

RAPTOR WORKHOLDING

2014 / 2015 WINTER PRODUCT CATALOG



**NEVER
BUILD
ANOTHER
FIXTURE.**





A FULL ACCESS PASS.

Speed up your manufacturing by machining five full sides of the workpiece in one set-up. Raptor's patented dovetail design quickly locks the part in place for extreme clamping strength and rigidity without wasting much material on the base.

A locating pin ensures your part is positioned accurately and, unlike other products, the spring-loaded clamp can be tightened with a simple T-handle wrench. Quick and easy.

Raptor gets out of your way so you can get the job done.

TESTED AND PROVEN.

Raptor was created by manufacturers for manufacturers. We know that workholding can be difficult because we face the same challenges. That is why we created these innovative products. Raptor is a strong, flexible workholding solution that has been utilized for years by some of the world's leading manufacturers. Raptor's dovetail design has been tested by an independent laboratory for strength.

FASTER JOB SETUP.

With Raptor, you can run a wide variety of parts and eliminate the changeover time. There is no need to spend time removing and replacing custom fixtures in your machines. We simplified the process. Smaller Raptor fixtures can also be attached to larger ones, allowing you to switch to any size part as fast as you can turn a hand tool. We've made workholding easier for you.

RAPTOR IS ADAPTABLE.

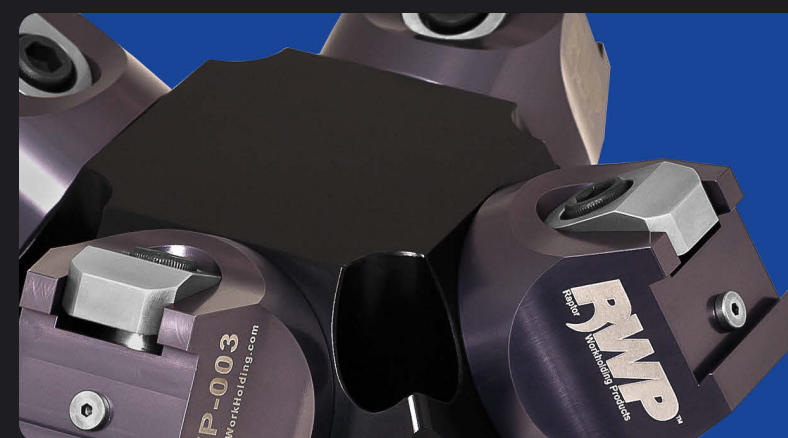
Our workholding products can fit any machine and any situation. We have a variety of adapters, risers, and fixtures built to attach directly to the most popular CNC machines. Multiple Raptors can be mounted to tombstones, bridges, carousels, nests and base plates. Raptor creates new products based on our customers' valuable feedback. If you need something special, let us know.

TRY RAPTOR FOR A 30-DAY FREE TRIAL PERIOD

Call 1-800-824-8333 or visit RaptorWorkholding.com for details.



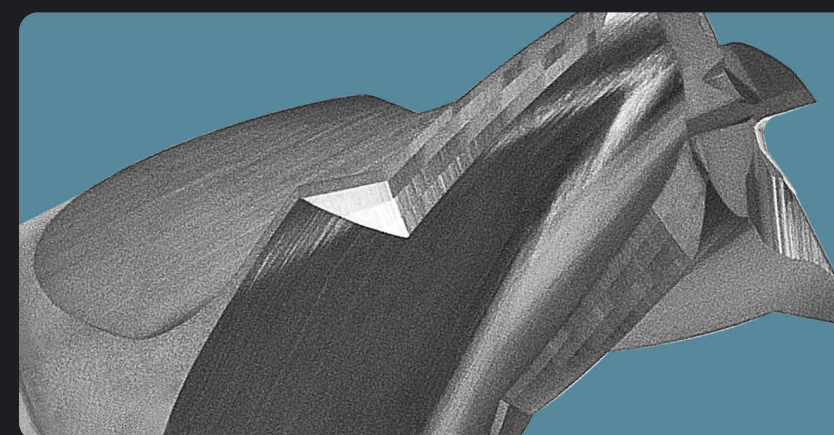
DOVETAIL FIXTURES



MULTI-FIXTURES



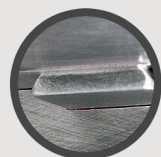
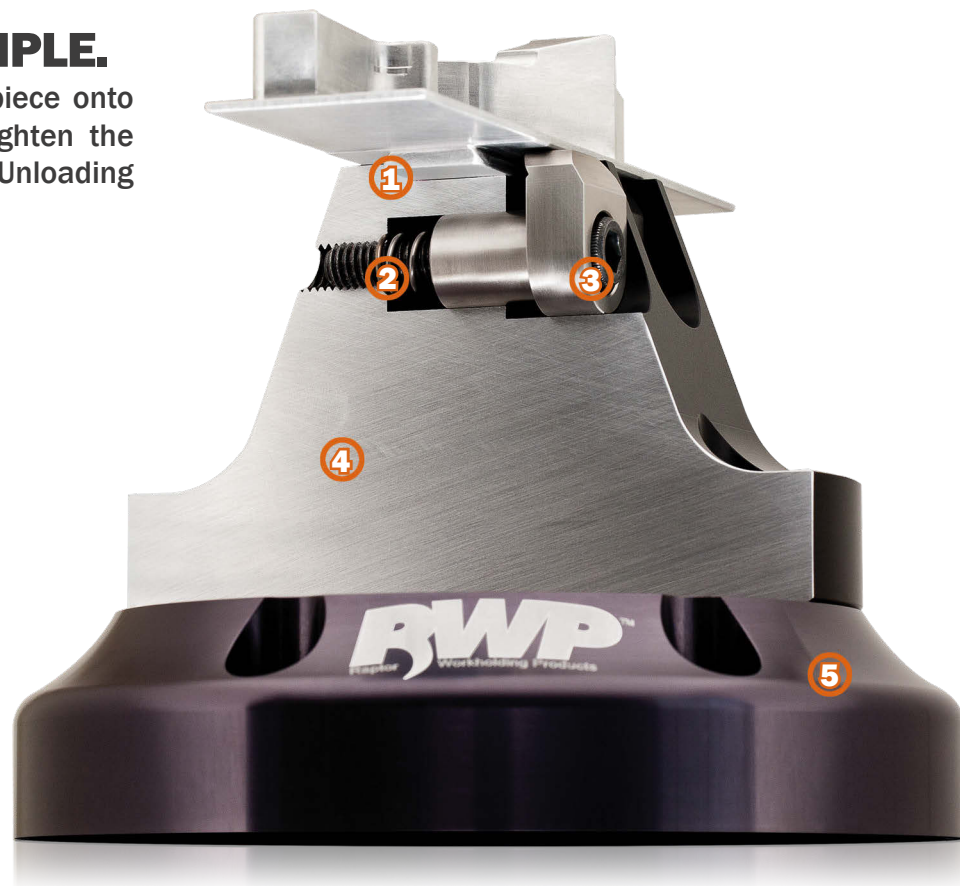
ADAPTERS & RISERS



CUTTERS & PARTS

RAPTOR IS SIMPLE.

Simply load your workpiece onto the fixture and hand-tighten the spring-loaded clamp. Unloading is just as easy.



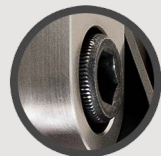
1 - SIMPLE DOVETAIL

A simple workpiece prep creates a dovetail that locks into the Raptor spring-loaded clamp.



2 - SPRING-LOADED CLAMP

Raptor's spring-loaded clamp works with you to hold the part strongly and makes releasing easy.



3 - HAND TIGHTENED

Use a T-wrench to hand-tighten the clamp and you're done. It's quick, simple and strong.



4 - STRONG BY DESIGN

Solid, super-strong stainless-steel or lightweight aluminum ensures that Raptor will hold up to repeated use.



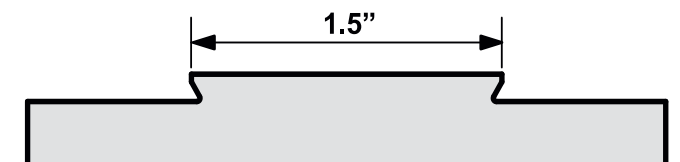
5 - FITS ANY MACHINE

We have adapters, risers and versions of Raptor to fit any machine you can think of. Yes, even that one.

