction:**  
 Aluminum (RL96A-60100)  
 Steel (RL96S-60100)

The RL96-60100 series quick change adapter was built with 4x counterbores with 100mm spacing. Fitments include the new Haas TRT160 and many others.

Repeatability of +/- 8 µm.



96mm RockLock

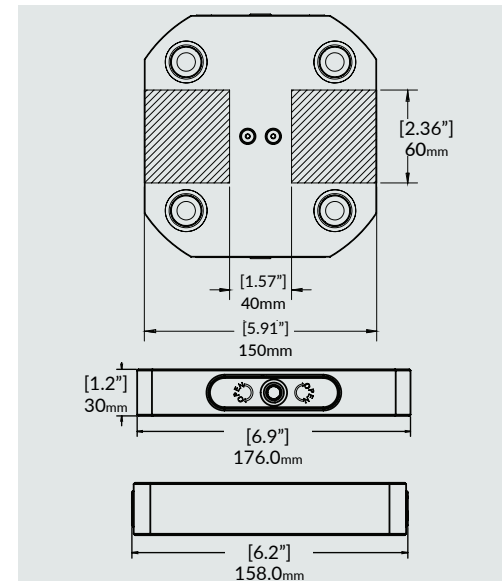
## RL96A-66/ RL96S-66



**Size:** 158mm x 150mm x 30mm  
**Spacing:** Drill your own  
**Material Construction:**  
 Aluminum (RL96A-66)  
 Steel (RL96S-66)

The RL96-66 series quick change adapter was built to accommodate a variety of machines that are not part of our standard offering. The blank adapter allows for drilling your own mounting holes.

Repeatability of +/- 8 µm.



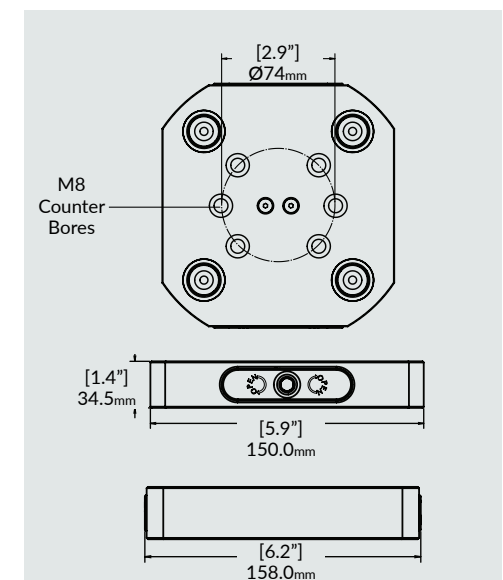
## RL96A-DDR / RL96S-DDR



**Size:** 150mm x 158mm x 34.5mm  
**Spacing:** Specific to DDR  
**Material Construction:**  
 Aluminum (RL96A-DDR)  
 Steel (RL96S-DDR)

The RL96-DDR was built for the Fanuc DDR rotary table.

Repeatability of +/- 8 µm.



## RL96A-38

**Size:** Ø 201.9mm x 75.0mm

**Spacing:**

4x M12 bolts @ 90° on Ø 78mm  
or

3x M12 bolts @ 120° on Ø 178mm

**Material Construction:**

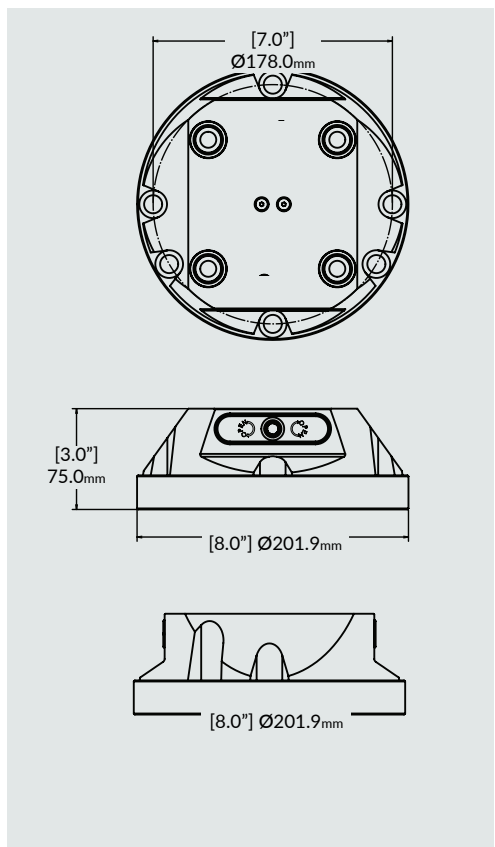
Aluminum (RL96A-38)

The RL96A-38 series quick change adapter was built for medium sized rotaries and smaller 5 axis machines (~300mm range).

With bolt patterns at 60 degrees and 90 degrees this adapter is flexible and fits on a majority of the most popular rotaries and 5 axis tables on the market.

The 3" overall height makes it ideal for smaller parts that you want to raise above the table.

Repeatability of +/- 8 µm.



## RL96A-411

**Size:** Ø 276mm x 100mm

**Spacing:**

4x 1/2-13 or M12 bolts @ 90° on Ø 252.0mm or

3x 1/2-13 or M12 bolts @ 120° on Ø 252mm

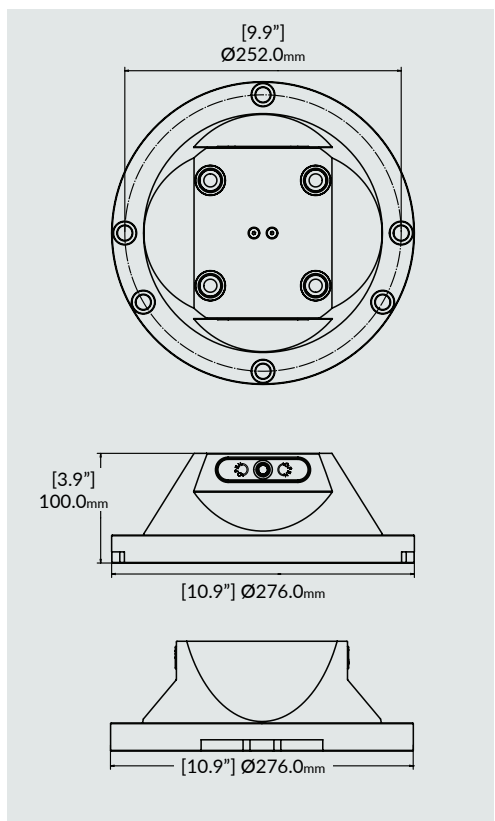
**Material Construction:**

Aluminum (RL96A-411)

The RL96A-411 is an integrated RockLock riser built into one of our most popular adapters.

The 11" diameter adapter x 4" overall height is ideal for medium to large 5 axis machines like the DMG Mori DMU50 and DMU60 as well as the Haas UMC-750 and UMC-750SS.

Repeatability of +/- 8 µm.



## RL96A-3915



**Size:** 381mm x 230mm x 80mm

**Spacing:**

4x M16 bolts @ 200mm square

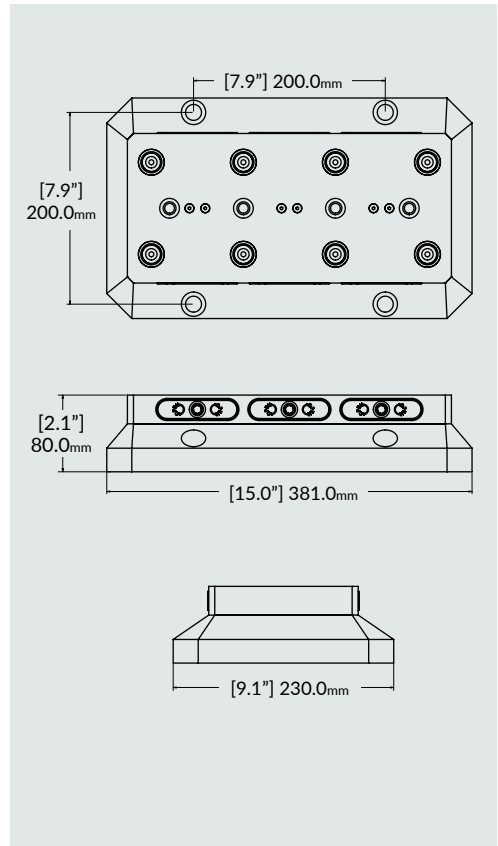
**Material Construction:**

Aluminum (RL96A-3915)

The RL96A-3915 was built with larger machines in mind (400mm-500mm tables).

Utilize one singular large vise or accommodate two smaller workholding units to maximize machine efficiency and reduce changeover time.

Repeatability of +/- 8  $\mu$ m.



96mm RockLock

## RL96A-4816



**Size:** 400mm x 200mm x 100mm

**Spacing:**

4x M12 @ 320mm x 160mm

rectangle (80mm T-slots) or

4x M16 @ 360mm x 126mm

rectangle (63mm T-slots)

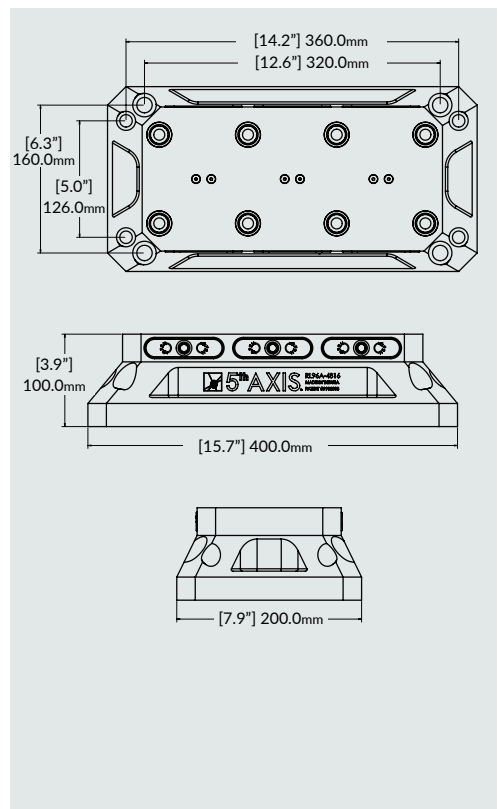
**Material Construction:**

Aluminum (RL96A-4816)

The RL96A-4816 is an integrated multi-position RockLock riser built into one of the largest adapters in the product line.

Utilize one large vise or accommodate two smaller vises with this riser.

Repeatability of +/- 8  $\mu$ m.



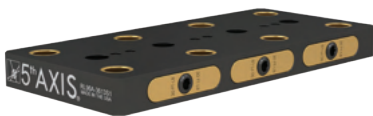
# Multi-Position Horizontal Plates



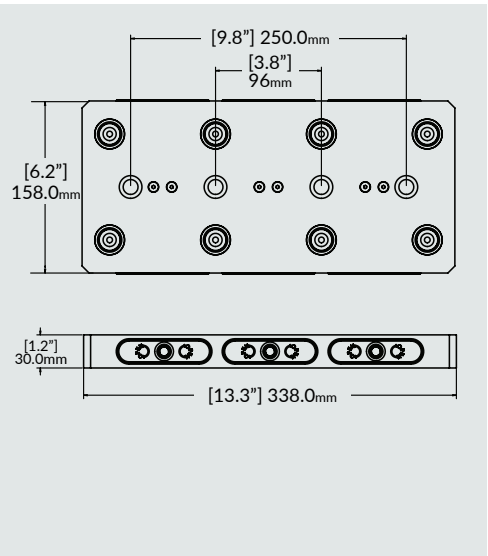
96mm RockLock

## RL96A-3613S1

**Size:** 158mm x 338mm x 30mm  
**Spacing:** 2x M12 SHCS @ 96mm or 250mm  
**Material Construction:**  
 Aluminum (RL96A-3613S1)

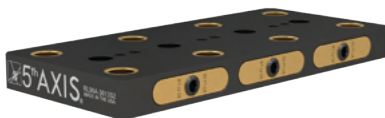


The RL96A-3613S1 is a multi-position RockLock plate built for maximum efficiency on small to medium vertical mills. The nested RockLock 96mm pattern allows for the operator to utilize one single large vise or two smaller vises. 125mm T-slot spacing for 3 axis mills.  
 Repeatability of +/- 8  $\mu$ m.

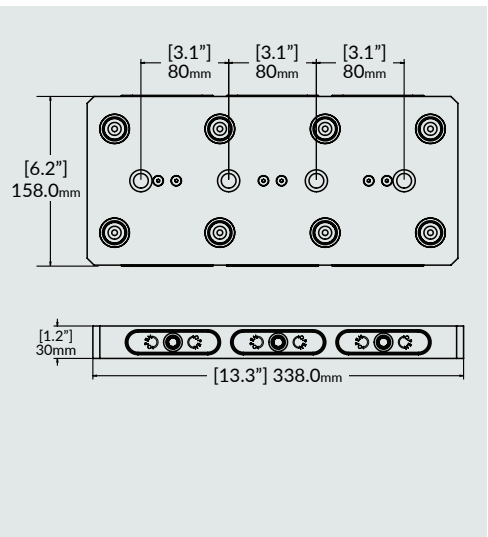


## RL96A-3613S2

**Size:** 158mm x 338mm x 30mm  
**Spacing:** 4x M12 SHCS Equally Spaced @ 80mm  
**Material Construction:**  
 Aluminum (RL96A-3613S2)

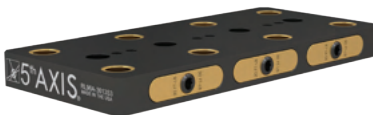


The RL96A-3613S2 is a multi-position RockLock plate built for maximum efficiency on small to medium vertical mills. The nested RockLock 96mm pattern allows for the operator to utilize one single large vise or two smaller vises. 80mm T-slot spacing for 3 axis mills.  
 Repeatability of +/- 8  $\mu$ m.

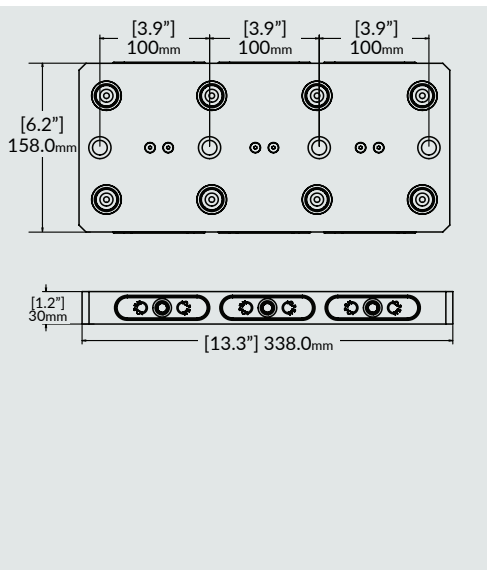


## RL96A-3613S3

**Size:** 158mm x 338mm x 30mm  
**Spacing:** 4x M12 SHCS Equally Spaced @ 100mm  
**Material Construction:**  
 Aluminum (RL96A-3613S3)



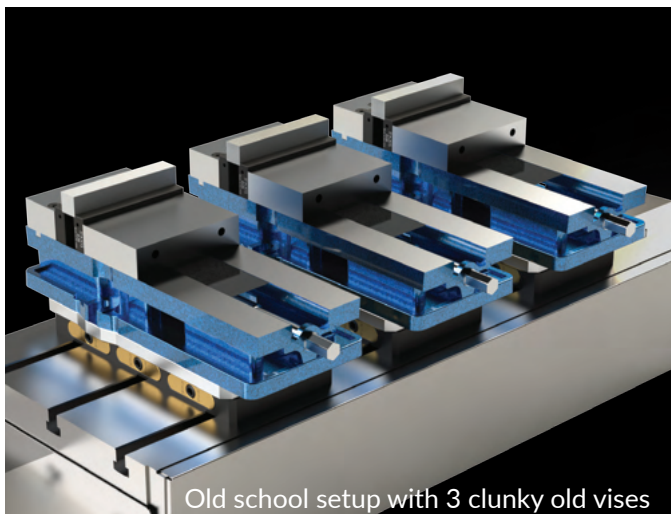
The RL96A-3613S3 is a multi-position RockLock plate built for maximum efficiency on small to medium vertical mills. The nested RockLock 96mm pattern allows for the operator to utilize one single large vise or two smaller vises. 100mm T-slot spacing for 3 axis mills.  
 Repeatability of +/- 8  $\mu$ m.



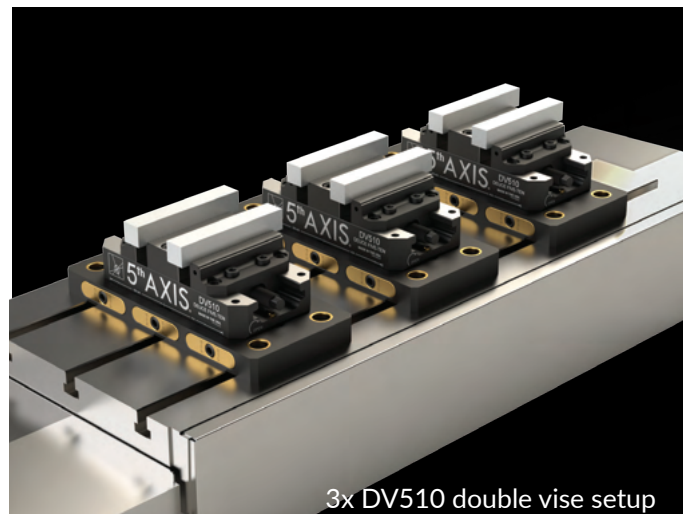
## More Parts Per Cycle = More Profit

### Profitability Through Efficiency

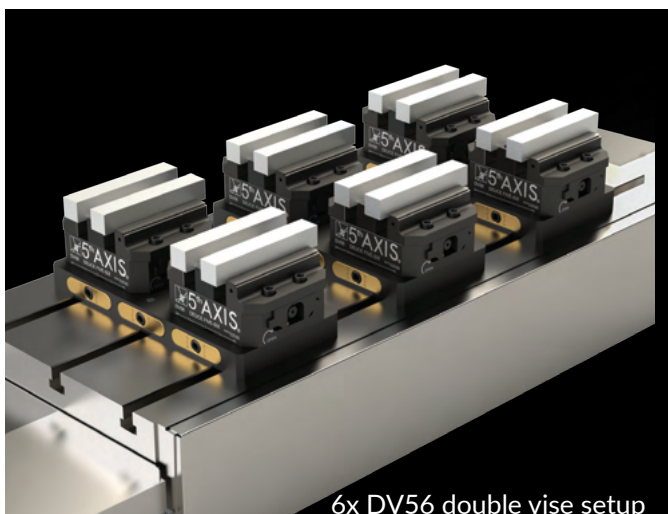
**3 Parts Per Cycle**



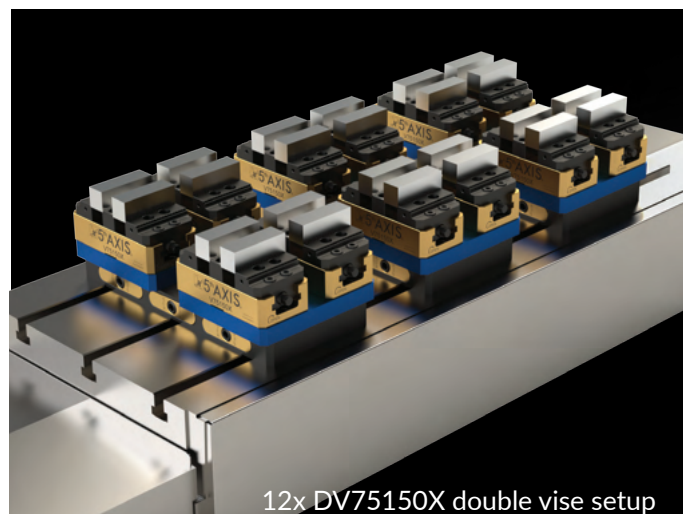
**6 Parts Per Cycle**



**12 Parts Per Cycle**



**24 Parts Per Cycle**





## RL96S-68 / RL96A-68

### 96mm Low Profile Base



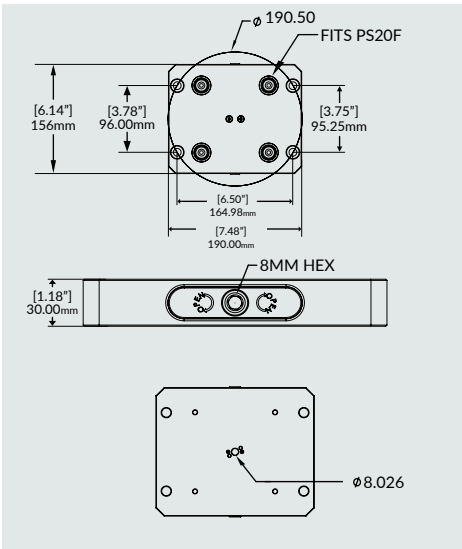
**Size:** 190mm x 156mm x 30mm

**Material Construction:**

Steel (RL96S-68)

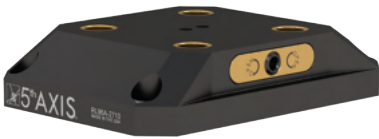
Aluminum (RL96A-68)

The RL96-68 is a 6" x 8" low profile 96mm quick change adapter plate. Designed for the new Haas TRT-210 rotary.



## RL96A-2710

### 96mm Riser



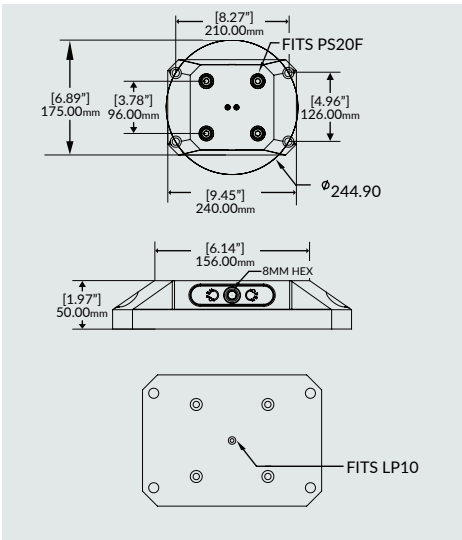
**Size:** 175mm x 240mm x 50mm

**Mounting:**

4x M12 on 126mm x 210mm grid

**Material Construction:** Aluminum (A)

The RL96A-2710 is a single position riser built for the new Haas UMC-500. The RL96A-2710 integrates with the RockLock system for maximum changeout efficiency.



## RL96A-2715

### 96mm Riser



**Size:** 175mm x 240mm x 50mm

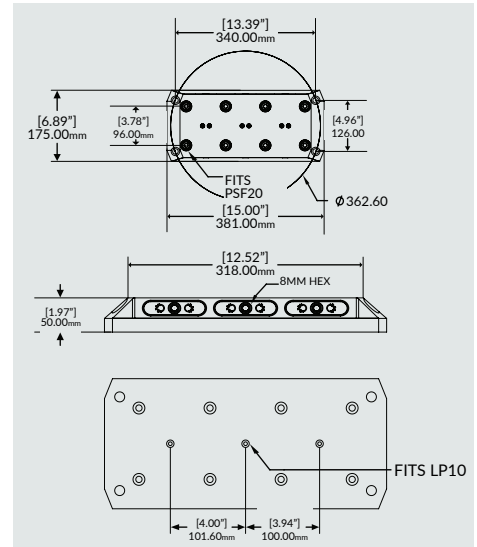
**Mounting:**

4x M12 on 126mm x 210mm grid

**Material Construction:** Aluminum (A)

The RL96A-2715 is a multi-position riser built for the new Haas UMC-500.

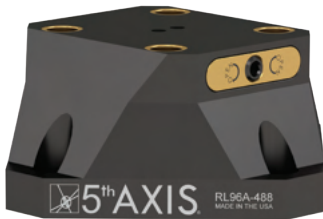
The RL96A-2715 provides maximum changeout efficiency with the RockLock system.



96mm RockLock

## RL96A-488

### Riser Adapter



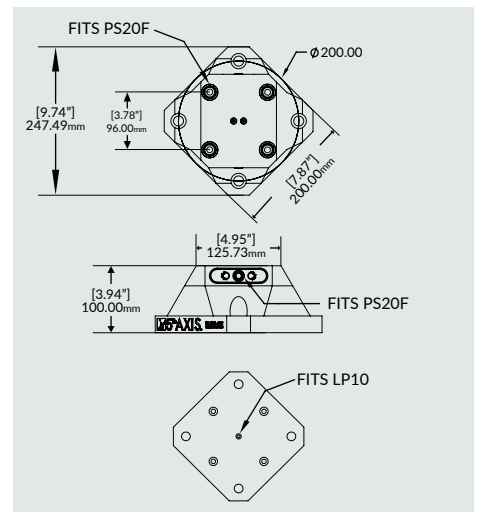
**Size:** 200mm x 200mm x 100mm

**Mounting:**

4x M12 @ 90° on 200mm PCD

**Material Construction:** Aluminum (A)

The RL96A-488 riser adapter provides multiple mounting options to meet various application needs and functions with the RockLock system to reduce setup time.



## RL96A-T31

### 3-Sided Integrated RockLock Tombstone

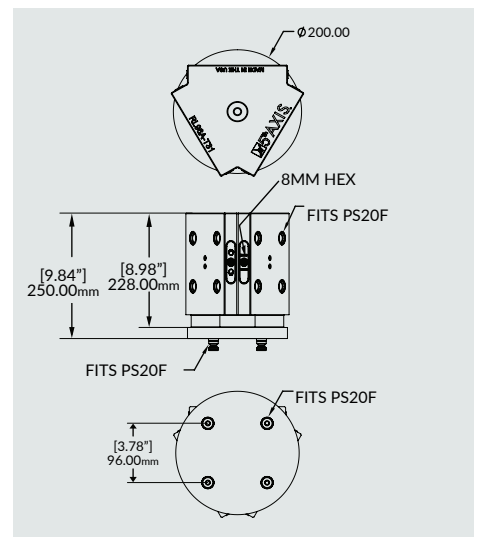


**Size:** Ø200mm x 250mm

**Mounting:** 96mm, includes pull studs

**Material Construction:** Aluminum (A)

Ideal for automated systems, the RL96A-T31 tombstone provides three mounting sides for part manufacturing. The RL96A-T31 can be mounted onto any 96mm RockLock base.



## RL96A-3002 / RL96S-3002

96mm RockLock



**Size:** 300mm x 300mm x 400mm

**Spacing:** Custom

**Material Construction:**

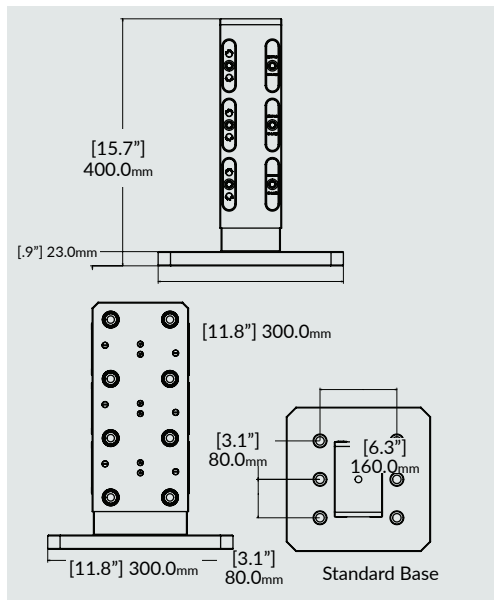
Aluminum (RL96A-3002)

Steel (RL96S-3002)

This two sided 300mm tombstone integrates the RockLock 96mm quick change system. This tombstone is perfect for mid-sized 5 axis machines. It is also a perfect fit for 300mm horizontal machining centers offered by Kitamura and Kitagawa.

All units feature hardened steel internals and locating features. All tombstones are built to order, and the base plate is customized to your machine table or pallet specs.

Repeatability of +/- 8 µm.



## RL96A-3003 / RL96S-3003



**Size:** 300mm x 300mm x 400mm

**Spacing:** Custom

**Material Construction:**

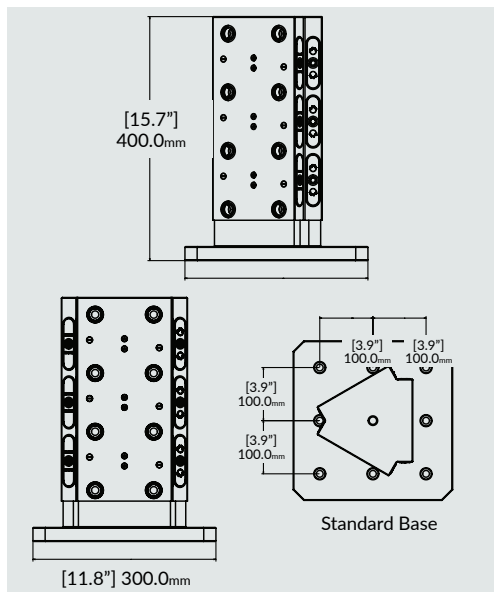
Aluminum (RL96A-3003)

Steel (RL96S-3003)

This three sided 300mm tombstone integrates the RockLock 96mm quick change system. This tombstone is perfect for mid sized 5 axis machines. It is also a perfect fit for 300mm horizontal machining centers.

All units feature hardened steel internals and locating features. All tombstones are built to order, and the base plate is customized to your machine table or pallet specs.

Repeatability of +/- 8 µm.



## RL96A-4004



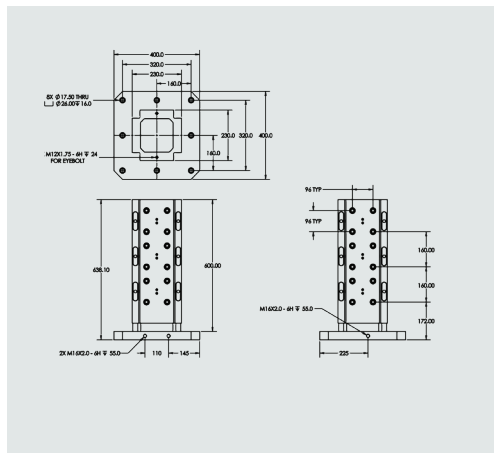
**Size:** 230mm x 230mm x 600mm

**Spacing:** 80mm

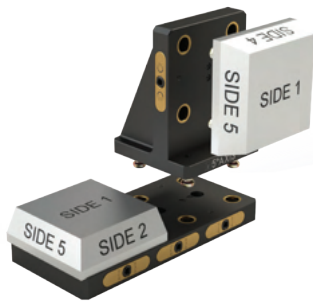
**Material Construction:**

Aluminum

This lightweight four sided 400mm tombstone integrates the RockLock 96mm quick change system. This tombstone is perfect for pallet exchange systems with low weight restrictions. All units feature hardened steel internals and locating features. This tombstone has a baseplate with 80mm grid spacing. Repeatability of +/- 8 µm.



## RL96A-90DEG



**Size:** 149.4mm x 158mm x 200mm

**Spacing:** RockLock PS20F or  
2x M12 SHCS @  
100mm - 101.6mm

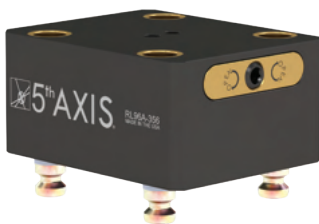
**Material Construction:**  
Aluminum (RL96A-90DEG)

The 90° right angle RockLock plate is the perfect low cost solution for multi-side machining. **Machine 5 sides of a part without a 5 axis machine.** The unit features pull studs on the bottom so that it can be mounted onto any 96mm RockLock plate. It also has 2 counter bores for traditional mounting to machine T-slots at 4" or 100mm.

Simply machine your material, unlock the system, rotate the material, lock the system and continue machining.

Includes 4x PS20F.  
Repeatability of +/- 8 µm..

## RL96A-356 / RL96S-356



**Size:** 158mm x 126mm x 75mm

**Spacing:** RockLock PS20F 96mm

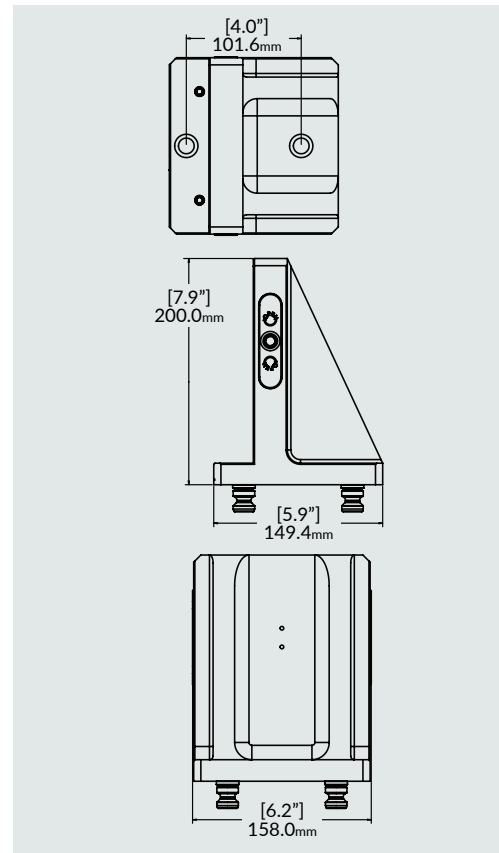
**Material Construction:**  
Aluminum (RL96A-356)  
Steel (RL96S-356)

Built to give extra rise from any RockLock bases.

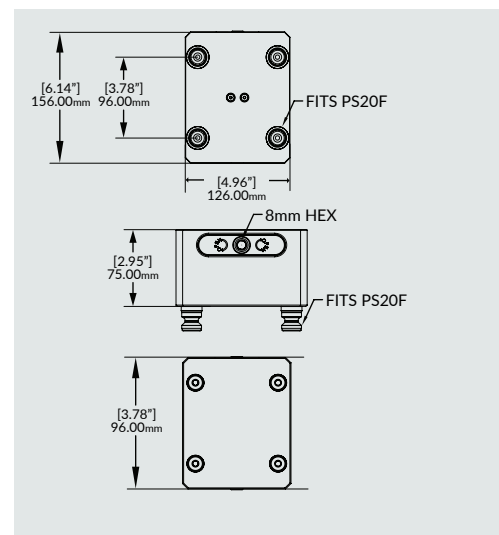
The small profile was created to reduce any interference.

Includes 4x PS20F.

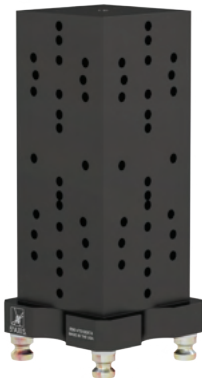
Repeatability of +/- 8 µm.



96mm RockLock



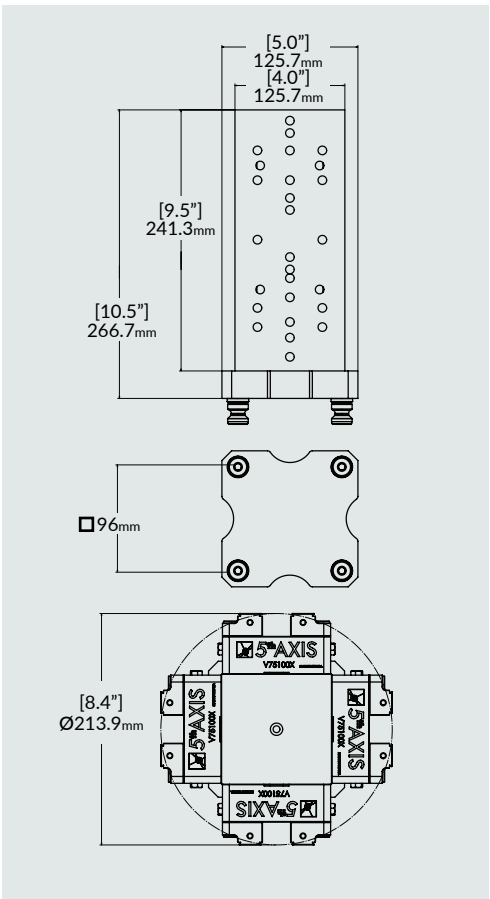
## R96-V75100T4



\*Vises sold separately

**Size:** 125.7mm x 125.7mm x 266.7mm  
**Mounting:** RockLock PS20F  
**Material Construction:** Aluminum (RL96A-V75100T4)

The R96-V75100T4 is an ultra compact mini tombstone designed to work with smaller 4 and 5 Axis machines. The goal was to create a 4 sided tombstone to increase productivity while maintaining a compact footprint. The tombstone is built for the V75100X self-centering vise (see page 45). The nested bolt pattern allows for the vises to be mounted vertically or rotated horizontally. The entire tombstone will quick change onto any 96mm RockLock base plates. With a maximum of 12 vises on the tombstone, the machine can run unattended. This minimizes tool changes and frees operators up to run multiple machines. Includes 4x PS20F. Repeatability of +/- 8 µm.