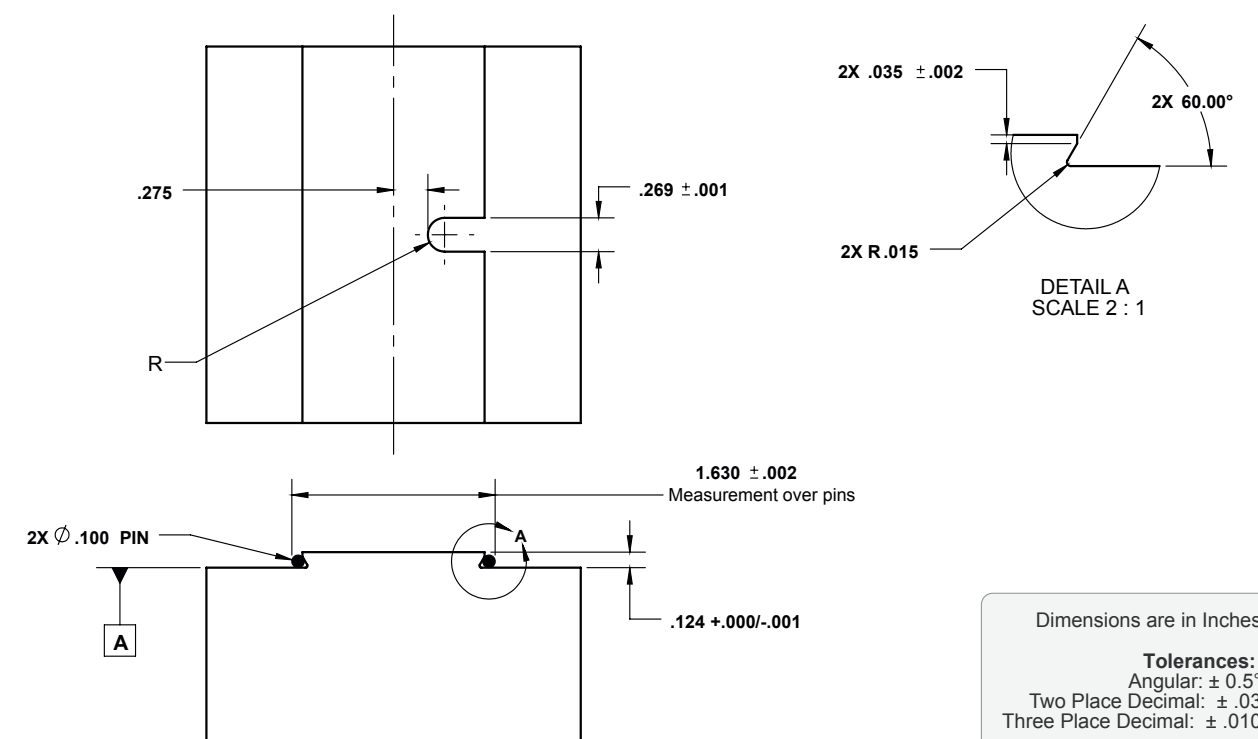
1.5" DOVETAIL FIXTURES



The following fixtures are for parts using a dovetail width of 1.5 inches. These dovetail fixtures are available in multiple configurations constructed of aluminum or stainless steel.



1.5" Dovetail Preparation Specifications



For maximum rigidity, datum -A- needs to contact top surface of fixture.

Torque bolts to 120-175 inch pounds

RWP-001
Aluminum 1.5” Dovetail Fixture
\$675.00

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75” / 171.45mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125” / 3.175mm
Dovetail Width	1.5” / 38.1mm
Fixture Height	3.0” / 76.2mm



RWP-001SS
Stainless Steel 1.5” Dovetail Fixture
\$1,250.00

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75” / 171.45mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125” / 3.175mm
Dovetail Width	1.5” / 38.1mm
Fixture Height	3.0” / 76.2mm



RWP-004
Aluminum 1.5” Dovetail Fixture
\$575.00

This fixture is designed to connect directly to the Mori Seiki MNV3000. It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75” / 171.45mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125” / 3.175mm
Dovetail Width	1.5” / 38.1mm
Fixture Height	2.0” / 50.8mm



RWP-013
Aluminum 1.5” Dovetail Fixture
\$675.00

This fixture is designed to connect directly to the Matsuura MAM 72-35V. It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75” / 171.45mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125” / 3.175mm
Dovetail Width	1.5” / 38.1mm
Fixture Height	2.0” / 50.8mm



RWP-013SS
Stainless Steel 1.5” Dovetail Fixture
\$1,250.00

This fixture is designed to connect directly to the Matsuura MAM 72-35V. It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75” / 171.45mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125” / 3.175mm
Dovetail Width	1.5” / 38.1mm
Fixture Height	2.0” / 50.8mm



RWP-026
Aluminum 1.5” Dovetail Fixture Base with 4 Holes and 4” Diameter Bolt Circle
\$675.00

Made for tombstones with a 2.0” X 2.0” hole pattern or 4.0 bolt circle - without a boss or plug.

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75” / 171.45mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125” / 3.175mm
Dovetail Width	1.5” / 38.1mm
Fixture Height	3.0” / 76.2mm



RWP-027
Aluminum 1.5" Dovetail Fixture
\$625.00

This fixture is designed to connect directly to the Yukiwa TNT-130L. It can also be utilized in other machines when connected with an adapter or riser.



Max Workpiece Weight	20 Pounds / 9.071kg
Max Workpiece Size	6.0" / 152.4mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2
Clamp Part Number	RWP-CL301SQ
Dovetail Height	.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Height	2.0" / 50.8mm

RWP-401-11
Aluminum 1.5" Rail Dovetail Fixture
\$2,500.00

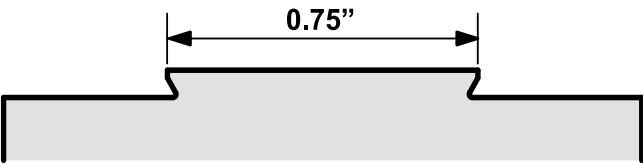


Max Workpiece Weight	140 Pounds / 63.502 kg
Max Workpiece Size	7.0"W x 17.0"L x 12.0"H 177.8mm x 431.8mm x 304.8mm
Fixture Material	7075-T6511 Aluminum
Number of Clamps	6
Clamp Part Number	RWP-CL301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Height	3.0" / 76.2mm

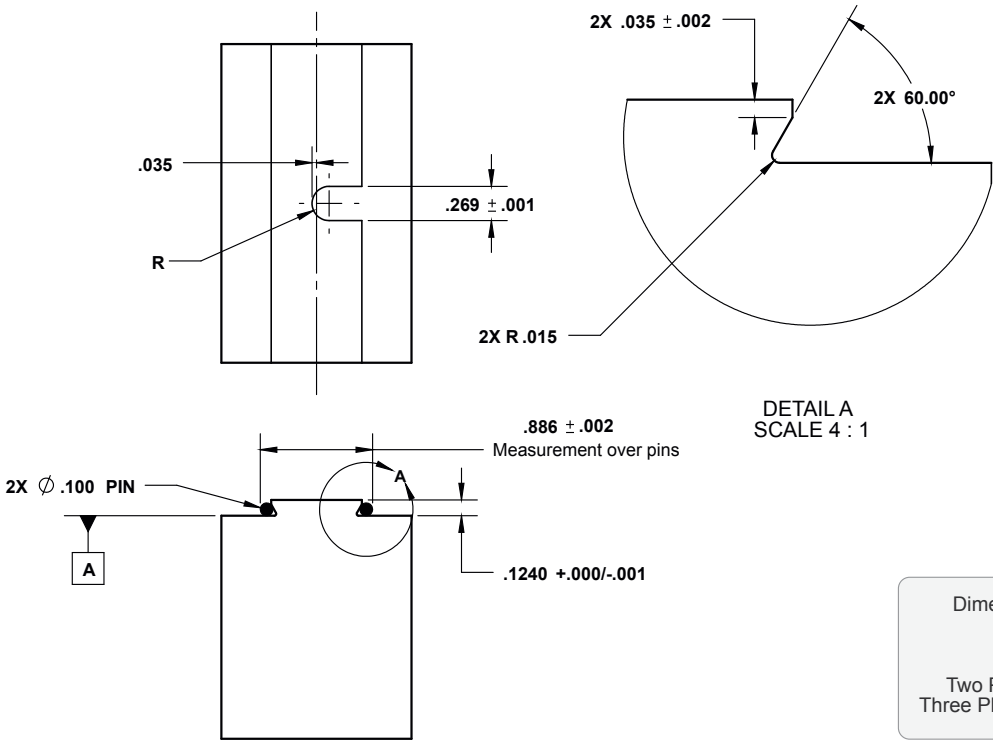
0.75" DOVETAIL FIXTURES



The following fixtures are for parts using a dovetail width of 0.75 inches. These dovetail fixtures are available in multiple configurations constructed of aluminum or stainless steel.



0.75" Dovetail Preparation Specifications



Dimensions are in Inches
Tolerances:
Angular: ± 0.5°
Two Place Decimal: ± .03
Three Place Decimal: ± .010

For maximum rigidity, datum -A- needs to contact top surface of fixture.

Torque bolts to 120-175 inch pounds

RWP-002

Aluminum 0.75" Dovetail Fixture
\$675.00

Max Workpiece Weight	18 Pounds / 8.164 kg
Max Workpiece Size	5.75" / 146.05mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	3.0" / 76.2mm



RWP-002SS

Stainless Steel 0.75" Dovetail Fixture
\$1,250.00

Max Workpiece Weight	25 Pounds / 11.339 kg
Max Workpiece Size	6.375" / 161.925mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	3.0" / 76.2mm



RWP-003

Aluminum 5C Collet Closer 0.75" Dovetail Fixture
\$400.00

Max Workpiece Weight	3 Pounds / 1.360 kg
Max Workpiece Size	3.0" / 76.2mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.50" / 38.1mm



RWP-007SS

Stainless Steel 0.75" Dovetail Fixture
\$800.00

Connects directly to a 54mm System 3R pallet reducing downtime by switching to an alternate pallet in seconds.