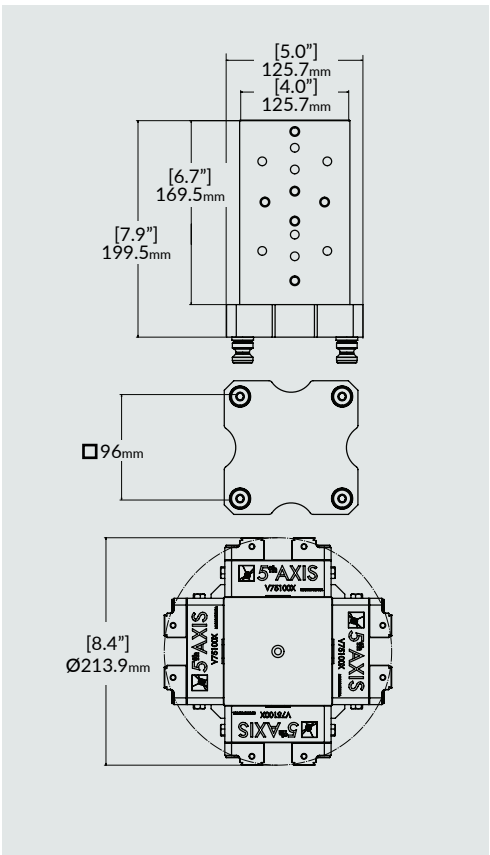
## R96-V75XT4



\*Vises sold separately

**Size:** 125.7mm x 125.7mm x 200mm  
**Mounting:** RockLock PS20F  
**Material Construction:** Aluminum (RL96A-V75XT4)

The R96-V75XT4 is a mini tombstone designed to work with smaller 4 and 5 Axis machines. The goal was to create a 4 sided tombstone to increase productivity while maintaining a compact footprint. This tombstone can accommodate the following self-centering vises: V75100X and V75150X (see page 45). It will also fit the DV75150X double station vise (see page 39). The entire tombstone will quick change on any 96mm RockLock base plates. With a maximum of 8 vises on the tombstone, the machine can run unattended. This minimizes tool changes and frees operators up to run multiple machines. Includes 4x PS20F. Repeatability of +/- 8 µm.

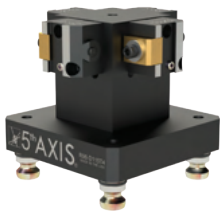
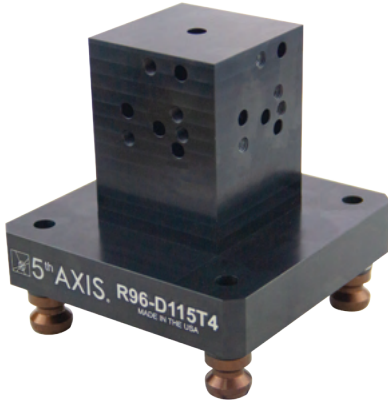


## R96-D115T41

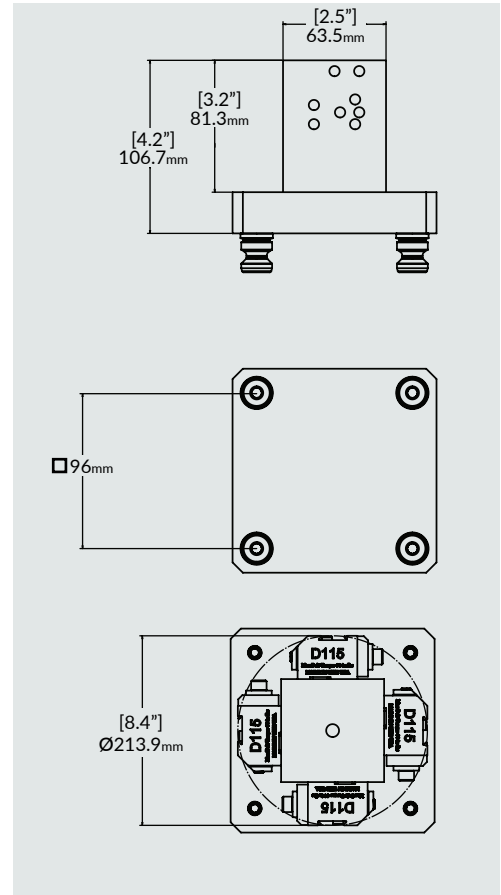
**Size:** 125mm x 125mm x 106.7mm  
**Spacing:** RockLock PS20F

Built for small or medium rotaries. Able to utilize quantity 4 D115 dovetail fixtures in order to maximize part density allowing minimal interference. Quantity 4 PS20F Pull studs are included.

Repeatability of +/- 8 µm.



\*Fixtures sold separately



96mm RockLock

## 3 Sided Vise Pyramids with 3x RL96A-56



### PY30RL96-56

30° angle. For use machines with 120° or more tilt.

### PY20RL96-56

20° angle. For use with 110° or more tilt.

Pyramids are compatible with 96mm RockLock top tooling. Top tooling can be mounted in vertical or horizontal orientation. Machine make and model required when ordering to ensure correct fitment. Quantity 3 RL96A-56 are included.





## PS20F

### PULL STUD

**Size:** 96mm Pull Studs

**Material Construction:** S7 Tool Steel

The PS20F is required to use any 5th Axis 96mm base. The 96mm spacing allows for compatibility with other systems.

\*Please note that pull studs must stay with the corresponding company's base plate. If you are using a 5th Axis 96mm RockLock base plate you will need 5th Axis pull studs (PS20F). The spacing and thread allows for the top tooling to be interchangeable between the different systems.



## PS20F-PY

### SINGLE PULL STUD WITH POKA-YOKE INSERT

**Size:** 96mm Pull Studs

**Material Construction:** S7 Tool Steel

Poka-yoke is a Japanese term that means "mistake-proofing". The PS20F-PY is a single modified pull stud with an aluminum ring. The ring is placed inside one of the locating holes in the RockLock base, allowing for only the single poka-yoke pull stud to fit inside the locating hole with the corresponding ring. This will prevent operators from changing the orientation and misloading a part.



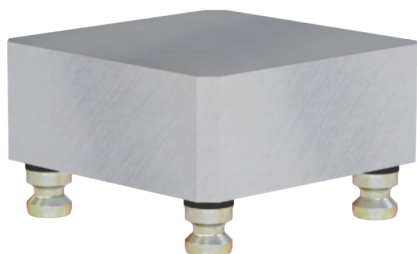
## PS20F-4PY

### PULL STUDS WITH POKA-YOKE INSERT

**Size:** 96mm Pull Studs

**Material Construction:** S7 Tool Steel

3x Standard PS20F Pull Studs and one Poka-Yoke (PS20F-PY).



## R96-BLANK

**Size:** 96mm Pull Studs

**Material Construction:** 6061 Aluminum

Blank 6061 aluminum block with quantity 4 PS20F pull studs included. Quickly build your own fixture or subplate with the R96-Blank.



## RL96-MP

**Size:** 96mm Pull Studs

**Material Construction:** Steel

Mount the RockLock base onto the machine, drop in the master pallet, dial in your setup, and torque your mounting bolts once you have reached the desired location. This is the fastest, most accurate way to set up the RockLock system. See page 33 for more info.

## RL96-KD688 / RL96-KDX6\*

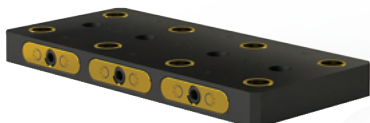
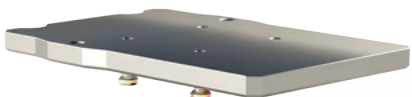
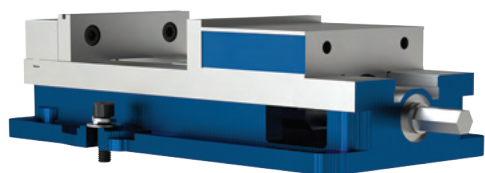
**Size:** RL96-KD688: 13" x 8.25" x .78"

RL96-KDX6: 13" x 6.92" x .78"

**Material Construction:**

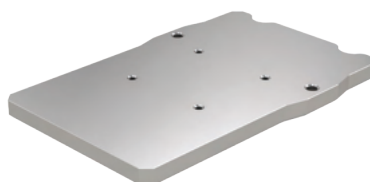
Aluminum (RL96-KD688)

Aluminum (RL96-KDX6)



The **RL96-KD688** is built to upgrade your Kurt D-series 6" vise to the RockLock quick-change system. Never indicate your Kurt vise in again! Simply bolt your Kurt vise onto the adapter and you will be off and running. Part number includes adapter + 4x PS20F pull studs.

The **RL96-KDX6** is built for the newer style DX6 crossover vise. Upgrade your new Kurt DX6 to RockLock quick-change system from 5th Axis. Part number includes adapter quantity 4 PS20F pull studs.



\*Vise and RockLock base sold separately



## Pallet Solutions

Automation

5th Axis Workholding products are designed to adapt to automated systems increasing throughput. Create profitability through efficiency.

**EROVA**  
system solutions  
**SOLUTIONS**



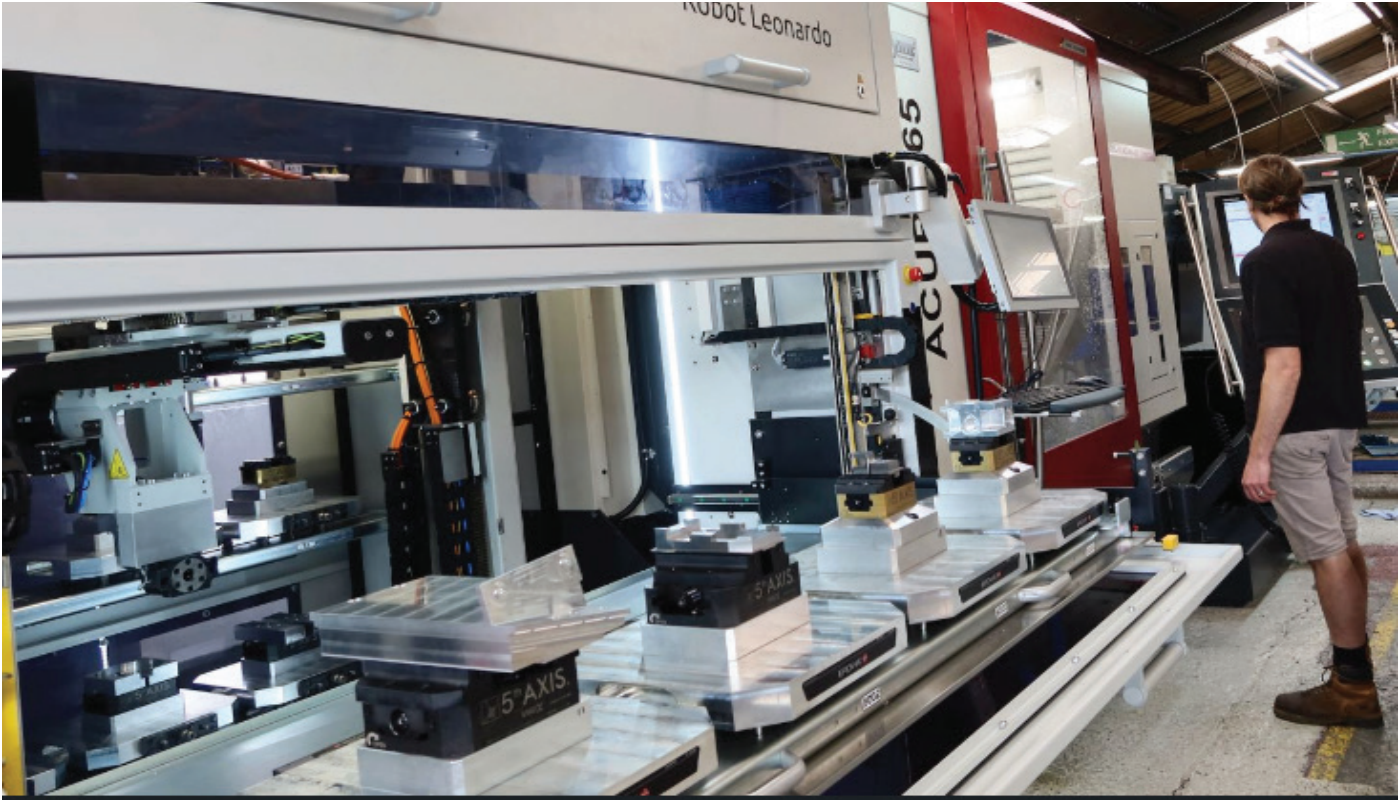
148mm



320mm



400mm





## Automation Solutions



Available in 52mm  
and 96mm Pull Stud  
Spacing

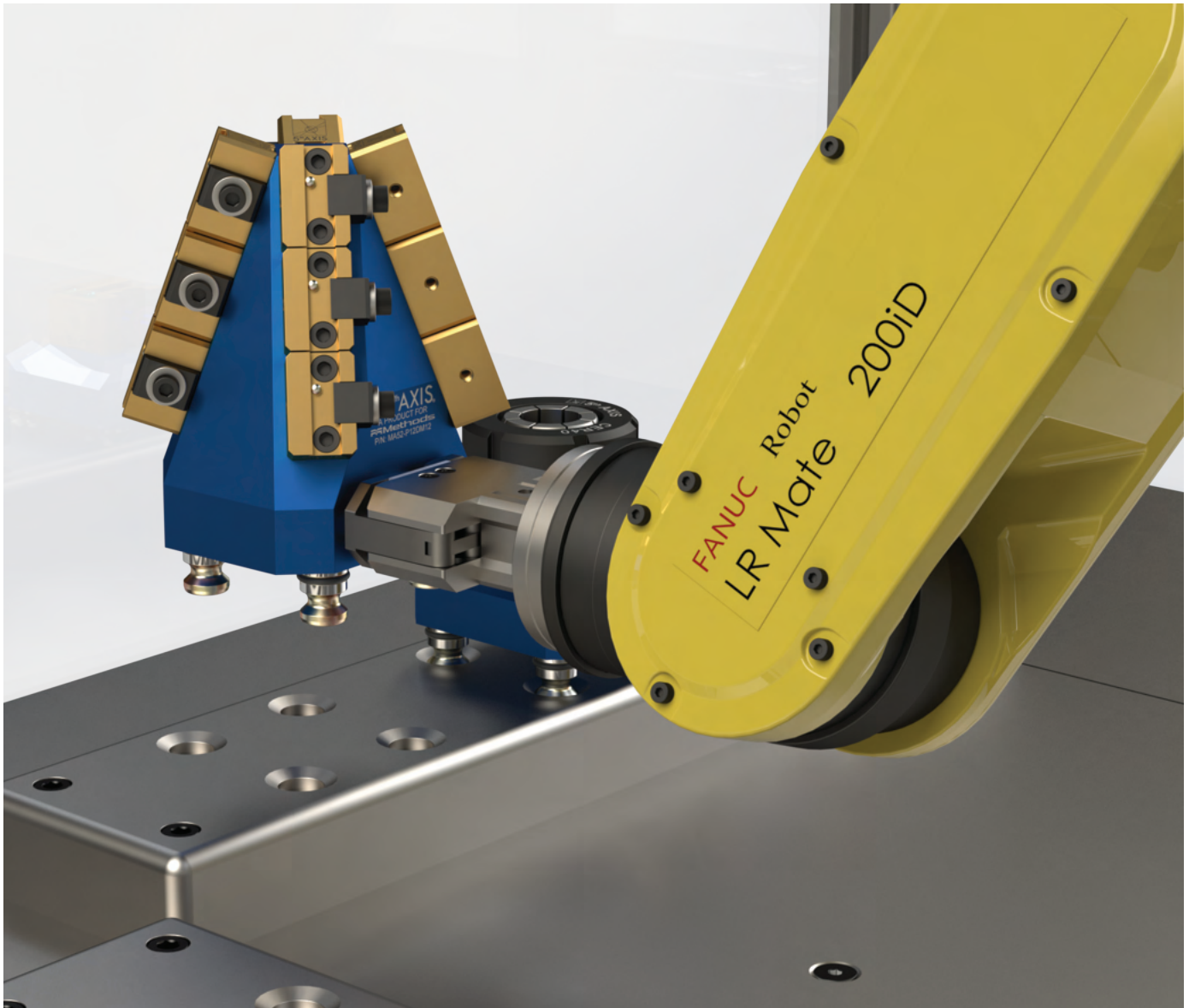


Clamp / Unclamp  
Confirmation



Steel Locating  
Features

Visit [5thaxis.com/automation](https://5thaxis.com/automation) to see the full line of automation products.



## RL52P-66B

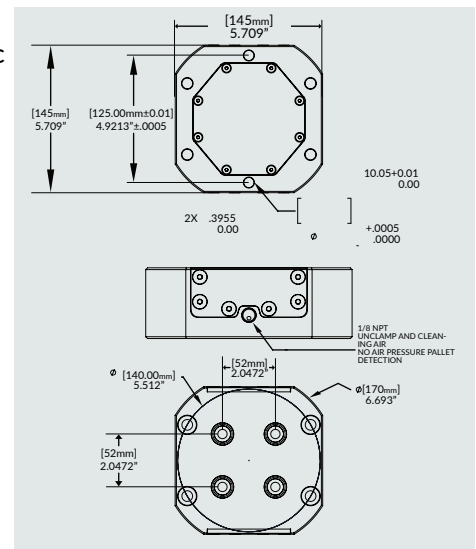


The RL52P-66B is a 52mm pneumatic RockLock unit.

**Working pressure range:**  
80 PSI (.55 MPa) MIN /  
120 PSI (.83 MPa) MAX

Side-Port

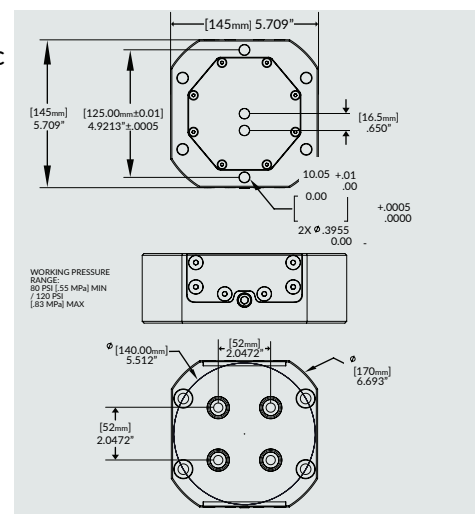
- 52mm pull stud spacing
- Air to open / spring to close
- Built for manual operation
- 1 port for clamp / unclamp
- No cleaning air / clamp confirmation



The RL52P-66A is a 52mm pneumatic RockLock unit that uses air to open and spring to close.

**Working pressure range:**  
80 PSI (.55 MPa) MIN /  
120 PSI (.83 MPa) MAX

- 52mm pull stud spacing
- Air to open / spring to close
- Built for automation applications
- 1 port for clamp / unclamp
- 1 port for cleaning / clamp confirmation



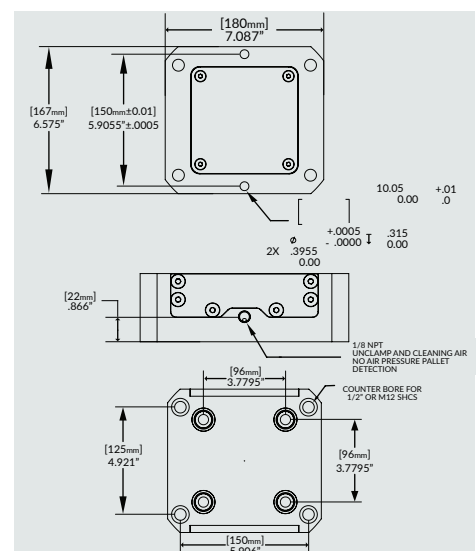
## RL96P-67B Side-Port



The RL96P-67B is a 96mm pneumatic RockLock unit.

**Working pressure range:**  
80 PSI (.55 MPa) MIN /  
130 PSI (.86 MPa) MAX

- 96mm pull stud spacing
- Air to open / spring to close
- Built for manual operation
- 1 port for clamp / unclamp
- No cleaning air / clamp confirmation



## RL52P-66A Bottom-Port



## RL96P-67A

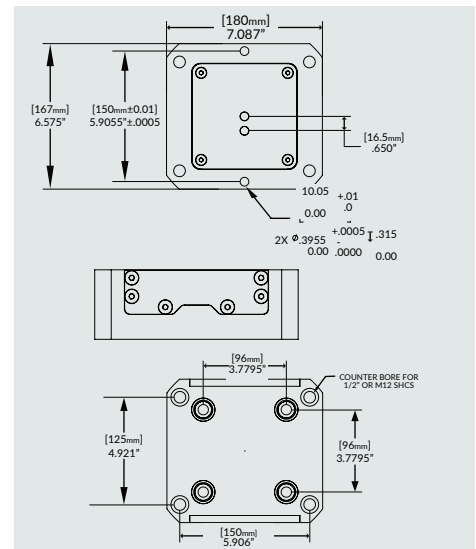


The RL96P-67A is a 96mm pneumatic RockLock unit that uses air to open and spring to close.

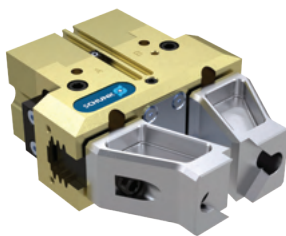
**Working pressure range:**  
80 PSI (.55 MPa) MIN /  
130 PSI (.86 MPa) MAX

Bottom Port

- 96mm pull stud spacing
- Air to open / spring to close
- Built for automation applications
- 1 port for clamp / unclamp
- 1 port for cleaning / clamp confirmation

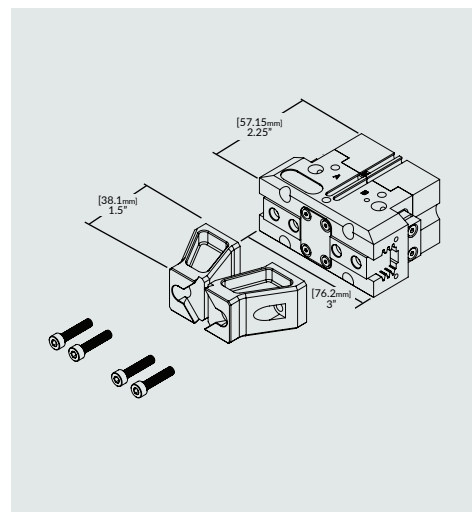


## AG-12



The AG-12 is a custom, light weight, and low-profile gripper assembly. This is the ultimate solution for cobot and industrial robot automation.

- Only compatible with 52mm RockLock systems\*
- Built for robots/cobots with a 12KG payload or less
- Parallel gripper with permanent lubrication
- High gripping force
- Steel gripper fingers with patented 20 degree angle

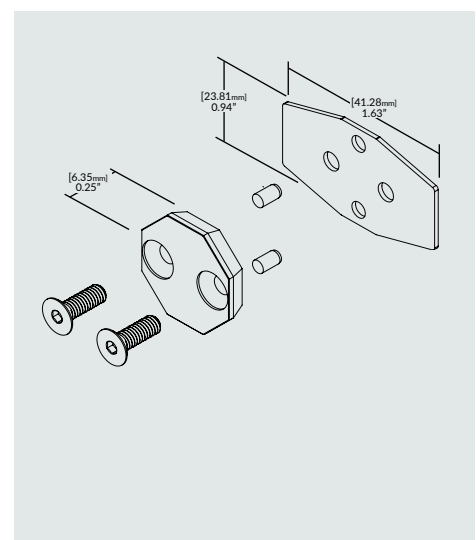


## AG-C



The AG-C is a low profile transport cleat assembly designed to support automated workholding.

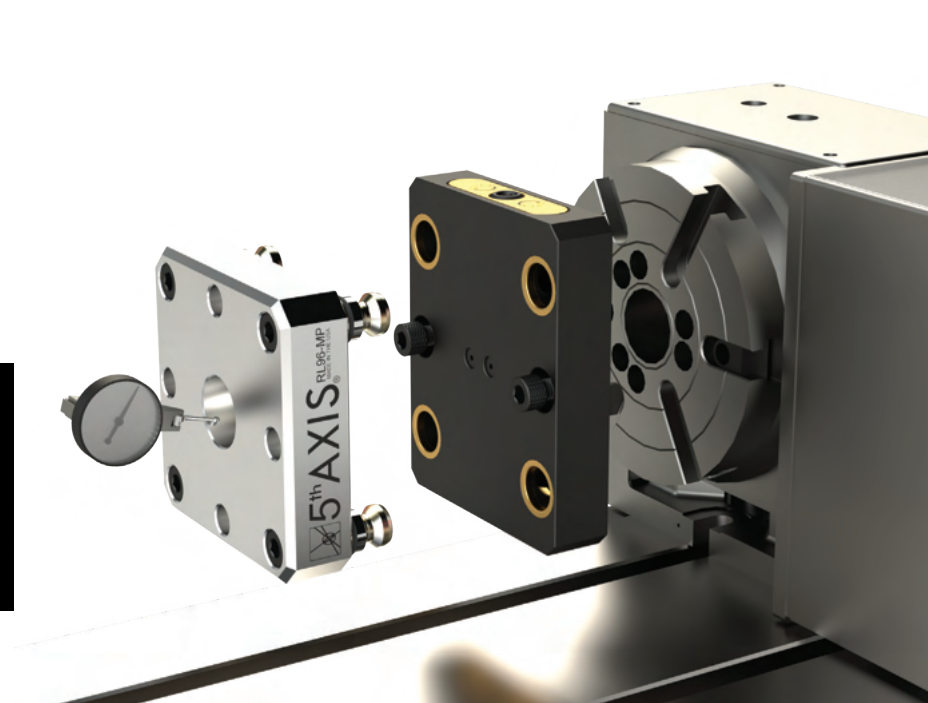
- Only compatible with 52mm Top Tooling\*
- High-grade stainless steel for maximum durability





## Master Alignment Pallet

Master Pallet



Available in 96mm and 52mm



Ensures RockLock repeatability less than 8  $\mu$ m



Precision milled and press fit pull studs\*



One Master Pallet for all your RockLock systems

Guarantees accuracy of the RockLock system. The Master Pallets are used to set up 52mm and 96mm RockLock systems.

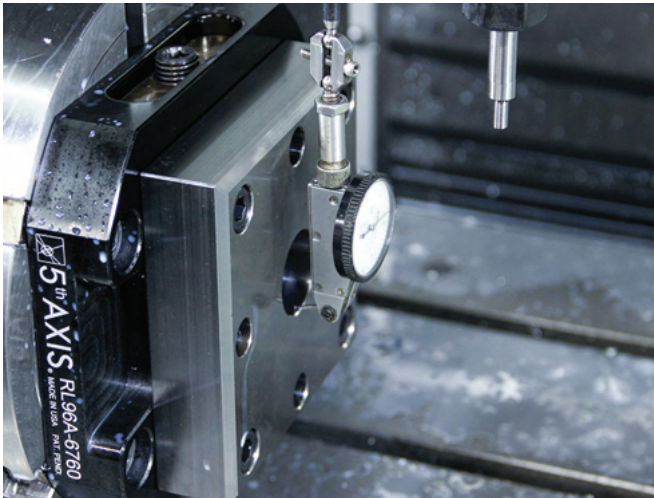
Mount the RockLock base onto the machine, drop in the Master Pallet, dial in your setup, and torque your mounting bolts once you have reached the desired location.

Master Pallet will only be used on the initial setup or if you move the setup from one machine to another. This is the fastest, most accurate way to set up the RockLock system.

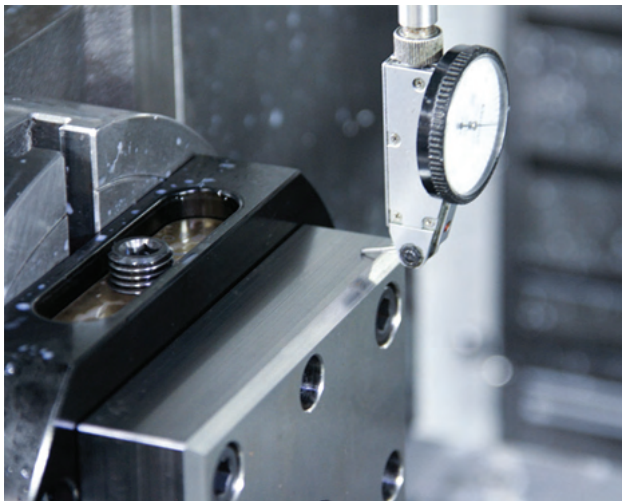
\*Do not remove pull studs.

\*\*Instructional video provided on our website.

\*\*\*CMM report provided with purchase of Master Pallet.



Precision center bore allows for indication of rotation.



Precision milled sides allow for indication of center line.

## Master Pallets

Part Number	RL52-MP	RL96-MP
		
Size	75mm x 75mm x 25.4mm	125.73mm x 125.73mm x 30.48mm
Mounting	RockLock PS16F Pull Studs Included	RockLock PS20F Pull Studs Included
Materials	Steel	Steel

Master Pallet

Double Station Vises

**BUILT FOR 3-AXIS**



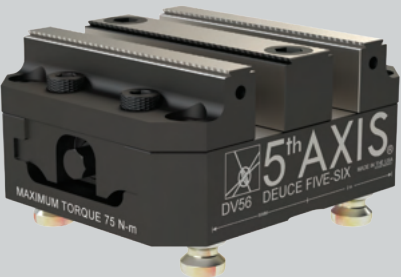
Convert from double station to single position fixed jaw\*

Quickly change jaws / convert to soft jaws

Compact footprint maximizes table space

\*Not a self-centering vise\*

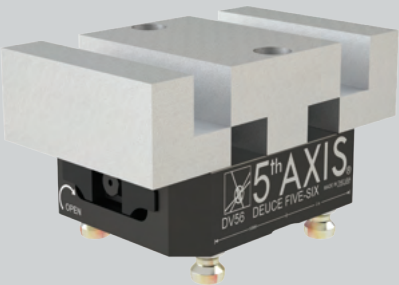
Double Station



Double Station



Single Station Fixed Jaw



Machinable Jaws

\*Only applies to DV56 and DV510

# Double Station Vises

## Quickly Convert From Double To Single Fixed Station\*



### Double Station

This configuration utilizes the center portion as the fixed position.



### Independent Movement

Each jaw moves independently. This allows for stock of different sizes and ensures proper clamping.



### Reversible Jaw

Jaws can quickly and easily be reversed for increased clamping range.



### Removing Center Jaw

The center jaw is bolted through the base and held in position with precision bushings.



### Shoulder Bolts Lock Back Jaw

The vise base has two precision bores that allow for shoulder bolts to lock the back jaw when switching to a single station.

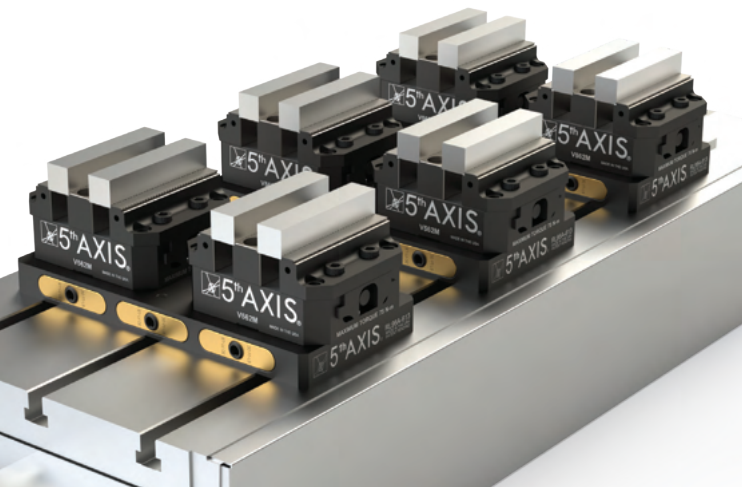
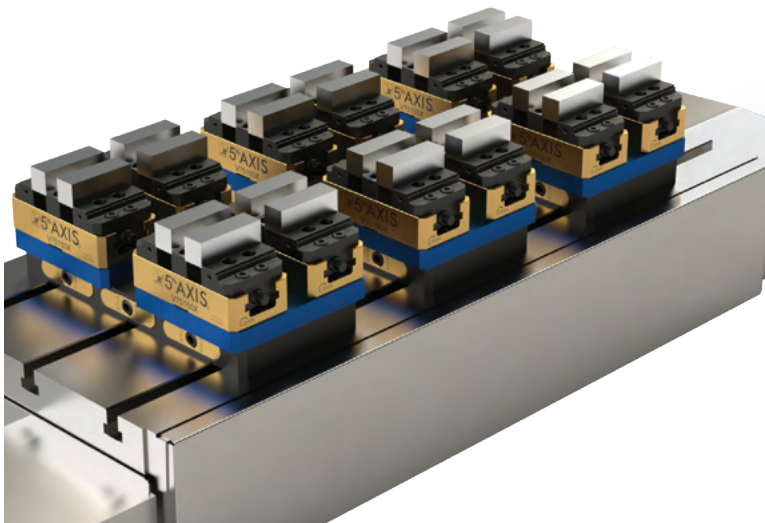


### Fixed Jaw\*

In this configuration the vise operates like any traditional machine vise.  
\*DV56 and DV510 only

## Maximize Your Table Space

Double Station







\*Only applies to DV56 and DV510



# Double Station Vises

## Master Hard Jaws



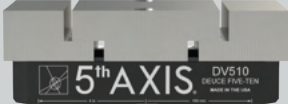
Part Number	DV75150X-J1	DV56-J1	DV510-J1	DV510-J4
				
Size	75mm x 150mm x 56mm	125.7mm x 152.4mm x 72.9mm	125.7mm x 258.3mm x 73.4mm	125.7mm x 258.3mm x 73.4mm
Jaw Type	Hardened Steel 3 Piece Master Jaw Set Serrated / 45° Dovetail	Hardened Steel 3 Piece Master Jaw Set Serrated / 45° Dovetail	Hardened Steel 3 Piece Master Jaw Set with 2" Center Serrated / 45° Dovetail	Hardened Steel 3 Piece Master Jaw Set with 1" Center Serrated / 45° Dovetail
Jaw Width	75mm	125.7mm	125.7mm	125.7mm
Clamping Force	13.5 kN @ 60 Nm	20.0 kN @ 75 Nm	20.0 kN @ 75 Nm	20.0 kN @ 75 Nm
Max Torque	60 Nm	75 Nm	75 Nm	75 Nm
Forward Clamping Range	0 - 37.02mm	0 - 28.5mm	0 - 66.7mm	0 - 79.4mm
Reverse Clamping Range	17.26mm - 55.02mm	31.0mm - 64.2mm	30.9mm - 102.3mm	30.9mm - 115mm
Single Station Forward Clamping Range	N/A	0 - 75.9mm	0 - 177.5mm	0 - 177.5mm
Single Station Reverse Clamping Range	N/A	56.8mm - 147.3mm	56.8mm - 248.7mm	56.8mm - 248.7mm

Double Station




DV75150X-J1 shown on the RL96A-3613S1 base plate

## Aluminum Jaws

Part Number	DV75150X-J2	DV56-J2	DV510-J2
			
Size	75mm x 150mm x 64.1mm	125.7mm x 152.4mm x 89mm	125.7mm x 258.3mm x 88.5mm
Jaw Type	6061 Aluminum Machinable Jaw Set	6061 Aluminum Machinable Jaw Set	6061 Aluminum Machinable Jaw Set
Jaw Width	75mm	125.7mm	125.7mm
Clamping Force	13.5 kN @ 60 Nm	20.0 kN @ 75 Nm	20.0 kN @ 75 Nm
Max Torque	60 Nm	75 Nm	75 Nm

## Steel Jaws

Part Number	DV75150X-J3	DV56-J3	DV510-J3
			
Size	75mm x 150mm x 64.1mm	125.7mm x 152.4mm x 89mm	125.7mm x 258.3mm x 88.5mm
Jaw Type	1018 Steel Machinable Jaw Set	1018 Steel Machinable Jaw Set	1018 Steel Machinable Jaw Set
Jaw Width	75mm	125.7mm	125.7mm
Clamping Force	13.5 kN @ 60 Nm	20.0 kN @ 75 Nm	20.0 kN @ 75 Nm
Max Torque	60 Nm	75 Nm	75 Nm



# Double Station Visits

# DV75150X-J1

## Master Hard Jaws



**Size:** 75mm x 150mm x 56.1mm

**Jaw Set Material:**  
Hardened Steel 3 Piece Master Jaw Set  
with Serrated / 45° Dovetail

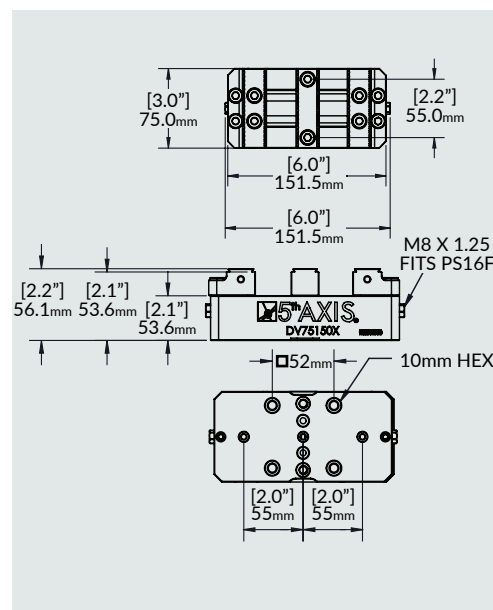
**Jaw Width:** 75mm

**Clamping Force:** 13.5 kN @ 60 Nm

**Max Torque:** 60 Nm

**Forward Clamping Range:**  
0-37.02mm

**Reverse Clamping Range:** 17.23 - 55.02mm

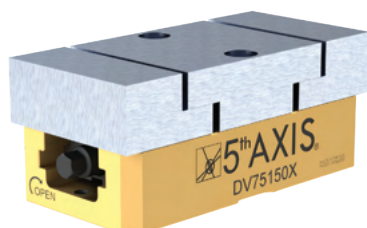


Double station vise with serrated and dovetail master jaws. Perfect for making parts that are less than 55mm x 75mm.