Max Workpiece Weight	7 Pounds / 3.175 kg
Max Workpiece Size	3.75" / 95.25mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.125" / 53.975mm

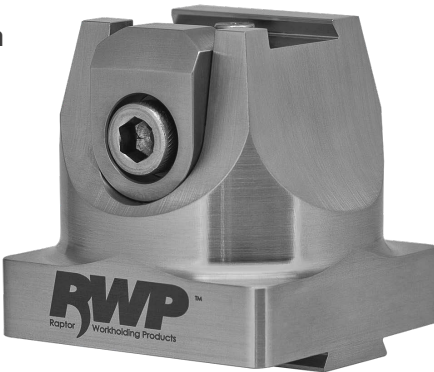


RWP-011SS

Stainless Steel 0.75" Dovetail Fixture with 0.75" Dovetail Bottom
\$800.00

Connects directly to compatible 0.75" dovetail fixtures allowing quick machining of smaller parts without removing the primary fixtures.

Max Workpiece Weight	7 Pounds / 3.175 kg
Max Workpiece Size	3.75" / 95.25mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.001" / 50.825mm

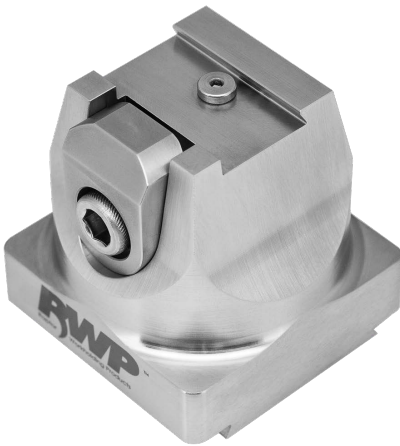


RWP-012SS

Stainless Steel 0.75" Dovetail Fixture with 1.5" Dovetail Bottom
\$800.00

Connects directly to compatible 1.5" dovetail fixtures allowing quick machining of smaller parts without removing the primary fixtures.

Max Workpiece Weight	7 Pounds / 3.175 kg
Max Workpiece Size	3.75" / 95.25mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.0" / 50.8mm



RWP-015

Aluminum 0.75" Dovetail Fixture
\$500.00

This fixture is designed to connect directly to the Haas TR110 Trunion. It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	18 Pounds / 8.164 kg
Max Workpiece Size	5.75" / 146.05mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.0" / 50.8mm



RWP-023

Aluminum 0.75" Dovetail Fixture Base with 4 holes and 4" diameter bolt circle
\$675.00

Made for Tombstones with a 2.0" X 2.0" Hole Pattern or 4.0 Bolt Circle - without a boss or plug.

Max Workpiece Weight	18 Pounds / 8.164 kg
Max Workpiece Size	5.75" / 146.05mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	3.0" / 76.2mm



RWP-024

Aluminum 0.75" Dovetail Fixture
\$345.00

Designed for modular applications. Multiple RWP-024 fixtures can be placed in-line to hold long parts.

Max Workpiece Weight	8 Pounds / 3.628kg
Max Workpiece Size	4.0" / 101.6mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	1
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.5" / 38.1mm



RWP-025

Aluminum 0.75" Mini Rail Dovetail Fixture with 1.5" Dovetail Bottom
\$645.00

Designed for quick-change applications machining long and skinny parts. Connects to compatible 1.5" dovetail fixtures.

Max Workpiece Weight	12.5 Pounds / 5.669 kg
Max Workpiece Size	4.0"W x 8.0"L x 4.0"H
	101.6mm x 203.2mm x 101.6mm
Fixture Material	7075-T6511 Aluminum
Number of Clamps	3
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.5" / 38.1mm



RWP-030SS

Stainless Steel 0.75" Dovetail Fixture
\$1,600.00

Max Workpiece Weight	40 Pounds / 18.143 kg
Max Workpiece Size	7.5" / 190.5 Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	3
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	3.0" / 76.2mm



RWP-034SS

Stainless Steel 0.75" Dovetail Fixture
\$1,600.00

This fixture is designed to connect directly to the Makino A51NX-5XU. It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	40 Pounds / 18.143 kg
Max Workpiece Size	7.5" / 190.5 Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	3
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.0"



RWP-405
Aluminum 8" Rail with 0.75" Dovetail
\$1,625.00

Max Workpiece Weight

65 Pounds / 29.483 kg

Max Workpiece Size

14.0"W x 4.0"L x 4.0"H Steel
355.6mm x 101.6mm x 101.6mm

Fixture Material

7075-T6511 Aluminum

Number of Clamps

4

Clamp Part Number

RWP-CL302SQ

Dovetail Height

0.125" / 3.175mm

Dovetail Width

0.75" / 19.05mm

Fixture Height

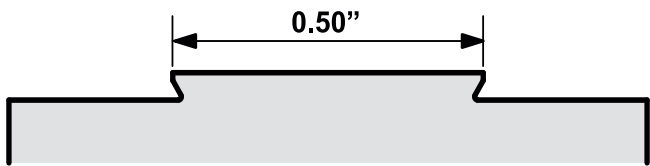
3.0" / 76.2mm



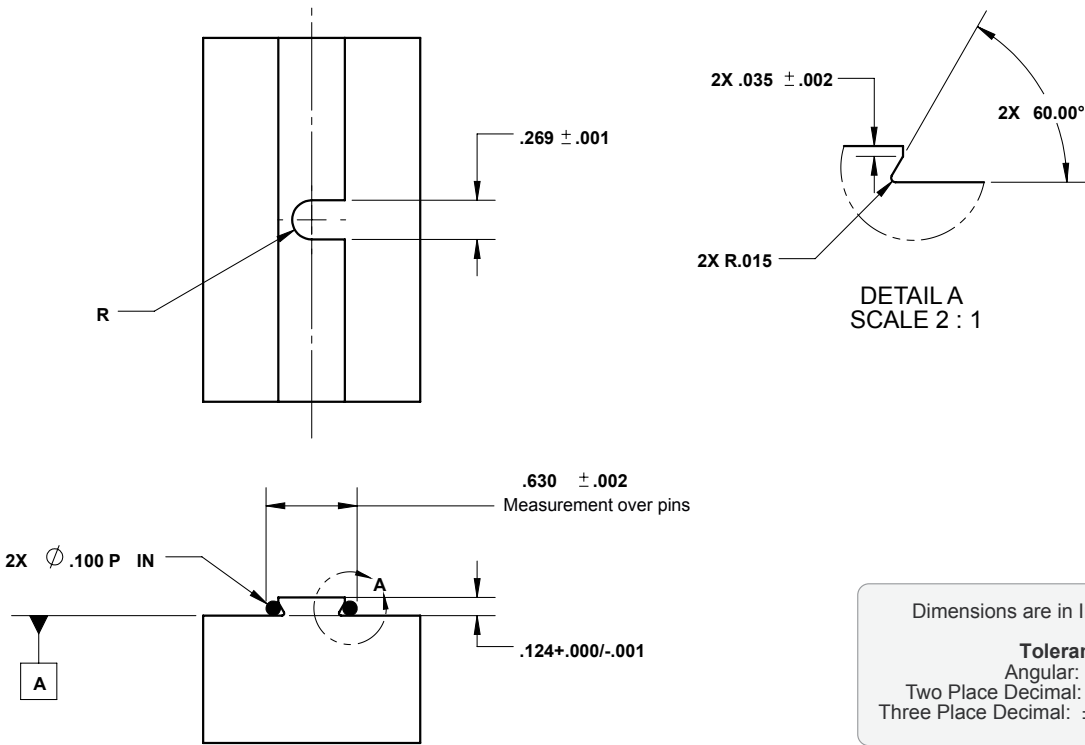
0.50" DOVETAIL FIXTURES



The following fixtures are for parts using a dovetail width of 0.50 inches. These dovetail fixtures are available in multiple configurations constructed of aluminum or stainless steel.



0.50" Dovetail Preparation Specifications



For maximum rigidity, datum -A- needs to contact top surface of fixture.

Torque bolts to 120-175 inch pounds

RWP-017SS

Stainless Steel 0.50" Dovetail Fixture
\$800.00

Max Workpiece Weight	6 Pounds / 2.721 kg
Max Workpiece Size	3.25" / 82.55 mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL306SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Height	2.125" / 53.975mm



RWP-018

Aluminum 0.50" Dovetail Fixture
\$675.00

Max Workpiece Weight	10 Pounds / 4.535 kg
Max Workpiece Size	4.75" / 120.65mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL306SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Height	3.0" / 76.2mm



RWP-018SS

Stainless Steel 0.50" Dovetail Fixture
\$1,250.00

Max Workpiece Weight	12 Pounds / 5.443 kg
Max Workpiece Size	5.0" / 127mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL306SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Height	3.0" / 76.2mm



RWP-022SS

Aluminum 0.50" Dovetail Fixture with 1.5" Dovetail Bottom
\$800.00

Connects to an RWP-001(SS), RWP-004, RWP-013(SS) or RWP-026.