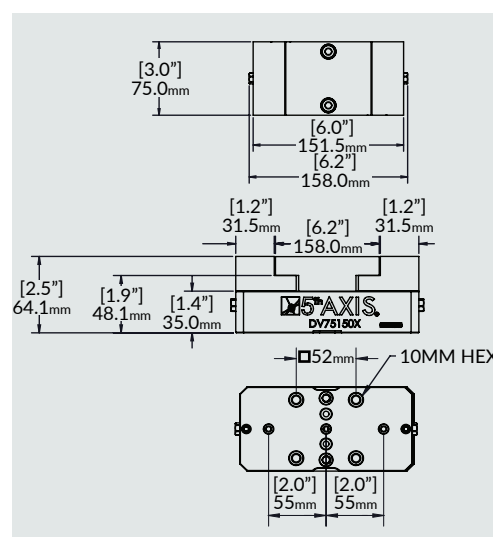
\*Cannot be used in single station configuration\*

# DV75150X-J2

## Aluminum Jaws



**Size:** 75mm x 150mm x 56.1mm  
**Jaw Set Material:**  
 6061 Aluminum Machinable Jaw Set  
**Jaw Width:** 75mm  
**Clamping Force:** 13.5 kN @ 60 Nm  
**Max Torque:** 60 Nm

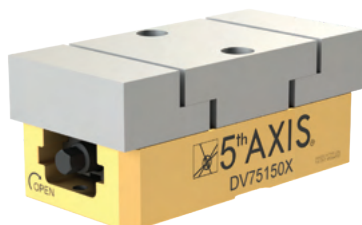


Double station vise with 6061 aluminum machinable jaws. Perfect for secondary operation work.

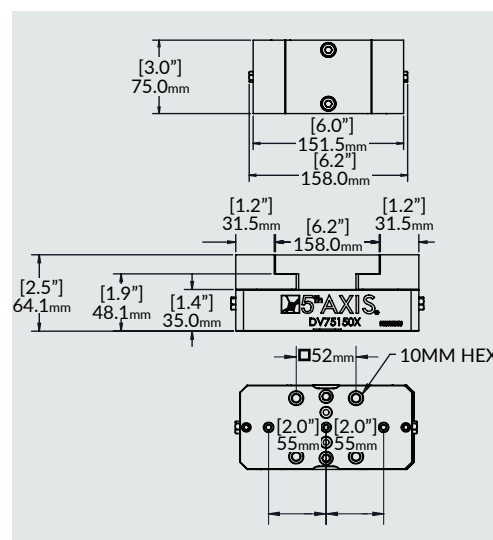
\*Cannot be used in single station configuration\*

# DV75150X-J3

## Steel Jaws



**Size:** 75mm x 150mm x 56.1mm  
**Jaw Set Material:**  
 1018 Steel Machinable Jaw Set  
**Jaw Width:** 75mm  
**Clamping Force:** 13.5 kN @ 60 Nm  
**Max Torque:** 60 Nm



Double station vise with 1018 steel machinable jaws. Perfect for secondary operation work.

\*Cannot be used in single station configuration\*

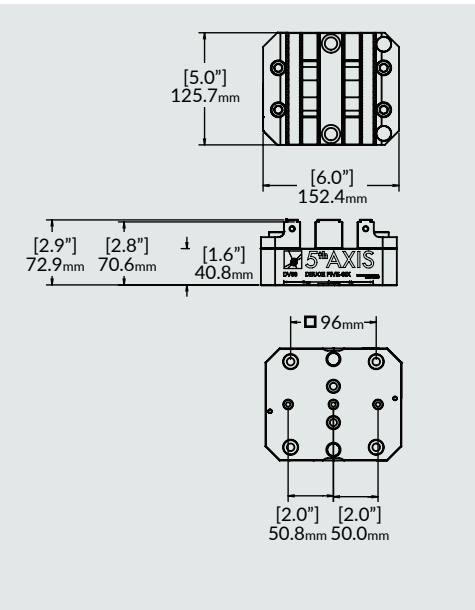
# Double Station Vises

## DV56-J1 Master Hard Jaws

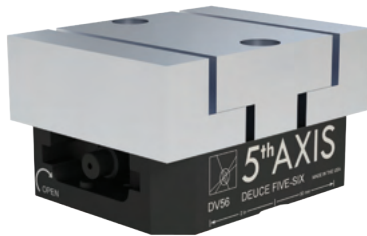


**Size:** 125.7mm x 152.4mm x 72.9mm  
**Jaw Set Material:** Hardened Steel 3 Piece Master Jaw Set with Serrated / 45° Dovetail  
**Jaw Width:** 75mm  
**Max Torque:** 75 Nm  
**Forward Clamping Range:** 0 - 28.5mm  
**Reverse Clamping Range:** 31mm - 64.2mm  
**Fixed Jaw Forward Clamping Range:** 0 - 75.9mm  
**Fixed Jaw Reverse Clamping Range:** 56.8 - 147.3mm

Quickly convert the DV56-J1 from a double station to a fixed single jaw vise. Perfect for parts smaller than 64.2mm x 125.7mm.

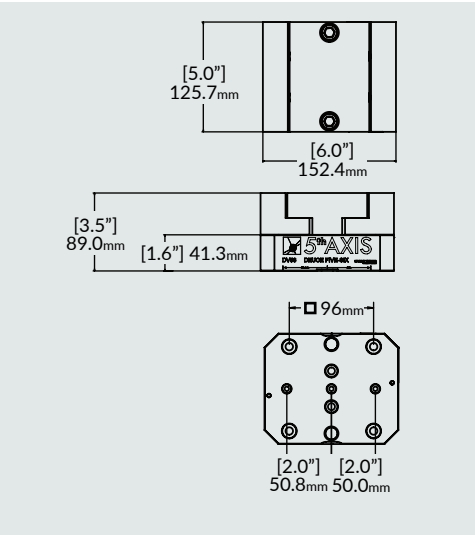


## DV56-J2 Aluminum Jaws

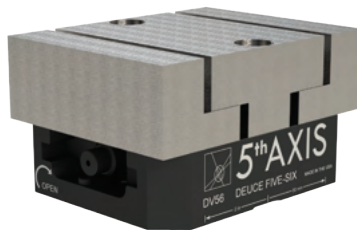


**Size:** 125.7mm x 152.4mm x 89mm  
**Jaw Set Material:** 6061 Aluminum Machinable Jaw Set  
**Jaw Width:** 75mm  
**Max Torque:** 75 Nm

Double station vise with 6061 aluminum machinable jaws. Perfect for secondary operation work.

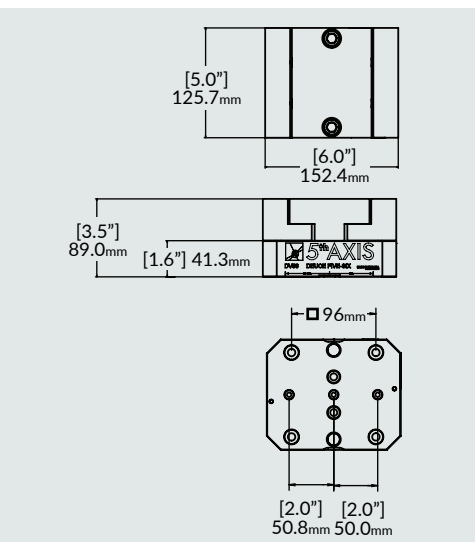


## DV56-J3 Steel Jaws



**Size:** 125.7mm x 152.4mm x 89mm  
**Jaw Set Material:** 1018 Steel Machinable Jaw Set  
**Jaw Width:** 75mm  
**Max Torque:** 75 Nm

Double station vise with 1018 steel machinable jaws. Perfect for secondary operation work.



Double Station

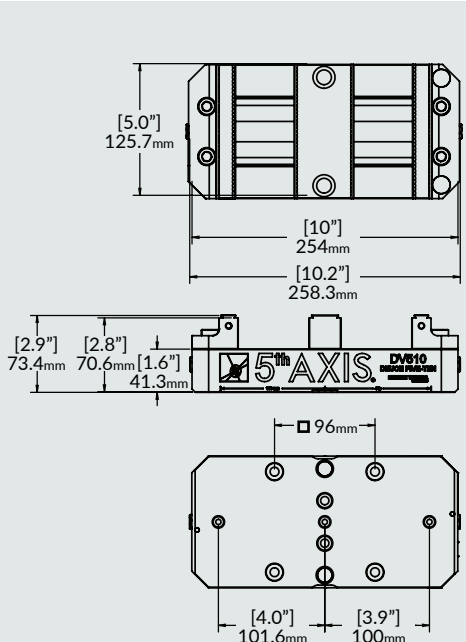
# Double Station Vises

## DV510-J1 Master Hard Jaws

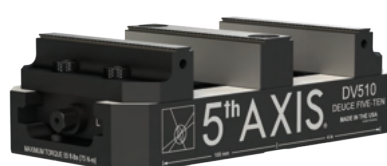


**Size:** 125.7mm x 258.3mm x 73.4mm  
**Jaw Set Material:**  
Hardened Steel 3 Piece Master Jaw Set with 2" Center and Serrated / 45° Dovetail Jaws  
**Jaw Width:** 125.7mm  
**Max Torque:** 75 Nm  
**Forward Clamping Range:**  
0 - 66.7mm  
**Reverse Clamping Range:**  
30.9mm - 102.3mm  
**Fixed Jaw Forward Clamping Range:**  
0 - 177.5mm  
**Fixed Jaw Reverse Clamping Range:**  
56.8mm - 248.7mm

Double station vise that converts to a fixed jaw vise. 3 piece hard jaw set with a 2" center, serrations, and 45° dovetail master jaw.

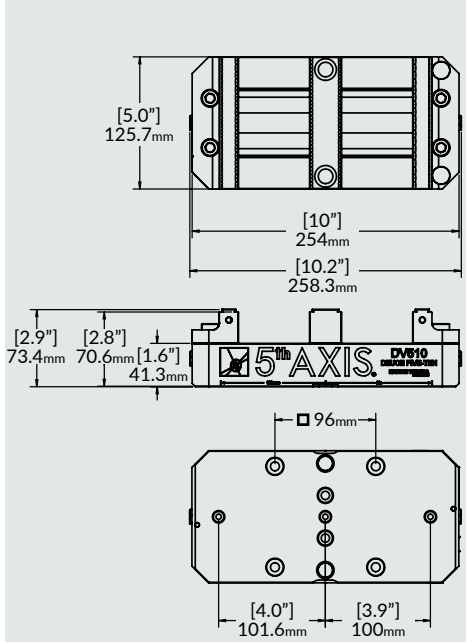


## DV510-J4 Master Hard Jaws



**Size:** 125.7mm x 258.3mm x 73.4mm  
**Jaw Set Material:**  
Hardened Steel 3 Piece Master Jaw Set with 1" Center and Serrated / 45° Dovetail Jaws  
**Jaw Width:** 125.7mm  
**Max Torque:** 75 Nm  
**Forward Clamping Range:**  
0 - 79.4mm  
**Reverse Clamping Range:**  
30.9mm - 115mm  
**Fixed Jaw Forward Clamping Range:**  
0 - 177.5mm  
**Fixed Jaw Reverse Clamping Range:**  
56.8mm - 248.7mm

Double station vise that converts to a fixed jaw vise. 3 piece hard jaw set with a 1" center, serrations, and 45° dovetail master jaw.



Double Station

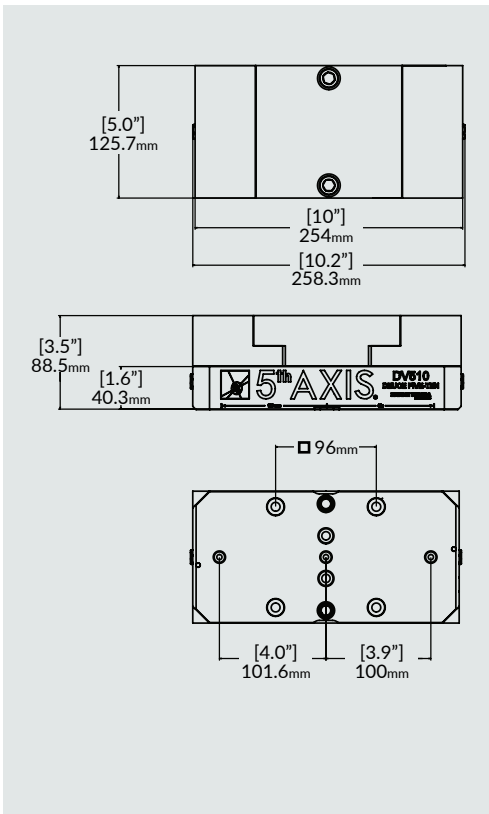
# Double Station Vises

## DV510-J2 Aluminum Jaws



**Size:** 125.7mm x 258.3mm x 88.5mm  
**Jaw Set Material:**  
6061 Aluminum Machinable Jaw Set  
**Jaw Width:** 125.7mm  
**Max Torque:** 75 Nm

Double station vise with 6061 aluminum machinable jaws. Perfect for secondary operation work

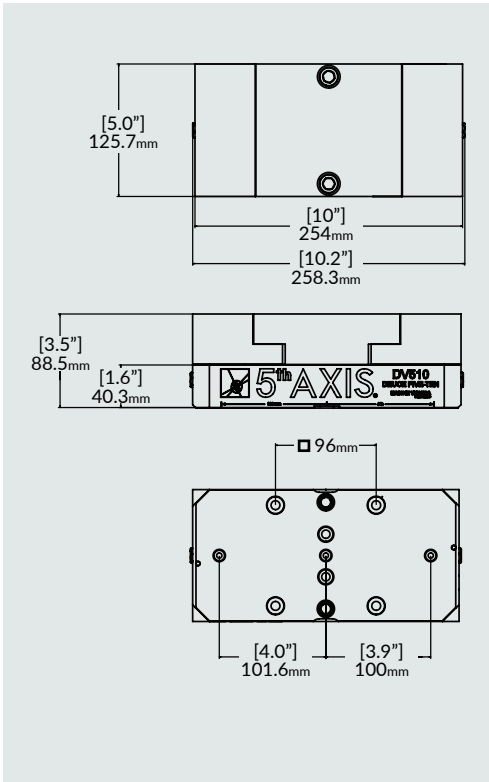


## DV510-J3 Steel Jaws



**Size:** 125.7mm x 258.3mm x 88.5mm  
**Jaw Set Material:**  
1018 Steel Machinable Jaw Set  
**Jaw Width:** 125.7mm  
**Max Torque:** 75 Nm

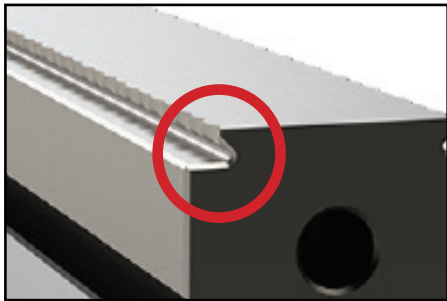
Double station vise with 1018 steel machinable jaws. Perfect for secondary operation work



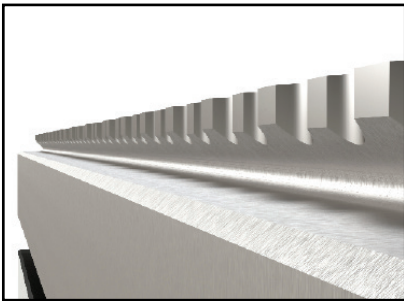
Double Station

# Self-Centering Vises

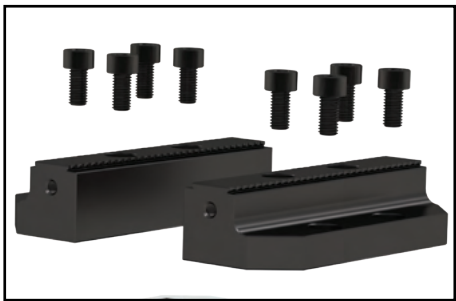
## Self-Centering Vises



Built in 45° dovetail can be utilized for increased clamping force



Serrated gripper teeth for superior bite into soft material



Quick change jaws without disassembling vise

**30% more clamping force**  
with new X-series vises



Self-Centering

Pre-drilled for pull studs

Hardened steel

+/- 0.0127mm on center

Large leadscrew

Jaws are easy to remove

Easy mounting to machine

# Self-Centering Vises

Part Number	V75100X	V75150X
		
Size	75mm x 100mm x 56mm	75mm x 150mm x 56mm
Jaw Width	75mm	75mm
Clamping Force	22.2 kN @ 60 Nm	22.2 kN @ 60 Nm
Max Torque	61 Nm	61 Nm
Forward Clamping Range	0 - 43.6mm	0 - 94.1mm
Reverse Clamping Range	38.5mm - 76.3mm	38.5mm - 128.8mm

Part Number	V562X	V510X
		
Size	125.7mm x 152.4mm x 73.6mm	125.7mm x 254mm x 73.6mm
Jaw Width	125.7mm	126mm
Clamping Force	25.1 kN @ 75 Nm	25.1 kN @ 75 Nm
Max Torque	75 Nm	75 Nm
Forward Clamping Range	0 - 78.0mm	0 - 184.7mm
Reverse Clamping Range	60.3mm - 128.0mm	60.3mm - 234.7mm



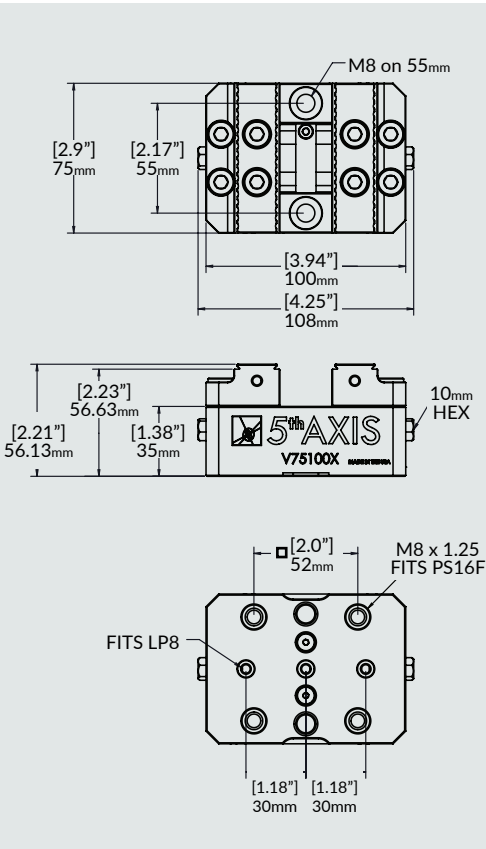
# Self-Centering Vises

## V75100X Metric



**Size:** 75mm x 100mm x 56mm  
**Jaw Width:** 75mm  
**Forward Jaws Clamping Range:**  
0 - 43.6mm  
**Reverse Jaws Clamping Range:**  
38.5mm - 76.3mm  
**Clamping Force:** 13.5 kN @ 60 Nm

The V75100X is the most recent revision of our V75100 vise. Now equipped with 4 bolt jaw mounting to reduce jaw lift providing robust clamping and sharper teeth for a better bite.