Max Workpiece Weight	6 Pounds / 2.721 kg
Max Workpiece Size	3.25" / 82.55mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1
Clamp Part Number	RWP-CL306SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Height	2.0" / 50.8mm



0.375" DOVETAIL FIXTURE

RWP-019SS

Stainless Steel 0.375" Dovetail Fixture

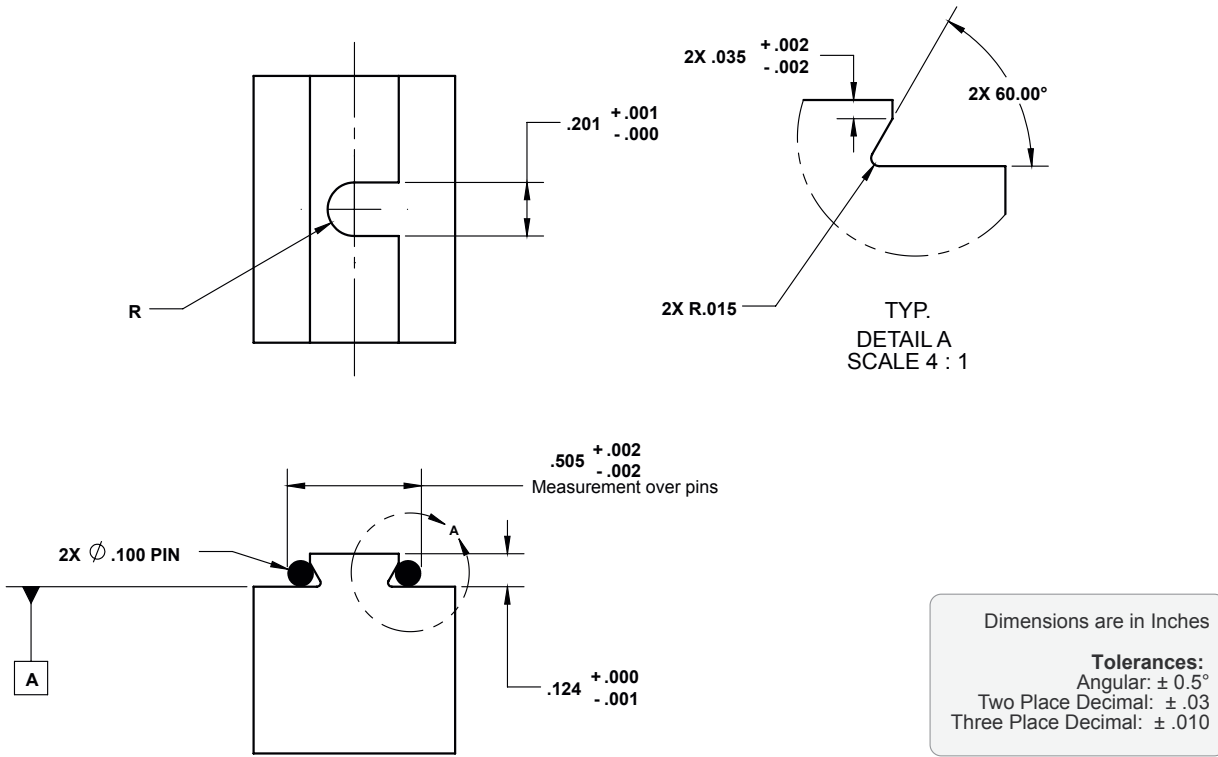
\$425.00

Modular capabilities when used with RWP-213SS or RWP-214SS, connecting to most 0.75" or 1.5" dovetail fixtures.

Max Workpiece Weight	2 Pounds / 0.907 kg
Max Workpiece Size	2.50" / 63.5mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL305SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Fixture Height	1.25" / 31.75mm



0.375" Dovetail Preparation Specifications

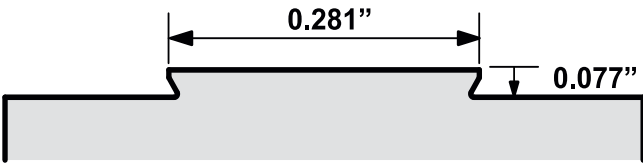


For maximum rigidity, datum -A- needs to contact top surface of fixture.

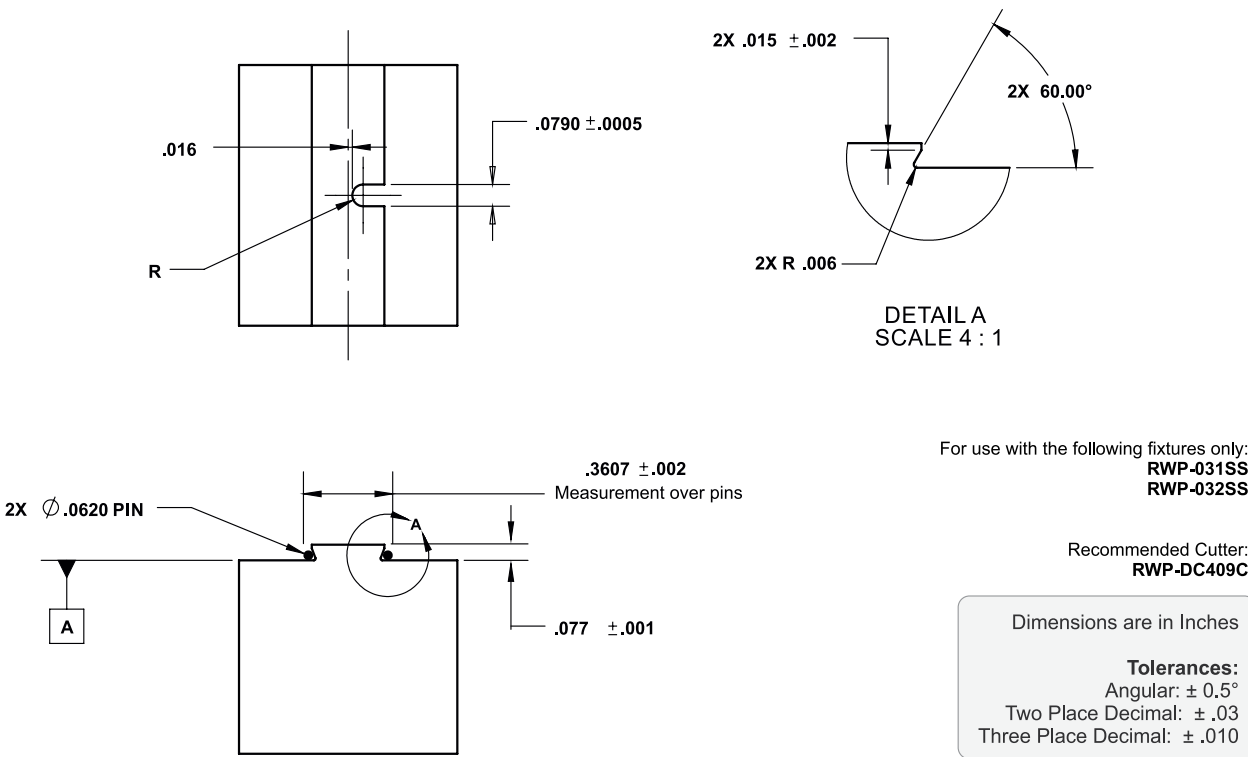
Torque bolts to 80 - 140 inch pounds

0.281" x 0.0781" DOVETAIL FIXTURES

The following fixtures are for parts using a dovetail width of 0.281 inches and a dovetail height of 0.077 inches. These dovetail fixtures are available in multiple configurations.



0.281" x 0.0781" Dovetail Preparation Specifications



For maximum rigidity, datum -A- needs to contact top surface of fixture.

Torque bolts to 30 - 40 inch pounds

For use with the following fixtures only:
RWP-031SS
RWP-032SS

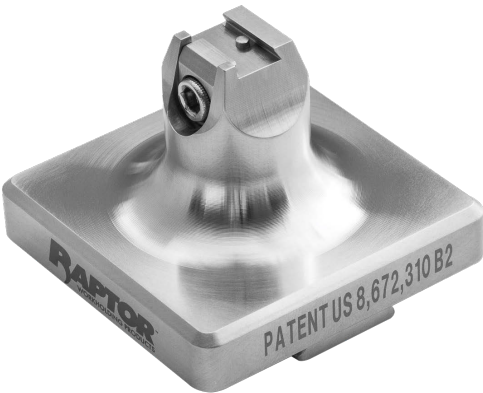
Recommended Cutter:
RWP-DC409C

Dimensions are in Inches
Tolerances:
Angular: ± 0.5°
Two Place Decimal: ± .03
Three Place Decimal: ± .010

RWP-031SS
Stainless Steel 0.281" Width x 0.0781" Height Dovetail Fixture with .075" Dovetail Bottom
\$650.00

Designed to connect directly to the following 0.75" dovetail fixtures:
RWP-002, RWP-002SS, RWP-015, RWP-023, RWP-024 and
RWP-030SS. This allows you to quickly machine smaller size
parts without taking your primary fixtures off of the machine.

Max Workpiece Weight	0.284 Pounds / 0.128 kg
Max Workpiece Size	1.25" / 31.75mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL307SQ
Dovetail Height	0.781" / 19.8374mm
Dovetail Width	0.281" / 7.137mm
Fixture Height	1.438" / 36.5252mm

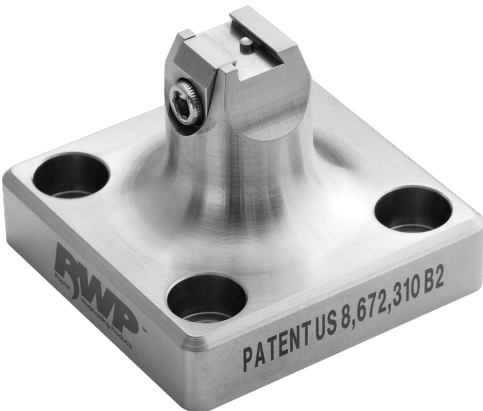


This fixture replaces the discontinued RWP-010SS.
Please contact us if you have any questions.

RWP-032SS
Stainless Steel 0.281" Width x 0.0781" Height Dovetail Fixture
\$650.00

Connects to your machine using the 4 mounting holes.