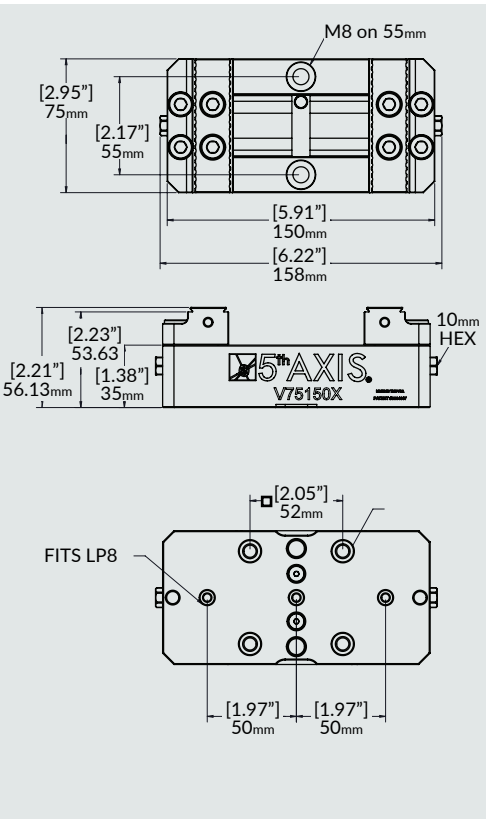


## V75150X Metric



**Size:** 75mm x 150mm x 56mm  
**Jaw Width:** 75mm  
**Forward Jaws Clamping Range:**  
0 - 92.8mm  
**Reverse Jaws Clamping Range:**  
38.5mm - 128.8mm  
**Clamping Force:** 13.5 kN @ 60 Nm

The V75150X was created out of customer demand for a small self-centering vise with an increased clamping range over the popular V75100X vise. The base is 50mm longer than the standard V75100X, allowing the max workpiece size to increase from 76mm to 128mm. The new 4 bolt jaw mounting design reduces jaw lift and the sharper teeth provide a superior bite in raw material.



# Self-Centering Vises

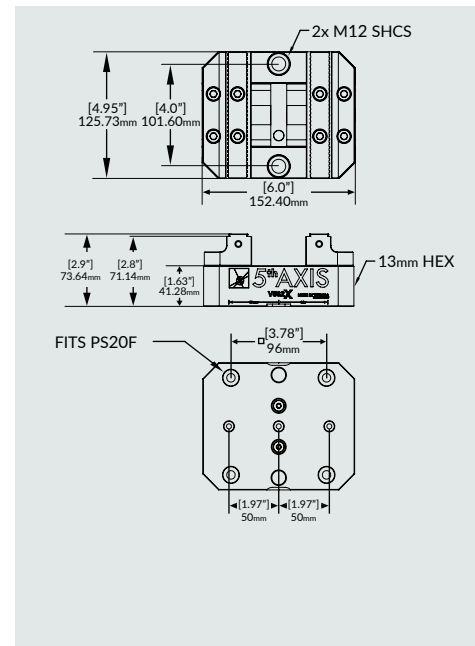
## V562X Metric



**Size:** 125.7mm x 152.4mm x 73.6mm  
**Jaw Width:** 125.7mm  
**Forward Jaws Clamping Range:**  
 0 - 78.0mm  
**Reverse Jaws Clamping Range:**  
 60.3mm - 128.0mm  
**Clamping Force:** 25.1 kN @ 75 Nm  
**Torque Vise Assembly:** 75 Nm

The V562X is the updated version of the best selling self-centering vise in the product line (V562M). The new model features 30% more clamping force due to the updated 4 jaw mounted bolts keyed jaw and truck.

The V562X is built from heat treated 4100 series steel and is precision ground and hard milled to ensure accuracy and repeatability.

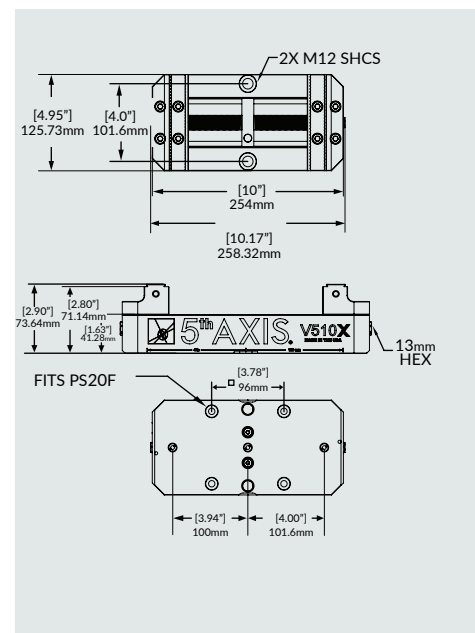


## V510X Metric



**Size:** 125.7mm x 254mm x 73.6mm  
**Jaw Width:** 125.7mm  
**Forward Jaws Clamping Range:**  
 0 - 184.7mm  
**Reverse Jaws Clamping Range:**  
 60.3mm - 234.7mm  
**Clamping Force:** 25.1 kN @ 75 Nm  
**Torque Vise Assembly:** 75 Nm

The V510X has all of the robust features of the V562X including the added clamping range. The V510X is a perfect fit for shops looking for a small footprint vise with a larger clamping range. The V510X is built from hardened and ground 4100 series steel to ensure accuracy and repeatability.



Self-Centering

# Double Station Pin Vises



Cost-Effective



Lightweight

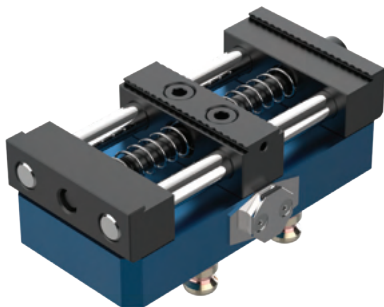
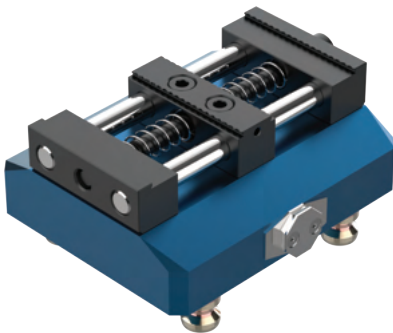
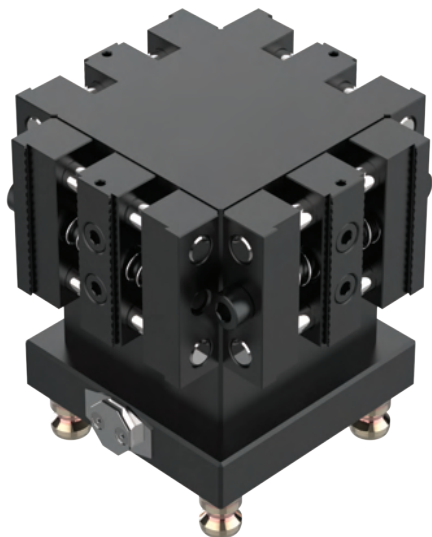
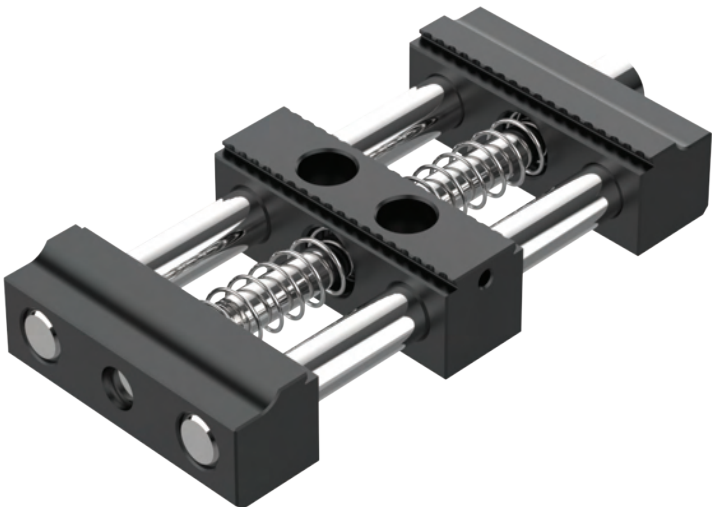


Compact Design

High-precision, quality vises in a skeleton design that makes them lighter, more compact, and cost-effective.

Ideal for high volume part production, Pin Vises have a small footprint, allowing more parts on a table for higher productivity. Pin Vises are also lightweight for automated applications where weight is a consideration.

Pin Vise tombstones, pyramids, and plates are configured with 96mm RockLock quick-change systems.



High volume applications

Available in 4" & 6" models



Clamping range:  
0.25" - 2.5"



Hardened steel

Extreme low-profile design

Serrated gripper teeth  
and integrated 45° dovetail

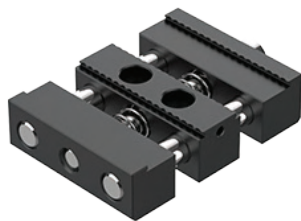
# Double Station Pin Vises

Part Number	PV3X-4A	PV3X-4B
		
Size	75mm x 111.6mm x 25mm [2.95" x 4.39" x 0.98"]	75mm x 111.6mm x 25mm [2.95" x 4.39" x 0.98"]
Jaw Width	75mm [2.95"]	75mm [2.95"]
Clamping Range	19.05mm - 38.10 mm [0.75" - 1.50"]	6.35mm - 25.40mm [0.25" - 1.00"]

Part Number	PV3X-6A	PV3X-6B
		
Size	75mm x 161.6mm x 25mm [2.95" x 6.36" x 0.98"]	75mm x 161.6mm x 25mm [2.95" x 6.36" x 0.98"]
Jaw Width	75mm [2.95"]	75mm [2.95"]
Clamping Ranges Based on Bolt Size*	150: 44.45mm - 63.50mm [1.75" - 2.50"]	150: 31.75mm - 50.80mm [1.25" - 2.00"]
	130: 31.75mm - 50.80mm [1.25" - 2.00"]	130: 19.05mm - 38.10mm [0.75" - 1.50"]
	100: 19.05mm - 38.10mm [0.75" - 1.50"]	100: 6.35mm - 25.40mm [0.25" - 1.00"]

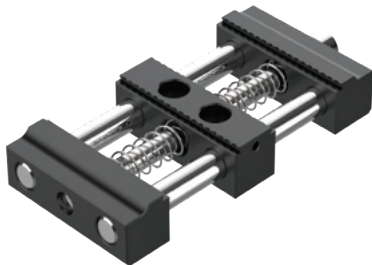
\*PVX3-6A & PVX3-6B pin vises come with three different bolt lengths to provide different clamping range options.

## PV3X-4



The PV3X-4 is a 4" pin vise that offers a low-cost, low profile solution ideal for 3 axis, horizontal, and lights out manufacturing.

## PV3X-6



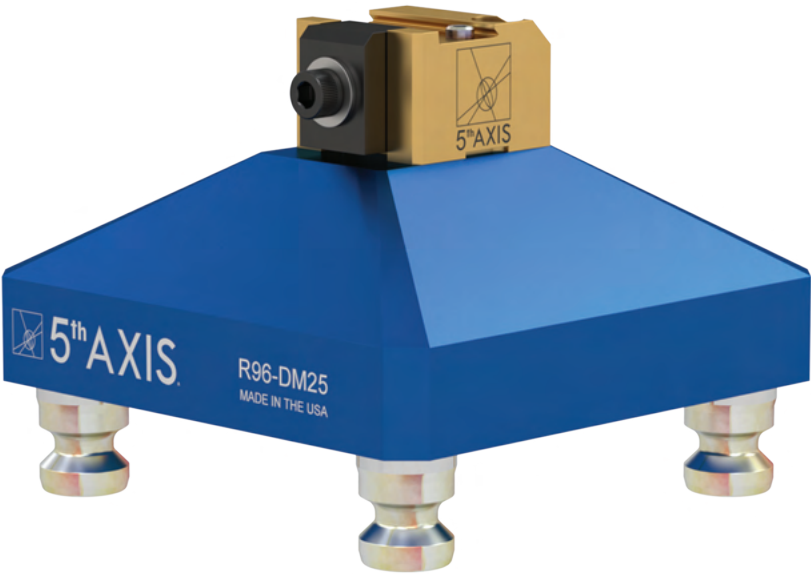
The PV3X-6A & 6B are 6" pin vises that come with three sets of bolts with different lengths to provide three clamping range options.

## PMV3X



The PMV3X is a 1018 steel machinable jaw version of the PV3X-6 pin vises.

Dovetail Fixtures



45° dovetail for increased clamping force



Locating pins for precise repeatability






Low profile design



Hardened steel clamp and body

Dovetail Fixtures

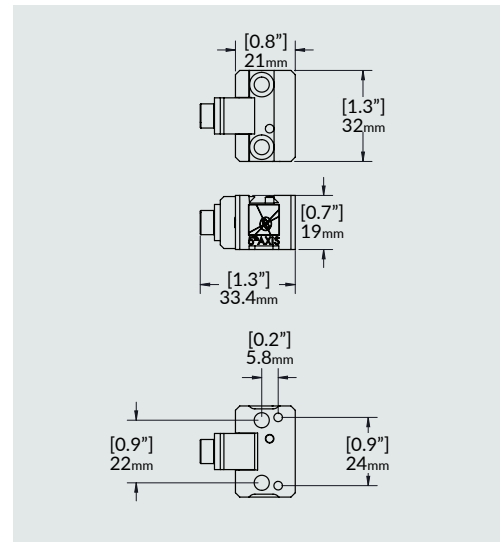
Part Number	DM12	DM25	DM50
			
Size	21mm x 32mm x 19mm	37mm x 41mm x 27mm	50mm x 50mm x 38mm
Stock Size	12mm - 25mm	25mm - 75mm	50mm and Above
Dovetail Depth	2.54mm	2.54mm	5.08mm

## DM12 Metric



**Size:** 21mm x 32mm x 19mm  
**Material:** 4100 Series Steel  
**Stock Size:** 12mm - 25mm  
**Dovetail Depth Required:** 2.54mm

The DM12 is the smallest dovetail fixture in the 5th Axis workholding line. The DM12 features a wedge style 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.

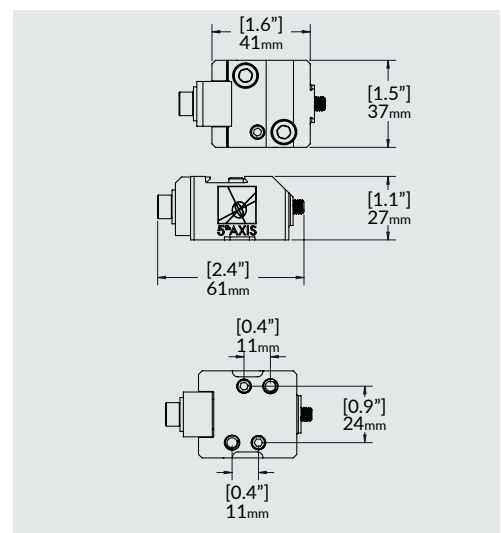


## DM25 Metric



**Size:** 37mm x 41mm x 27mm  
**Material:** 4100 Series Steel  
**Stock Size:** 25mm - 75mm  
**Dovetail Depth Required:** 2.54mm

The DM25 is the most versatile dovetail fixture in the 5th Axis workholding line. It is a simple and robust dovetail fixture built for stock under 75mm. The DM25 features a robust clamp for superior gripping force and a low profile design that optimizes tool clearance. This dovetail fixture is the perfect choice for multi-axis work on small to medium sized parts.

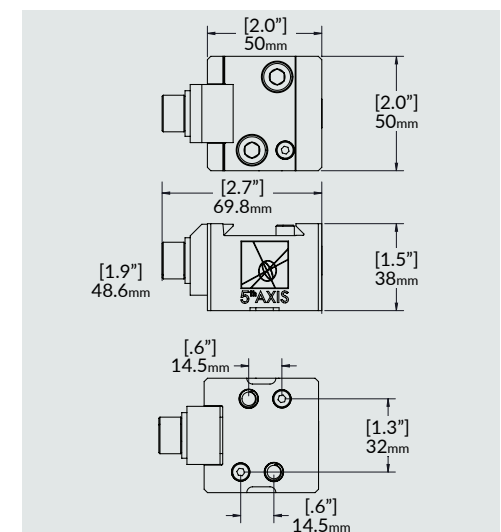


## DM50 Metric



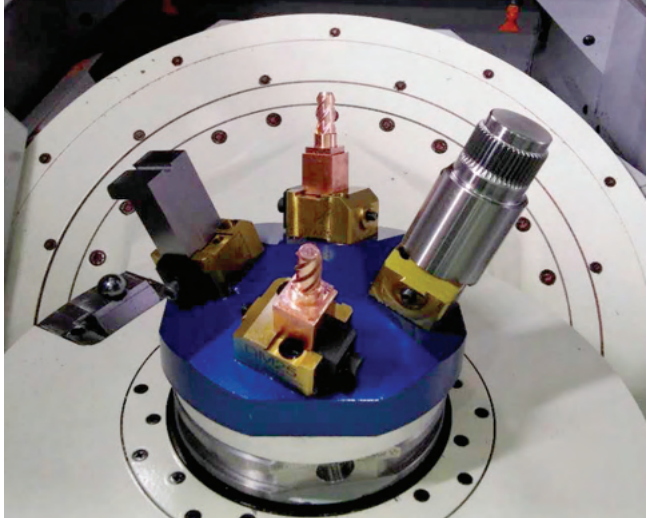
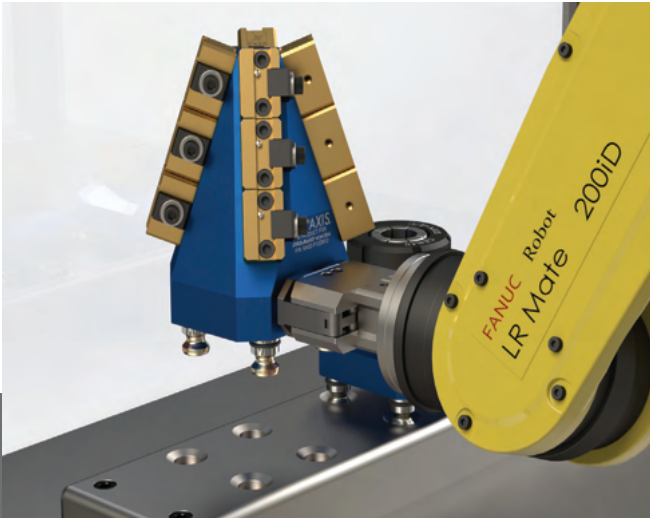
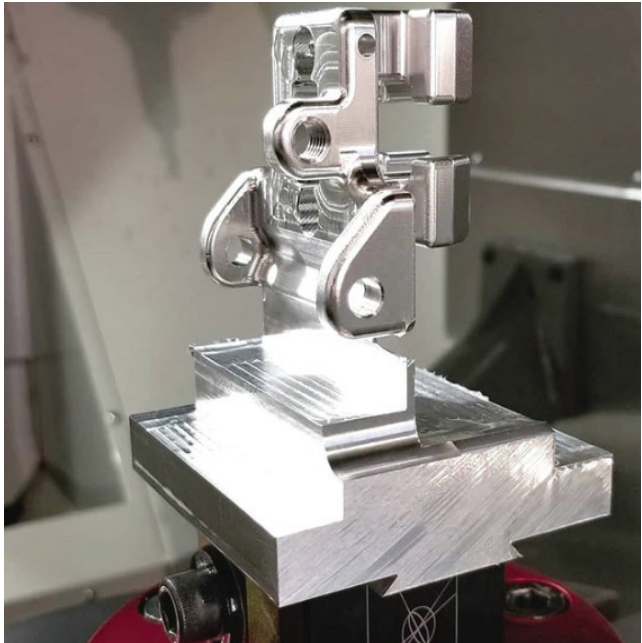
**Size:** 50mm x 50mm x 38mm  
**Material:** 4100 Series Steel  
**Stock Size:** 50mm+  
**Dovetail Depth Required:** 5.08mm

The DM50 is a simple and robust dovetail fixture built for stock 50mm and above. It features a wedge style clamp for superior gripping force, and a low profile design that optimizes tool clearance.