Max Workpiece Weight	0.284 Pounds / 0.128 kg
Max Workpiece Size	1.25" / 31.75mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Part Number	RWP-CL307SQ
Dovetail Height	0.781" / 19.8374mm
Dovetail Width	0.281" / 7.137mm
Fixture Height	1.563" / 39.700mm

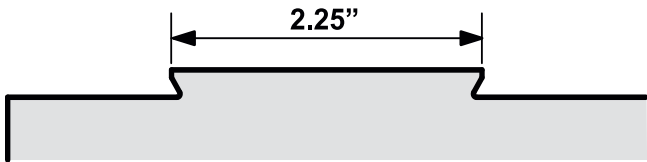


This fixture replaces the discontinued RWP-009SS.
Please contact us if you have any questions.

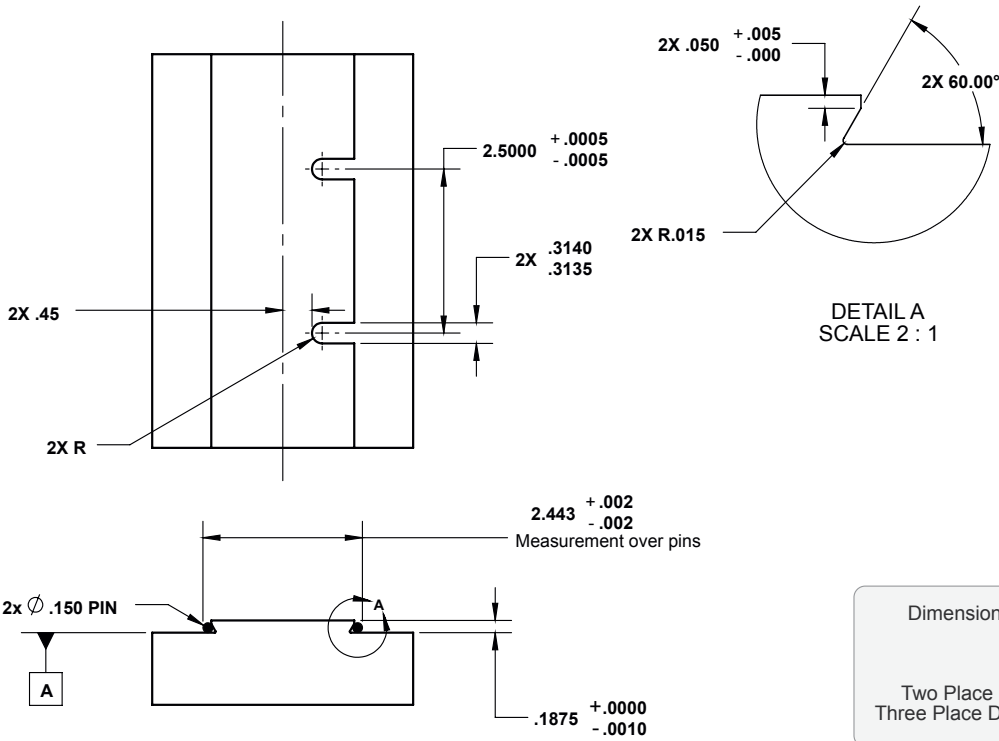
2.25" DOVETAIL FIXTURES



The following fixtures are for parts
using a dovetail width of 2.25 inches.
These dovetail fixtures are available in
aluminum or stainless steel.



2.25" Dovetail Preparation Specifications



Dimensions are in Inches
Tolerances:
Angular: ± 0.5°
Two Place Decimal: ± .03
Three Place Decimal: ± .010

For maximum rigidity, datum -A- needs to contact top surface of fixture. Torque bolts between 20 and 60 foot pounds.

RWP-006
Aluminum 2.25" Dovetail Fixture
\$1,050.00

Max Workpiece Weight	80 Pounds / 36.287 kg
Max Workpiece Size	8.0"W x 10.0"L x 10.0"H
	203.2mm x 254mm x 254mm
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL303SQ
Dovetail Height	0.1875" / 4.7625mm
Dovetail Width	2.25" / 57.15mm
Fixture Height	2.50" / 63.5mm



RWP-006SS
Stainless Steel 2.25" Dovetail Fixture
\$2,100.00

Max Workpiece Weight	168 Pounds / 76.203 kg
Max Workpiece Size	12.0" / 304.8mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL303SQ
Dovetail Height	0.1875" / 4.7625mm
Dovetail Width	2.25" / 57.15mm
Fixture Height	2.50" / 63.5mm



2.75" DOVETAIL FIXTURE
RWP-403SS-12
Stainless Steel 2.75" Dovetail Fixture
\$5,750.00

Max Workpiece Weight	225 Pounds / 102.058 kg
Max Workpiece Size	8.0"W x 10.0"L x 10.0"H Steel
	203.2mm x 254mm x 254mm
Fixture Material	17-4 Stainless Steel
Number of Clamps	3 Clamps
Clamp Part Number	RWP-CL3001SQ
Dovetail Height	0.25" / 6.35mm
Dovetail Width	2.75" / 69.85mm
Fixture Height	3.875" / 98.425mm



MODULAR FIXTURE COMPATABILITY

We've designed Raptor to work with your equipment for your jobs. Attach one Raptor fixture to the dovetail of another, utilize our adapters or connect multiple fixtures into our flexible Raptor Nests, bridges, carousels and tombstones.

There are no limits to your options. Your job setup will be fast, flexible and made just for you.



1.50" MODULAR CONFIGURATIONS

RWP-012SS	RWP-022SS	RWP-019SS +RWP-214SS	RWP-025	RWP-019-4X45T	RWP-019-4X90T
RWP-001(SS) 					
RWP-004 					
RWP-013(SS) 					
RWP-026 					
RWP-027 					

0.75" MODULAR CONFIGURATIONS

RWP-031SS /
RWP-010SS

RWP-011SS

RWP-019SS
+RWP-213SS

RWP-002(SS) or RWP-030SS

RWP-015

RWP-023

RWP-024



RAPTOR IS FAST.

Raptor multi-fixtures provide a platform to attach multiple Raptor dovetail fixtures. Now you can manufacture longer parts or program your 5-axis to machine multiple parts in one load.

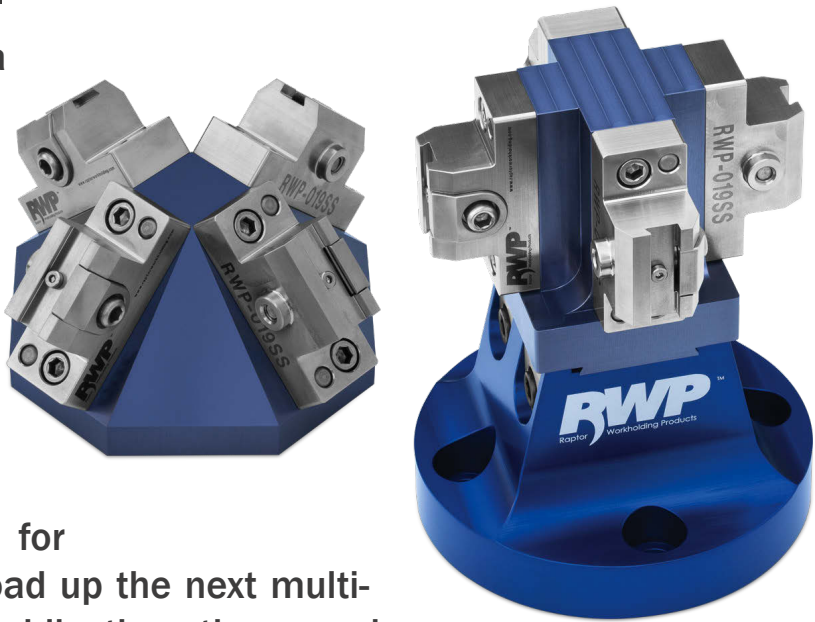
Some Raptor multi-fixtures can attach to the top of other Raptor fixtures or adapters for quick and easy change-out. Load up the next multi-fixture with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.

RWP-003-4X
Auminum 0.75" Dovetail Fixture - The nest system holds 4 RWP-003 on a single base
\$2,500.00

This Raptor Nest utilizes four included RWP-003 0.75" dovetail fixtures. This is designed specifically for five-axis machining applications and allows you to hold four workpieces on a single base.

The RWP-003-4X Raptor Nest will mount to any of our standard adapters and risers.

Max Workpiece Weight	3 Pounds / 1.360 kg Each
Max Workpiece Size	3.0" / 76.2mm Cubed Each
Fixture Material	7075-T6511 Aluminum
Number of Clamps	4 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.50" / 38.1mm



RWP-019-4X45T

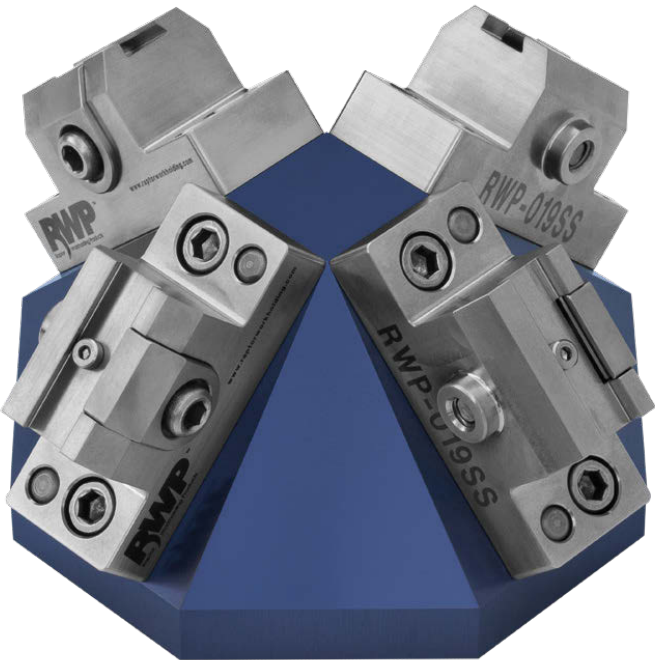
Stainless Steel 0.375" Dovetail Fixture - The nest system holds 4 RWP-019SS on a single base

\$2,150.00

This Raptor Nest utilizes four included RWP-019SS 0.375" dovetail fixtures mounted at a 45 degree angle. This Raptor Nest has a 1.5" dovetail bottom and attaches to the top of other Raptor fixtures for quick and easy change-out. Load up the next nest with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.

The RWP-019-4X45T Raptor Nest will mount to the following Raptor fixtures: RWP-001(SS),RWP-004, RWP-013(SS), or RWP-026

Max Workpiece Weight	2 Pounds / 0.907 kg Each
Max Workpiece Size	2.50" / 63.5mm Cubed Each
Fixture Material	17-4 Stainless Steel
Number of Clamps	4 Clamps
Clamp Part Number	RWP-CL305SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Fixture Height	1.25" / 31.75mm



RWP-019-4X90T

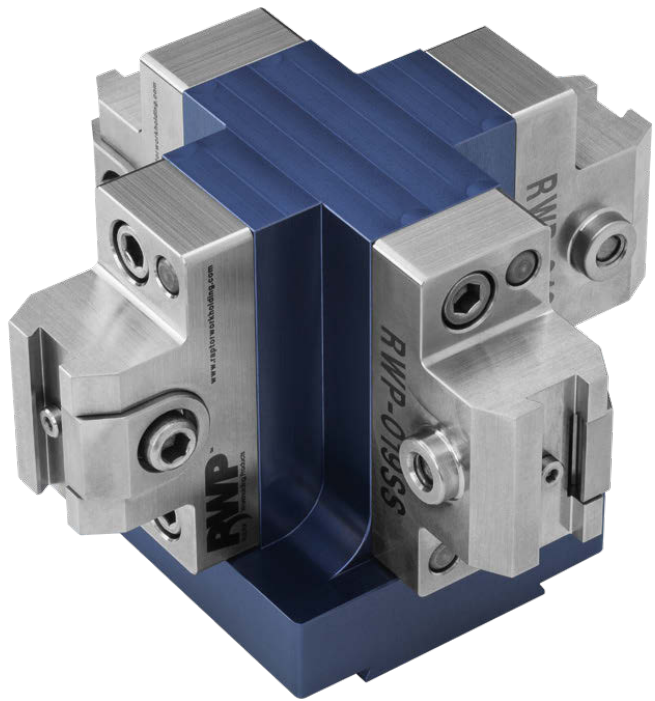
Stainless Steel 0.375" Dovetail Fixture - The Nest system holds 4 RWP-019SS on a single base

\$2,000.00

This Raptor Nest utilizes four included RWP-019SS 0.375" dovetail fixtures mounted at a 90 degree angle. This Raptor Nest has a 1.5" dovetail bottom and attaches to the top of other Raptor fixtures for quick and easy change-out. Load up the next nest with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.

The RWP-019-4X90T Raptor Nest will mount to the following Raptor fixtures: RWP-001(SS), RWP-004, RWP-013(SS), or RWP-026

Max Workpiece Weight	2 Pounds / 0.907 kg Each
Max Workpiece Size	2.50" / 63.5mm Cubed Each
Fixture Material	17-4 Stainless Steel
Number of Clamps	4 Clamps
Clamp Part Number	RWP-CL305SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Fixture Height	1.25" / 31.75mm



RWP-024-2XR

Aluminum 0.75" Dovetail Fixture - In-Line bridge system holds 2 RWP-024 on a single base

\$950.00

The RWP-024-2XR is a 0.75" dovetail bridge system for milling applications. This product is designed for modular applications: utilizing two RWP-024 0.75" fixtures in-line to hold longer parts.

Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.875" / 73.025mm

	1 Workpiece (Total)
Max Workpiece Weight	16 Pounds / 7.257 kg
Max Workpiece Size	8.5"W x 4.0"L x 4.0"H 215.9mm x 101.6mm x 101.6mm



	2 Workpieces (Each)
	8 Pounds / 3.628 kg
	4.0" / 101.6mm Cubed

RWP-024-3XR

Aluminum 0.75" Dovetail Fixture - In-Line bridge system holds 3 RWP-024 on a single base

\$1,325.00

The RWP-024-3XR is a 0.75" dovetail bridge system for milling applications. This product is designed for modular applications: utilizing three RWP-024 0.75" fixtures in-line to hold longer parts.

Fixture Material	7075-T6511 Aluminum
Number of Clamps	3 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.875" / 73.025mm

	1 Workpiece (Total)
Max Workpiece Weight	24 Pounds / 10.886 kg
Max Workpiece Size	12.5"W x 4.0"L x 4.0"H 317.5mm x 101.6mm x 101.6mm



	3 Workpieces (Each)
	8 Pounds / 3.628 kg
	4.0" / 101.6mm Cubed

RWP-024-4XR

Aluminum 0.75" Dovetail Fixture - In-Line bridge system holds 2 RWP-024 on a single base
\$1,705.00

The RWP-024-4XR is a 0.75" dovetail bridge system for milling applications. This product is designed for modular applications: utilizing four RWP-024 0.75" fixtures in-line to hold longer parts.



Fixture Material	7075-T6511 Aluminum
Number of Clamps	4 Clamps
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.875" / 73.025mm

	1 Workpiece (Total)	4 Workpieces (Each)
Max Workpiece Weight	32 Pounds / 14.514 kg	8 Pounds / 3.628 kg
Max Workpiece Size	16.5"W x 4.0"L x 4.0"H 419.1mm x 101.6mm x 101.6mm	4.0" / 101.6mm Cubed

RWP-024-6XC

Aluminum 0.75" Dovetail Fixture - 6 Fixture Carousel
\$2,800.00

The RWP-024-6XC is a 0.75" dovetail carousel for milling applications. This product is designed for modular applications: utilizing 6 RWP-024 fixtures on a carousel base to machine multiple items in 1 operation. This carousel base mounts to either RWP-006 or RWP-006SS



Max Workpiece Weight	8 Pounds / 3.628kg Each
Max Workpiece Size	4.0" / 101.6mm Cubed Each
Fixture Material	7075-T6511 Aluminum
Number of Clamps	1
Clamp Part Number	RWP-CL302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.5" / 38.1mm

RAPTOR IS ADAPTABLE.



Our workholding products can fit any machine and any situation. We have a variety of adapters, risers, and fixtures built to attach directly to the most popular CNC machines. Multiple Raptors can be mounted to tombstones, multi-fixtures and base plates.

Raptor creates new products based on our customers' valuable feedback. If you need something special, let us know.

RWP-201

Adapter for Mori Seiki NMV5000
\$600.00

Enables compatible fixtures to be mounted on the Mori Seiki NMV5000.

Material	7075-T6511 Aluminum
Product Height	3.5" / 88.9mm
Product Diameter	8.980" / 228.092mm
Bolt Circle Diameter	6.25" / 158.75mm
Connection Bolts	(4) 1/2" SHCS
Connects to	Mori Seiki NMV5000
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-202

Adapter for Haas TR210, HRT210 & HRC210
\$500.00

Enables compatible fixtures to be mounted on the Haas TR210 & HRT210

Material	7075-T6511 Aluminum
Product Height	2.0" / 50.8mm
Product Diameter	8.20" / 208.28mm
Bolt Circle Diameter	6.50" / 165.1mm
Connection Bolts	(6) 1/2" SHCS
Boss / Plug	2.00" Dia x 0.375"
Connects to	Haas TR210, HRT210 & HRC210
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-203

Adapter for Haas Series: TR160 & HRT160
\$500.00

Enables compatible fixtures to be mounted on the Haas Series: TR160 & HRT160.

Material	7075-T6511 Aluminum
Product Height	1.5" / 38.1mm
Product Diameter	6.30" / 160.02mm
Bolt Circle Diameter	5.40" / 137.16mm
Connection Bolts	(6) 3/8" SHCS T-NUTS
Boss / Plug	1.499" Dia x 0.313"
Connects to	Haas Series: TR160 & HRT160
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-205 / RWP-206
Riser for Mori Seiki NMV3000
(RWP-205 Metric Pallet / RWP-206 Inch Pallet)

\$600.00
Enables compatible fixtures to be mounted on the Mori Seiki NMV3000.

Material	7075-T6511 Aluminum
Product Height	3.5" / 88.9mm
Product Diameter	8.980 / 228.092mm
Bolt Circle Diameter	175mm (RWP-205) / 7.0" (RWP-206)
Connection Bolts	(4) M12 SHCS (RWP-205) / (4) 1/2" SHCS (RWP-206)
Boss / Plug	1.180" Dia x 0.250
Connects to	Mori Seiki NMV3000
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-207

Riser for Matsuura MAM 72-63V
\$3,500.00

Enables compatible fixtures to be mounted on the Matsuura MAM 72-63V

Material	7075-T6511 Aluminum
Product Height	5.0" / 127mm
Product Diameter	15.90" / 403.86mm
Bolt Circle Diameter	12.00" / 304.8mm
Connection Bolts	(4) 5/8" SHCS
Boss / Plug	1.995" Dia x 0.058"
Connects to	Matsuura MAM 72-63V
Fixture Compatibility	RWP-003-4X, RWP-006(SS)



RWP-208

Aluminum Emergency Adapter
\$275.00

Emergency adapter plate enables any compatible fixtures to be mounted on the pallet of your machine. You simply add the mounting holes.