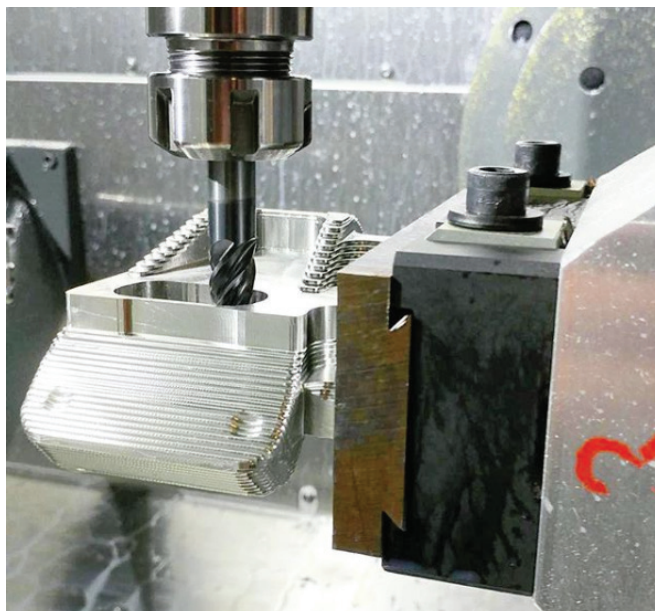
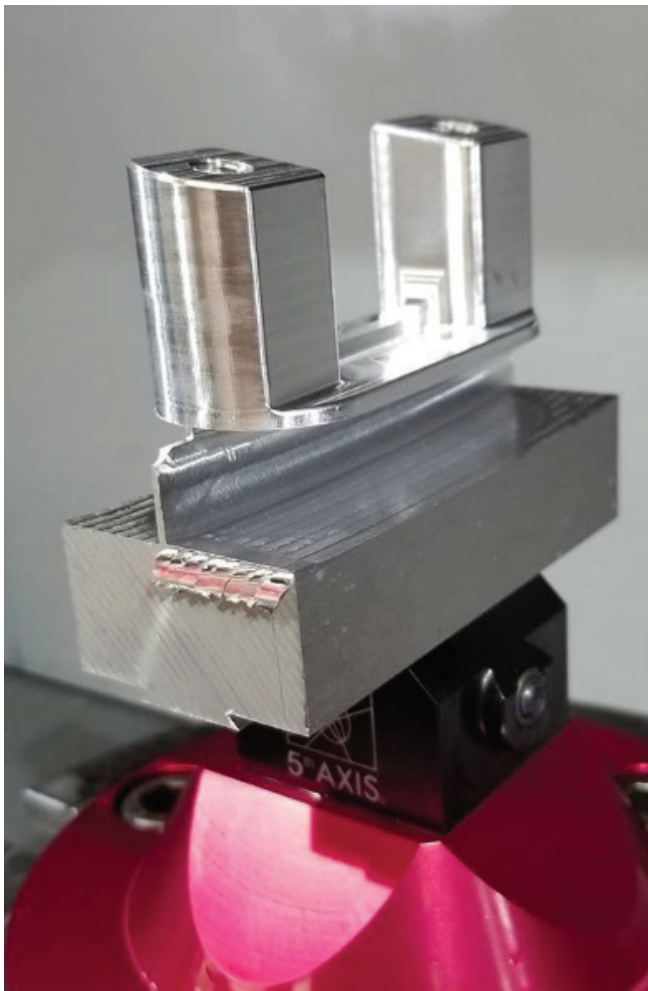
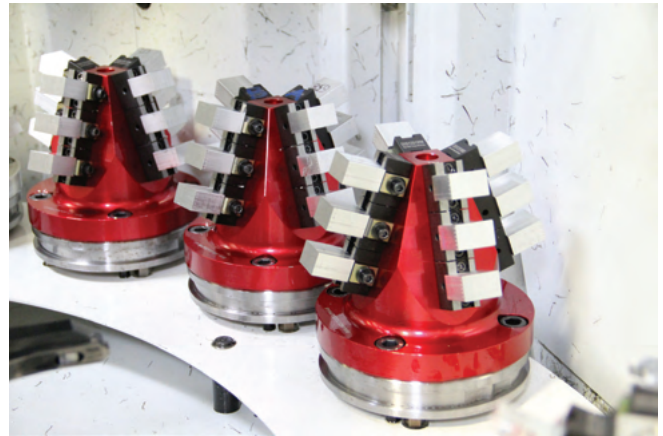
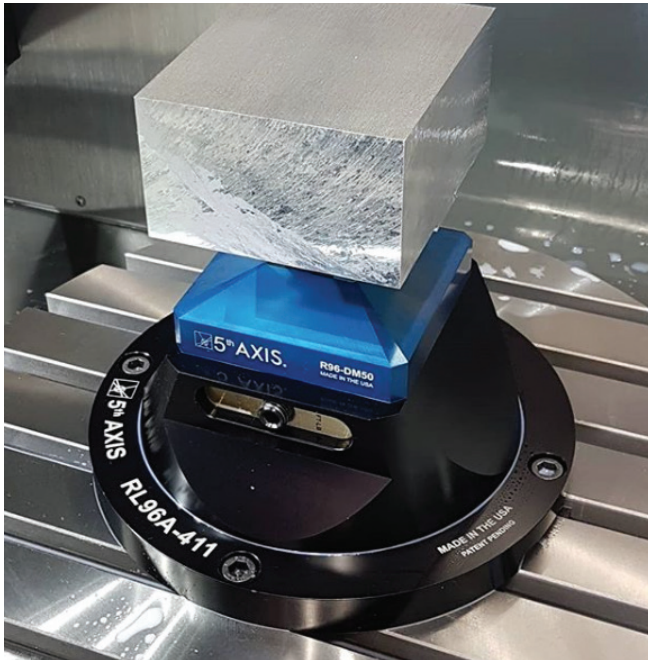


# Dovetail Fixtures



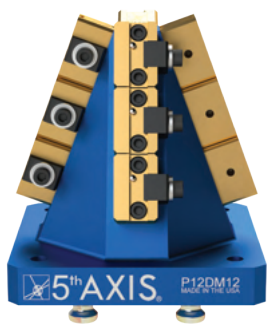


# Dovetail Fixtures Examples



# Dovetail Fixtures

## R52-P12DM12

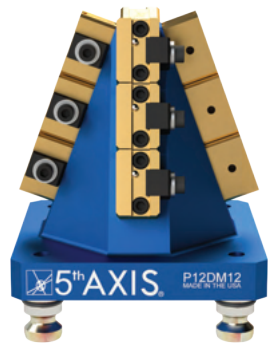


### Metric

**Spacing:** 125.73mm x 125.73mm x 133.5mm  
**Material Construction:** 6061 Aluminum

Built for our 52mm RockLock Quick Change System, the R52-P12DM12 provides maximum amount of flexibility. This 4-sided pyramid utilizes twelve DM12 dovetail fixtures for stock under 25mm. The orientation of the fixtures on the pyramid ensures optimal tool clearance for multiple parts. Machine up to 12 parts on this compact unit. The modular design allows for fixtures to be added or removed depending on the length of the workpiece.

## R96-P12DM12



### Metric

**Spacing:** 125.73mm x 125.73mm x 133.5mm  
**Material Construction:** 6061 Aluminum

Built for our 96mm RockLock Quick Change System, the R96-P12DM12 provides maximum amount of flexibility. This 4 sided pyramid utilizes twelve DM12 dovetail fixtures for stock under 25mm. The orientation of the fixtures on the pyramid ensures optimal tool clearance for multiple parts. Machine up to 12 parts on this compact unit. The modular design allows for fixtures to be added or removed depending on the length of the workpiece.

## R52-P4DM25



### Metric

**Spacing:** Ø152.4mm x 64.9mm  
**Material Construction:** 6061 Aluminum

This compact pyramid utilizes 4 DM25 dovetail fixtures. The small foot print ensures no space is wasted allowing simultaneous machining of four parts. Run more parts per cycle and minimize pallet and tool changes. This versatile fixture can be mounted on trunnions, pallets, and machine tables using our 52mm RockLock Quick Change System.

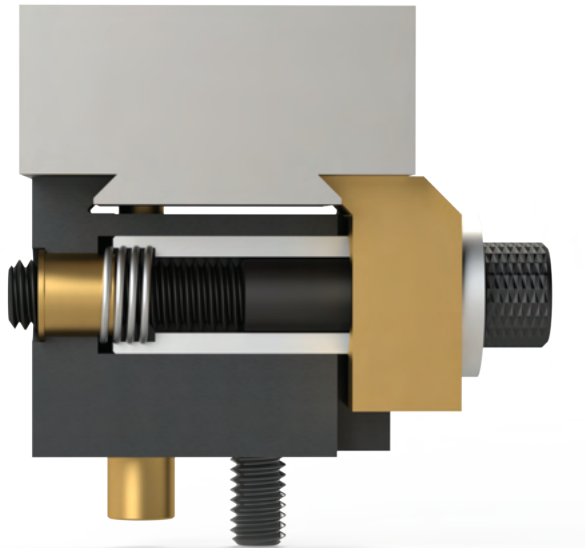
## R96-P4DM25



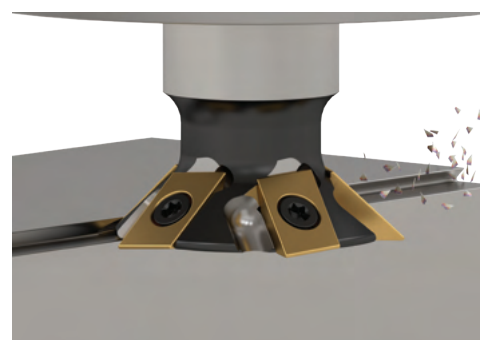
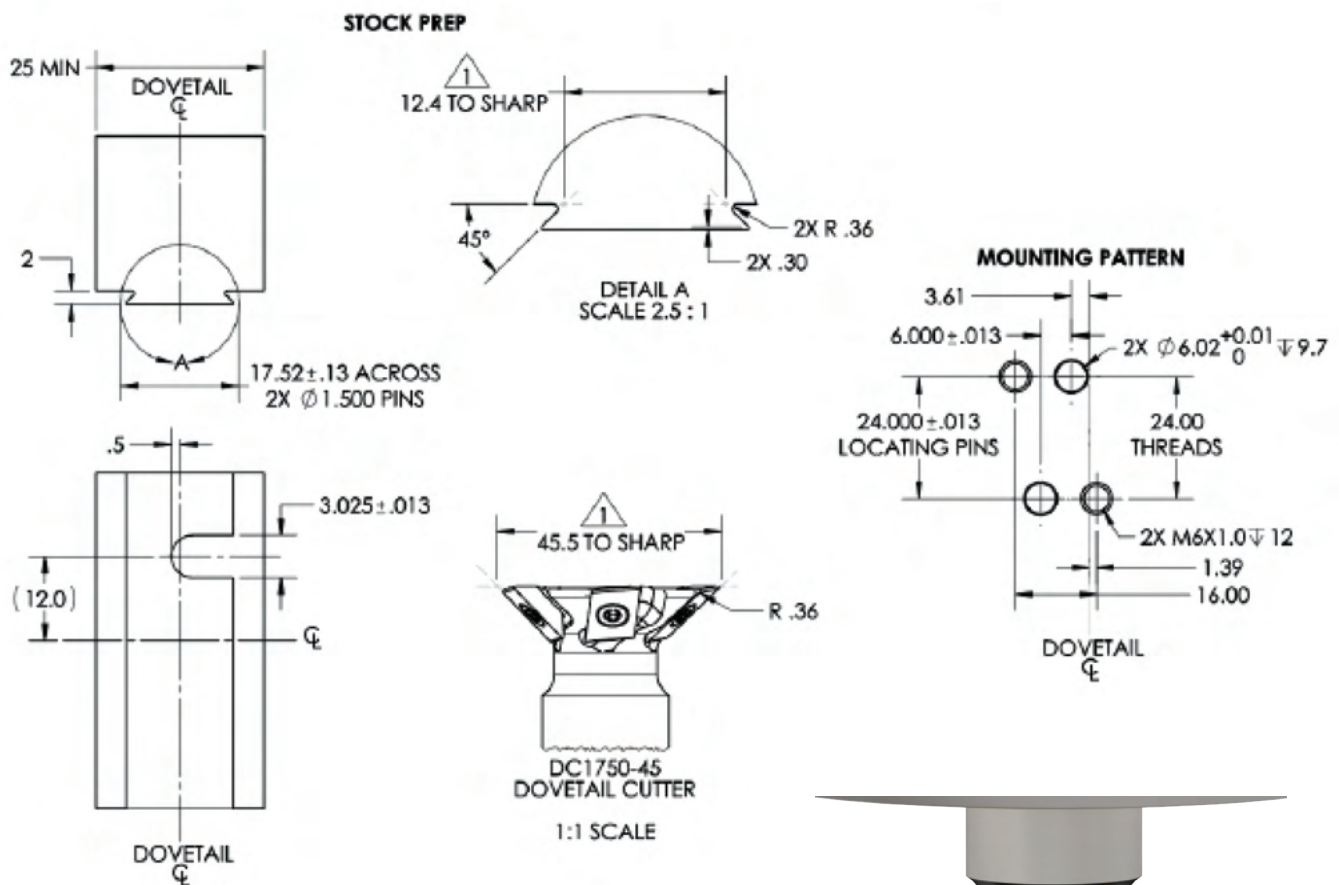
### Metric

**Spacing:** Ø152.4mm x 64.9mm  
**Material Construction:** 6061 Aluminum

This compact pyramid utilizes 4 DM25 dovetail fixtures. The small foot print ensures no space is wasted allowing simultaneous machining of four parts. Run more parts per cycle and minimize pallet and tool changes. This versatile fixture can be mounted on trunnions, pallets, and machine tables using our 96mm RockLock Quick Change System.



## Sample Dovetail Stock Prep (DM25)









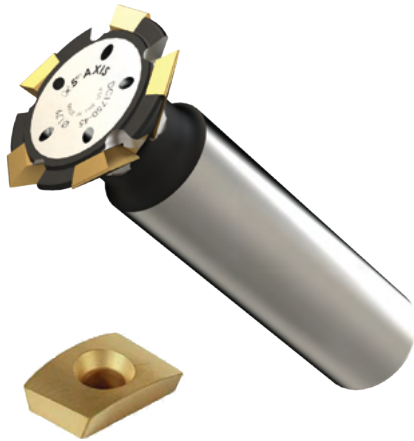
CERX-40 & CERX-32



The CERX-40 and CERX-32 are quick and efficient fixtures for holding round stock. The collets utilizes your existing set of standard ER40 and ER32 collets allowing you to clamp different diameters of stock. The bodies are manufactured from hardened alloy steel to exacting standards.

Part Number	R52-CERX-40	R96-CERX-40
		
Size	75mm X 75mm x 68mm	126mm x 126mm x 81mm
Mounting	Includes PS16F	Includes PS20F
Stock Size	ER40 Collet	ER40 Collet

Part Number	R52-CERX-32	R96-CERX-32
		
Size	75mm X 75mm x 68mm	126mm x 126mm x 81mm
Mounting	Includes PS16F	Includes PS20F
Stock Size	ER32 Collet	ER32 Collet



## Dovetail Cutters

### DC1750-I

45° Indexable Dovetail Cutter, 1" shank

All of our fixtures feature 45° dovetail.

### DC1750-M

45° Indexable Dovetail Cutter, 25mm shank

All of our fixtures feature 45° dovetail.

### DC1750-B

Inserts for Dovetail Cutter

Compatible with all 5th Axis dovetail cutters.



## Thumb Screws

### Replacement Thumbscrews:

**TS10** - Used on V75100X, V75150X, DV75150X

**TS13** - Used on DV56, DV510, V552M, V562M, and V510M

**TS17** - Used on V6105M

Thumb screws are included with every vise. Fits standard 3/8" drives.

## Threaded Locating Pins

### Replacement Locating Pins:

**LP6** - 6mm OD

**LP8** - 8mm OD

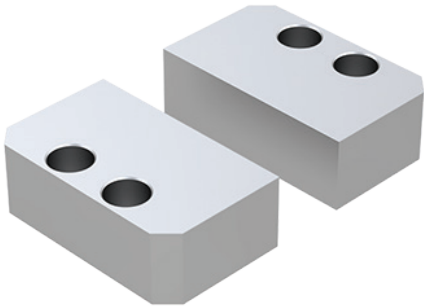
**LP10** - 10mm OD

Locating pins are included with every vise.

\*Inserts sold separately.

CAD models available for download at [5thaxis.com/downloads](http://5thaxis.com/downloads)





## Machinable 6061 Aluminum Jaws

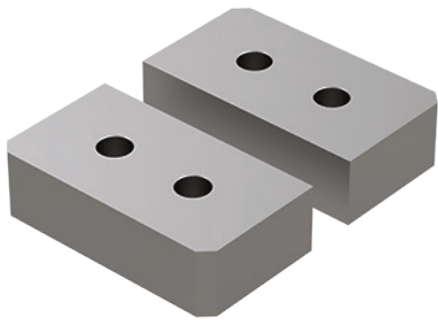
### METRIC

**VAJ75X** - 75mm x 45mm x 25mm (Compatible with V75100 / V75100X)

**VAJ52X** - 125.73 mm x 62.23 mm x 34.29 mm (Compatible with V562X / V510X)

**VAJ52M** - 125mm x 50mm x 34mm (Compatible with V552M / V562M / V510M)

**VAJ610M** - 151mm x 78mm x 47mm (Compatible with V6105M)



## Machinable 1018 Steel Jaws

### METRIC

**VSJ75X** - 75mm x 45mm x 25mm (Compatible with V75100 / V75100X)

**VSJ52M** - 125mm x 50mm x 34mm (Compatible with V552M / V562M / V510M)

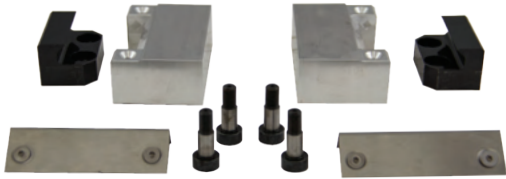
**VSJ610M** - 151mm x 78mm x 47mm (Compatible with V6105M)



## DJ6 Gripper Jaws

**DJ6** - Compatible with standard 6" Kurt Vise.

The DJ6 gripper jaws with built-in 45° dovetails are the perfect accessory for your 6" machine vise. Jaws are heat treated and precision ground for superior repeatability and longevity. The jaws are 55 HRC, TiN coated and feature a 25mm step depth.