Material	6061 Aluminum
Product Height	1.5" / 38.1mm
Product Diameter	7.950" / 201.93mm
Boss / Plug	2.500" Dia x 0.780 optional plug
Connects to	Any Machine
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-209

Aluminum Emergency Adapter
\$400.00

Emergency adapter plate enables any compatible fixture to be mounted on the pallet of your machine. You simply add the mounting holes.

Material	6061 Aluminum
Product Height	1.5" / 38.1mm
Product Diameter	9.055" / 229.997mm
Boss / Plug	2.500" Dia x 0.780 optional plug
Connects to	Any Machine
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-006(SS), RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-210

Riser for Mazak Variaxis 630

\$3,500.00

The RWP-210 is a riser/adapter plate that enables the RWP-006 fixture to be mounted on the Mazak Variaxis 630.



Material	7075-T6511 Aluminum
Product Height	6.0" / 152.4mm
Product Diameter	15.90" / 403.86mm
Bolt Circle Diameter	3.937" / 100mm
Boss / Plug	1.97" Dia / 49.99 mm
Connects to	Mazak Variaxis 630
Fixture Compatibility	RWP-003-4X, RWP-006(SS)

RWP-224

Aluminum Riser

\$2,750.00

This riser can be used in a modular configuration when combined with the Universal Adapter: RWP-223.



Material	7075 Aluminum
Product Height	6.0" / 152.4mm
Product Diameter	11.950" / 303.53mm
Bolt Circle Diameter	10.150" / 257.81mm
Connection Bolts	(4) 1/2"-13 SHCS
Boss / Plug	1.00" Dia. X 0.30" Receiving Hole
Connects to	Any Machine, RWP-223
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-006(SS), RWP-013(SS), RWP-018(SS), RWP-030SS

RWP-228

Aluminum Riser DMG Mori DMU50/50eco

\$600.00

The RWP-228 is a riser/adapter plate that enables compatible fixtures to be mounted on the pallet of the DMG Mori DMU50/50eco machine.



Material	7075 Aluminum
Product Height	3.494" / 88.7476mm
Product Diameter	8.96" / 227.584mm
Bolt Circle Diameter	7.015" / 178.181mm
Connection Bolts	(4) M12 SHCS
Boss / Plug	1.180" Dia x 0.25
Connects to	DMG Mori DMU50/50eco
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-003-4X, RWP-013(SS), RWP-018(SS), RWP-030SS

RWP-213SS

Stainless Steel 0.75" Adapter for RWP-019SS

\$300.00

Allows the RWP-019SS to be attached to any compatible fixtures.

Material	17-4 Stainless Steel
Height	0.5" / 12.7mm
Connects to	RWP-019SS
Fixture Compatibility	RWP-002(SS), RWP-015, RWP-023, RWP-024, RWP-030SS



RWP-214SS

Stainless Steel 1.5" Adapter for RWP-019SS

\$300.00

Allows the RWP-019SS to be attached to any compatible fixtures.

Material	17-4 Stainless Steel
Height	0.5" / 12.7mm
Connects to	RWP-019SS
Fixture Compatibility	RWP-001(SS), RWP-004, RWP-013(SS), RWP-026



RWP-601

Aluminum Extender 1" Height

\$450.00

The 1" Extender is to add height when used with either Universal Adapter: RWP-222 or RWP-223 in lieu of using a riser.

Material	7075 Aluminum
Height	1" / 25.4mm
Connects to	RWP-222, RWP-223
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-013(SS), RWP-018(SS), RWP-030SS



RWP-602

Aluminum Extender 2" Height

\$500.00

The 2" Extender is to add height when used with either Universal Adapter: RWP-222 or RWP-223 in lieu of using a riser.

Material	7075 Aluminum
Height	2" / 50.8mm
Connects to	RWP-222, RWP-223
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-013(SS), RWP-018(SS), RWP-030SS



There are many CNC machines and rotary table sizes. That's why we offer universal adapters and extenders. Our universal adapters are 2 inches tall and are available in 9 inch and 11 inch diameters. Both universal adapters have multiple mounting slots so they are guaranteed to fit your machine.

Combine the universal adapters with extenders available in either 1 inch or 2 inch sizes to provide additional height without unnecessary bulk. Please refer to charts for options.

RWP-222
Aluminum Universal Adapter 9.875" Diameter, 2" Height
\$600.00

Has mutliple slots to allow for use on multiple machine pallets or rotary tables. This universal adapter is modular in design with many options



Material	7075 Aluminum, Anodized Type II
Product Height	2.0" / 50.8mm
Product Diameter	9.875" / 250.825mm
Bolt Circle Diameter	7.00" / 177.8mm T-Slots: 0.406"W x 4.45"L
Connection Bolts	(4) 1/2"-13 UNC-2B
Boss / Plug	1.00" Dia x 0.30" Receiving Hole
Connects to	RWP-206, RWP-601, RWP-602
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-006(SS), RWP-013(SS), RWP-018(SS), RWP-030SS

*Centering plug required. Raptor's plug, sold separately, may need to be modified.

RWP-222 Universal Adapter Configuration Options

RWP-001(SS)	RWP-002(SS) / RWP-030SS	RWP-006(SS)	RWP-013(SS)	RWP-018(SS)
RWP-222 direct mount with fixture only				
RWP-222 direct mount with fixture and RWP-601 one inch extender				
RWP-222 mount with fixture and RWP-602 two inch extender				
RWP-222 mount with fixture and RWP-206 riser				

RWP-223
Aluminum Universal Adapter 11.95" Diameter, 2" Height
\$850.00

Has multiple slots to allow for use on multiple machine pallets or rotary tables. This universal adapter is modular in design with many options



Material	7075 Aluminum, Anodized Type II Class 2
Product Height	2.0" / 50.8mm
Product Diameter	11.950" / 303.53mm
Bolt Circle Diameter	10.150" / 257.81mm T-Slots: 0.53"W x 5"L
Connection Bolts	(4) 1/2"-13 UNC-2B
Boss / Plug	1.250" Dia x 0.30" Receiving Hole
Connects to	RWP-224, RWP-601, RWP-602
Fixture Compatibility	RWP-001(SS), RWP-002(SS), RWP-006(SS), RWP-013(SS), RWP-018(SS), RWP-030SS,

*Centering plug required. Raptor's plug, sold separately, may need to be modified.

RWP-223 Universal Adapter Configuration Options

RWP-001(SS)	RWP-002(SS) / RWP-030SS	RWP-006(SS)	RWP-013(SS)	RWP-018(SS)
RWP-223 direct mount with fixture only				
RWP-223 direct mount with fixture and RWP-601 one inch extender				
RWP-223 mount with fixture and RWP-602 two inch extender				
RWP-223 mount with fixture and RWP-224 riser				



NEED DOVETAIL CUTTERS?

We have a solution for that too. Our dovetail cutters are available in a variety of dovetail heights and diameters depending on your need. Raptor dovetail cutters machine the flat on the dovetail edge of your workpiece in one pass. This prevents a sharp edge on the dovetail from pressing into the corner of the fixture.

RWP-DC403U

3 Flute Uncoated 0.75" Diameter
0.125" High Dovetail Cutter
\$155.00

RWP-DC404C

4 Flute Coated 0.75" Diameter
0.125" High Dovetail Cutter
\$162.00

RWP-DC405C

4 Flute Coated 0.248" Diameter
0.0469" High Dovetail Cutter
\$92.00

RWP-DC407C

4 Flute Coated 0.35" Diameter
0.125" High Dovetail Cutter
\$120.00

RWP-DC408C

4 Flute Coated 0.45" Diameter
0.125" High Dovetail Cutter
\$132.00

RWP-DC409C

4 Flute Coated 0.248" Diameter
0.0781" High Dovetail Cutter
\$92.00

RPM & Feed Rates for RWP Dovetail Cutters

Workpiece Material	Cutting Speed	1/4" Dia.	3/8" Dia.	1/2" Dia.	3/4" Dia.
Aluminum	1600 - 2000	.0025	.0045	.006	.0075
Gray Cast Iron	490 - 590	.0008	.0012	.0018	.0024
Soft Steels > 35Rc	295 - 390	.0008	.0012	.0018	.0024
Alloy steels 4130-4340	250 - 450	.0016	.0025	.0031	.0037
Tool Steels A2, D2, S7	150 - 300	.0014	.0020	.0025	.0032
Die Steels P20, H13	250 - 450	.0016	.0025	.0031	.0037
SS 303	290 - 375	.0008	.0012	.0018	.0024
SS 304, Invar, Kovar	230 - 280	.0007	.0011	.0017	.0023
SS 304L, 316L, 13-8Ph, etc.	295 - 360	.0006	.0010	.0016	.0022
Titanium 6AlV4, 6-2222	160 - 230	.0006	.0011	.0014	.0022
High Temperature Alloys 718 Inconel, A286, Haynes	80 - 120	.0006	.0011	.0014	.0022

Notice: We have provided the manufacturer's recommended Speeds & Feeds Guidelines for our Raptor Dovetail Cutters. Raptor suggests that machinists consider their experience and their machining style (conservative or aggressive) as well as the type of machine being used and the material type being cut, and then make necessary adjustments using their best judgement taking into consideration all of the variables in the machining process.