## Anti-Lift Jaws

**AL75A** - Anti-Lift Aluminum Machinable Jaws, Starter Set. Includes steel cleats, aluminum machinable jaws, and brackets. (Compatible with V75100, V75100X, V75150X)

**AL75-2A** - Set of 2, Replacement Anti-Lift Machinable Aluminum Jaws. (Compatible with V75100, V75100X, V75150X)

**AL75S** - Anti-Lift Steel Machinable Jaws, Starter Set. Includes steel cleats, steel machinable jaws, and brackets. (Compatible with V75100, V75100X, V75150X)

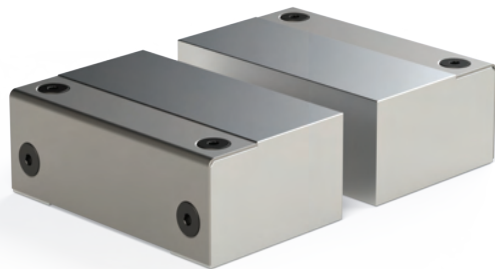
**AL75-2S** - Set of 2, Replacement Anti-Lift Machinable Jaws, Steel. (Compatible with V75100, V75100X, V75150X)

**AL52A** - Anti-Lift Aluminum Machinable Jaws, Starter Set. Includes steel cleats, aluminum machinable jaws, and brackets. (Compatible with V552 / V562 / V552M / V562M / V510M)

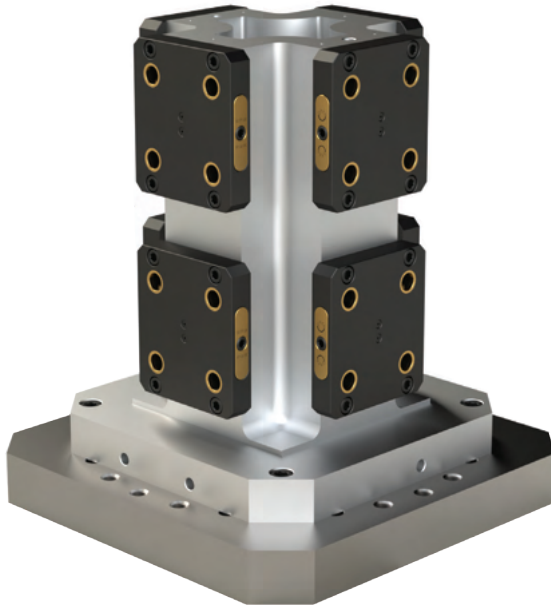
**AL52-2A** - Set of 2, Replacement Anti-Lift Machinable Aluminum Jaws. (Compatible with V552 / V562 / V552M / V562M / V510M)

**AL52-2S** - Set of 2, Replacement Anti-Lift Machinable Jaws, Steel. (Compatible with V552 / V562 / V552M / V562M / V510M)

Our Anti-Lift Jaws use a cleat and angled soft jaw to pull the jaw in and down when torque is applied to the lead screw. This design decreases jaw lift and jaw deflection commonly seen in self-centering vises.



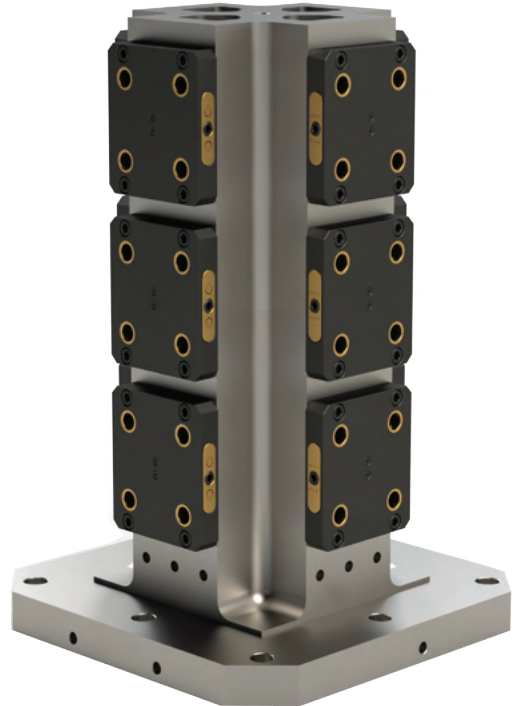
# RockLock Examples



**400mm Tombstone configuration**

**Part number shown: RL96S -67M**

Built for standard tombstone and grid plates.  
Bolt spacing at 100mm.



**500mm Tombstone configuration**

**Part number shown: RL96S -67M**

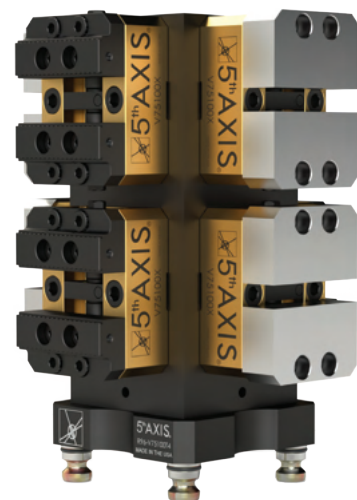
Built for standard tombstone and grid plates.  
Bolt spacing at 100mm.



**R96-V75XT4 Tombstone configuration**

**Part number shown: R96-V75XT4 with 4X DV75150X**

200mm tall mini tombstone designed to work with smaller  
4 and 5 Axis machines.

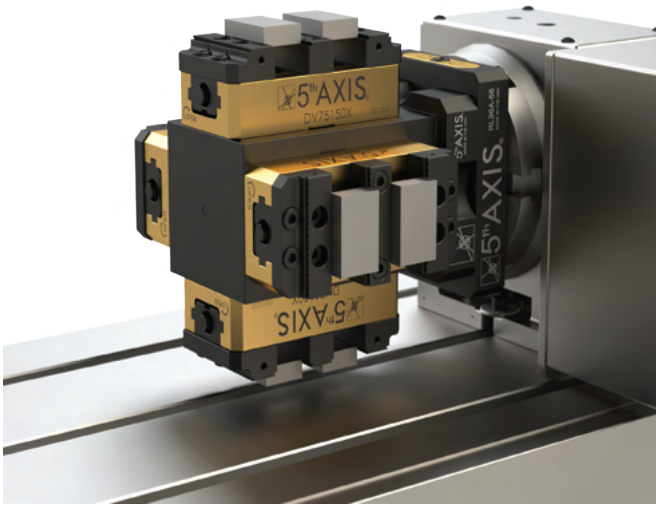


**R96-V75100T4 Tombstone configuration**

**Part number shown: R96-V75100T4 with 8X V75100X**

266mm tall mini tombstone designed to work with  
smaller 4 and 5 Axis machines.

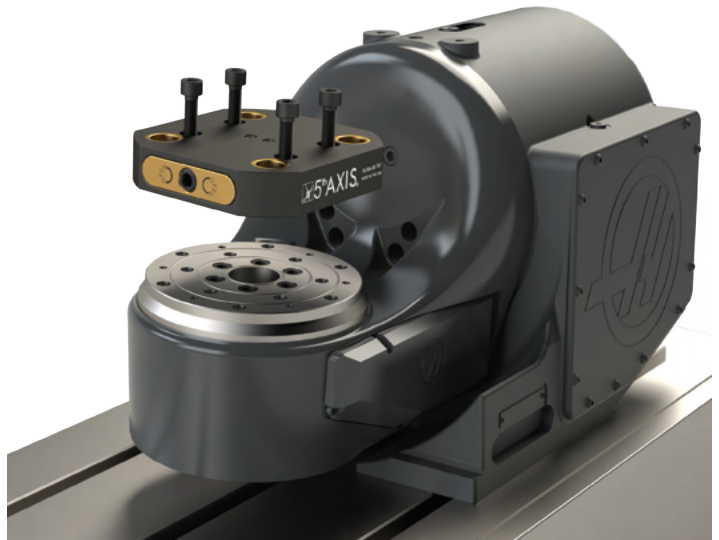
# RockLock Examples



**4th Axis tombstone configuration**

**Part number shown: R96-V75XT4 with 4x DV75150X + RL96A-56 adapter**

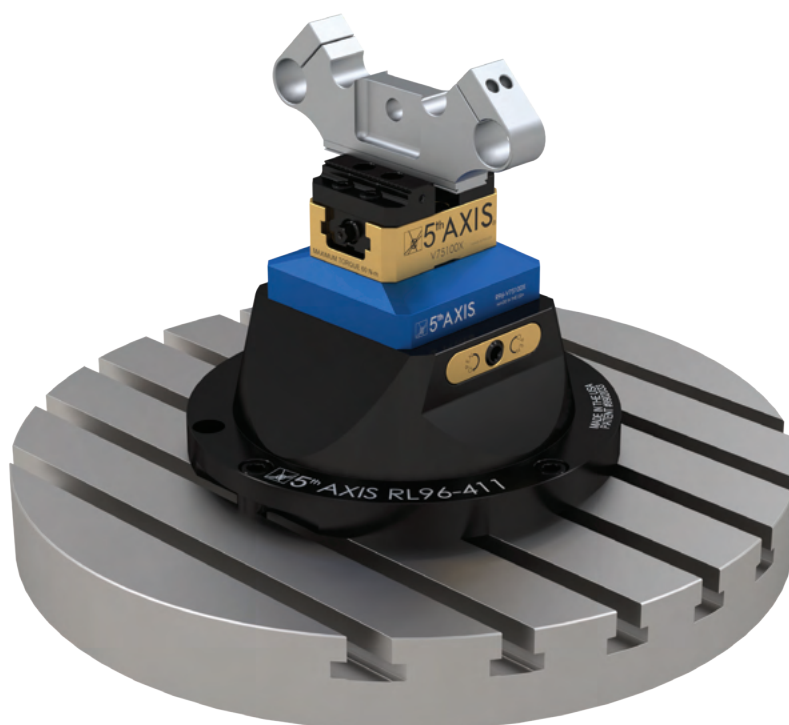
Turn your vertical with a rotary into a mini horizontal. Produce 8 times more parts on your rotary table.



**Haas TRT160 configuration**

**Part number shown: RL96A-60100**

New 4 bolt 96mm RockLock adapter. Designed for the new style Haas TRT160 rotary.

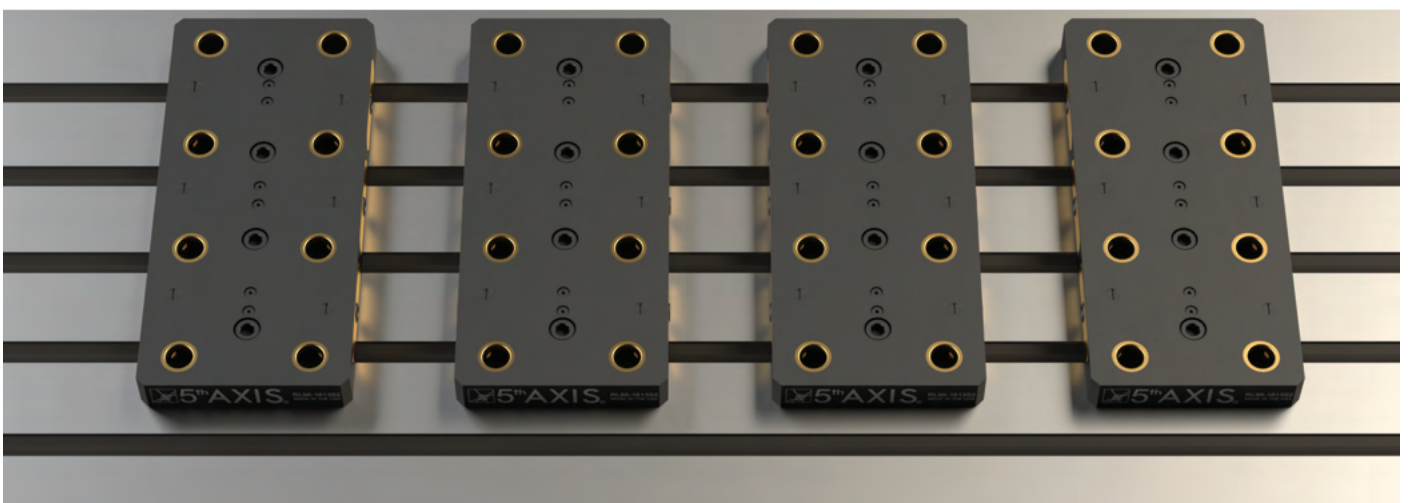
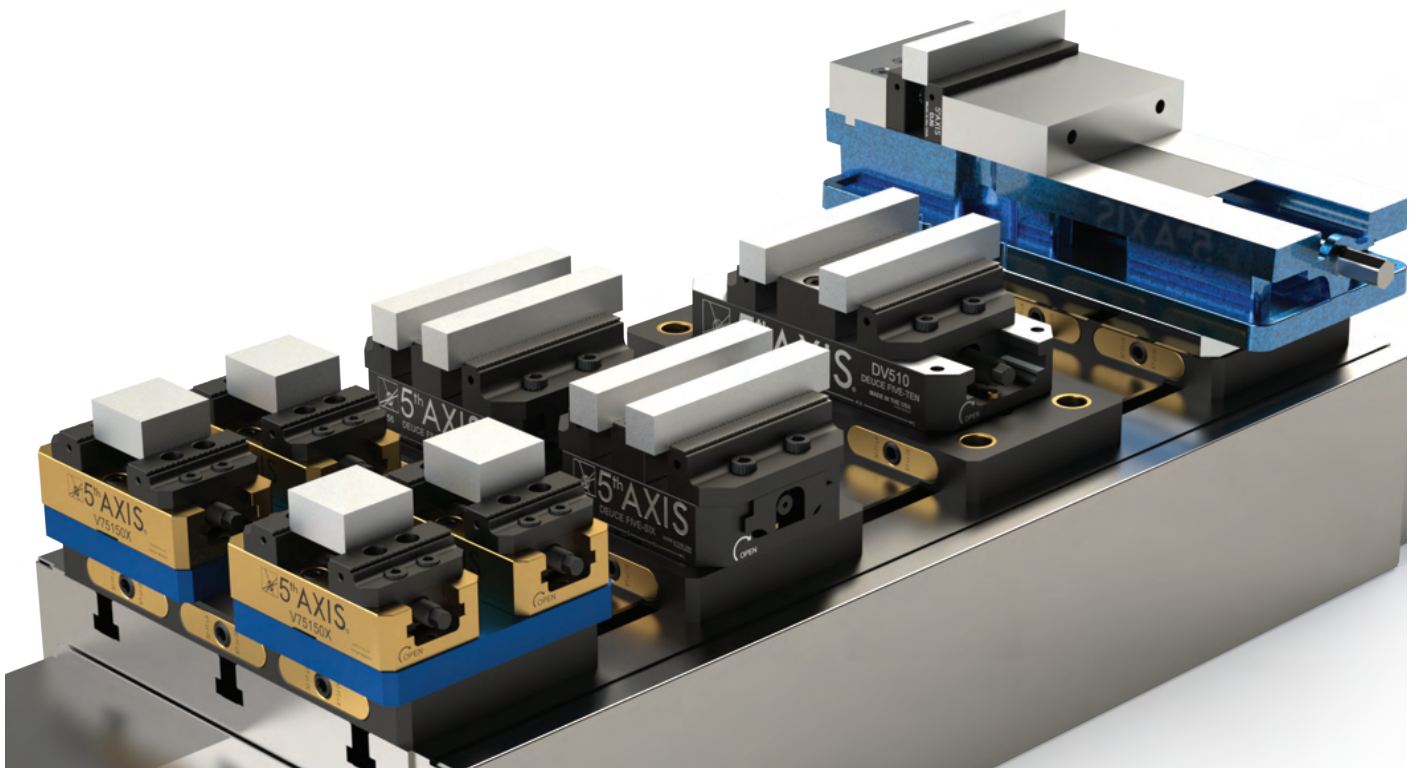




# BUILT FOR 3 AXIS

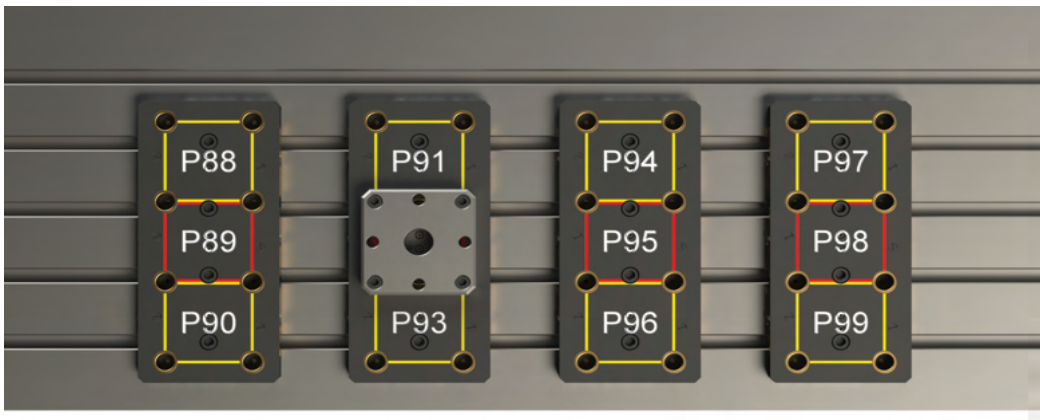
**Simplify Programming**

**Reduce Changeover Time**



# READY TO ROCK SETUP

Example shown for Haas VF-2/VF-3 [GI54 Work Coordinates]



1. Starting with an empty machine table, install 5th Axis 3613S plates for your specific table. Thread bolts into t-nuts, but do not torque bolts.
2. Space plates 3" (76.2mm) apart from each other. Use a mallet to initially align and straighten plates.
3. Install master pallet (RL96-MP) in center position (P89, P92, P95, P98) to indicate straight. Once aligned and indicated straight, torque mounting bolts to torque specifications.
4. For every position, install master pallet and set X and Y axes with touch probe or indicator for each work offset position.
5. Set Z zero on the top mounting surface of the RockLock 3613S base for all work offsets.
6. R2R system is ready to use.





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