REPLACEMENT CLAMP KITS

RWP-KIT-301SQ

Replacement Clamp Kit
\$185.00

Fixture Compatibility RWP-001(SS), RWP-004, RWP-013(SS), RWP-026, RWP-027, RWP-401-11



RWP-KIT-302SQ

Replacement Clamp Kit
\$185.00

Fixture Compatibility RWP-002(SS), RWP-003, RWP-003-4X, RWP-007SS, RWP-011SS, RWP-012SS, RWP-015, RWP-023, RWP-024, RWP-024-2XR, RWP-024-3XR, RWP-024-4XR, RWP-024-6XC, RWP-025, RWP-030SS, RWP-034SS, RWP-405

RWP-KIT-303SQ

Replacement Clamp Kit
\$442.00

Fixture Compatibility RWP-006(SS)

RWP-KIT-304SQ

Replacement Clamp Kit
\$180.00

Fixture Compatibility RWP-008SS, RWP-009SS, RWP-010SS

RWP-KIT-305SQ

Replacement Clamp Kit
\$180.00

Fixture Compatibility RWP-019SS, RWP-019-4X45T, RWP-019-4X90T

RWP-KIT-306SQ

Replacement Clamp Kit
\$185.00

Fixture Compatibility RWP-017SS, RWP-018(SS), RWP-022SS

RWP-KIT-307SQ

Replacement Clamp Kit
\$180.00

Fixture Compatibility RWP-031SS, RWP-032SS

RWP-8-32

8/32 x 1/4 Replacement Locating Pins
\$5.00

These replacement locating pins are for all Raptor Fixtures except the RWP-019SS.
Five replacement pins per pack.



RWP-8-32MO

8/32 x .165 Replacement Locating Pins
\$25.00

These replacement locating pins are for the RWP-019SS only.
Five replacement pins per pack.



RWP-PLUG-208

RWP-208 Plug with One Screw
\$33.00

Plug comes in standard size. Plug O.D. will need to be shaped to fit the hole size of each related machine or rotary table to which that item is being connected

Compatibility RWP-018, RWP-208, RWP-209, RWP-222, RWP-223



RWP-PLUG-208SS

RWP-208SS Plug with One Screw
\$63.00

Plug comes in standard size. Plug O.D. will need to be shaped to fit the hole size of each related machine or rotary table to which that item is being connected

Compatibility RWP-018SS



FREQUENTLY ASKED QUESTIONS

The holding area looks small. Will this system be strong enough to hold my part?

The small clamping area is a key feature of Raptor which allows greater clearance to the workpiece versus other solutions which clamp on the outside and get in your way. This also means far less wasted material over traditional bulky holding vices which require more material to achieve the same holding strength. Raptor dovetail fixtures allow you to overhang your workpiece off of the top of the fixture surface. Therefore, workpieces can be considerably larger than the actual fixture itself. The rigidity of the Raptor design uses stainless steel dovetail clamps to press the workpiece into an opposing solid shoulder. The angles on the workpiece that the clamps engage help pull the workpiece downward. This enhances the holding strength, prevents chatter and gives you greater flexibility in your operations. Raptor fixtures can hold workpieces up to 150 pounds on dovetails as small as 1/8".

Still not convinced? Ask us for a referral to another shop already using the product and we will gladly send you a list of names of satisfied customers. Or, come visit one of our Raptor manufacturing facilities to take a look for yourself.

Why should I choose Raptor Dovetail Fixtures?

Raptor was born out of necessity. We looked at some other options and developed a design that fit the needs of our shop and workflow. Raptor allows unprecedented access and clearance to all five sides of the workpiece and is designed to hold the fixture rigidly in place. Our dovetail cutters machine the flat on the dovetail edge of your workpiece in one pass. This prevents a sharp edge on the dovetail from pressing into the corner of the fixture.

One of the concerns with other workholding solutions is the extreme force the operator needs to apply to secure the workpiece. Raptor is specially designed to press the workpiece into a solid shoulder and pull it down. The clamps can be engaged by hand with a simple T-handle wrench without the effort of other solutions.

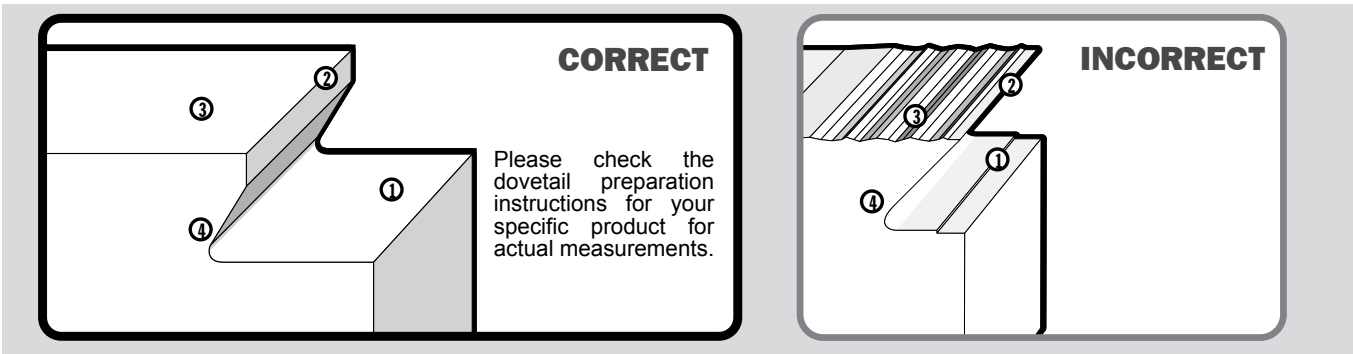
Workpieces are loaded and aligned with an optional center locating pin, locked in place with a quick turn of the T-handle wrench and ready to go. Once the cycle is completed, the workpiece can be unloaded just as easily– simply loosen the clamps and lift it off. Tired of making a different fixture for every job? Make the switch to a solution that will change the way you think about every set-up. Easy. Simple. Smart. Still not convinced? Ask us to send you a demo fixture for a free 30 day trial.

Where can I buy Raptor Workholding Fixtures?

Raptor products are available for purchase either by contacting us directly, via phone or ordering online at RaptorWorkholding.com, or from authorized retailers near you. Ask your tooling supplier for Raptor workholding solutions. If they don't yet carry Raptor workholding products, ask them to call us at **1-800-824-8333**. Once you try Raptor and experience the ease of use, simplified workflow and increased access, you'll never want to go back to your old workholding solutions.

Prices and specifications subject to change. Please visit RaptorWorkholding.com for latest information.

DOVETAIL TROUBLESHOOTING



1. Clean, even surface in dovetail cut

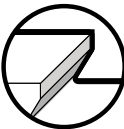


Correct:
Dovetail cutter has cleaned up entire surface. This leaves more of workpiece in contact with fixture for extra stability.



Incorrect:
Surface is cut unevenly, compromising rigidity.

2. Small edge break, not a sharp point

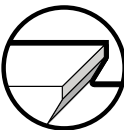


Correct:
Cutter should leave a small edge break. Exact measurements can be found in the dovetail preparation specs for your specific product.



Incorrect:
Dovetail edge comes to a sharp point interfering with proper fit.

3. Bottom surface of workpiece is smooth



Correct:
Workpiece bottom surface is smooth and free of burrs and ridges.

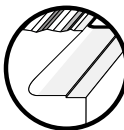


Incorrect:
Bottom surface of workpiece is left rough, interfering with proper clamping.

4. Correct angle and radius of dovetail cut



Correct:
Dovetail is cut to 60 degrees with an interior radius matching dovetail preparation specs for your product. Dovetail gauge should fit perfectly.



Incorrect:
Angle or interior radius is incorrect. May indicate cutter needs to be replaced.

5. Locating pin slots precise and accurate



Correct:
Locating pin slots are accurately placed and cut with straight walls following exact measurements found in dovetail preparation specs.

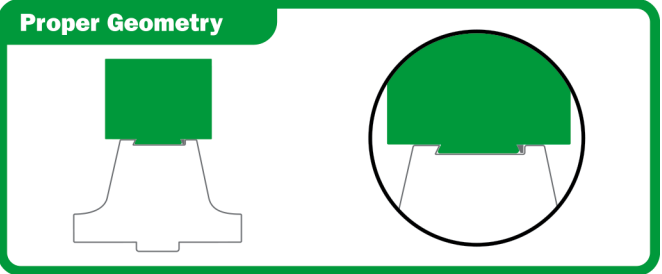
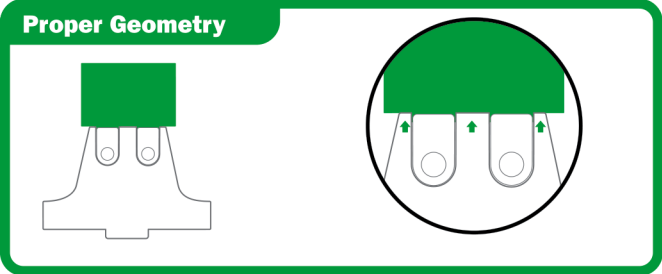


Incorrect:
Locating pin slots are in wrong location or have tapered walls harming repeatability of part.

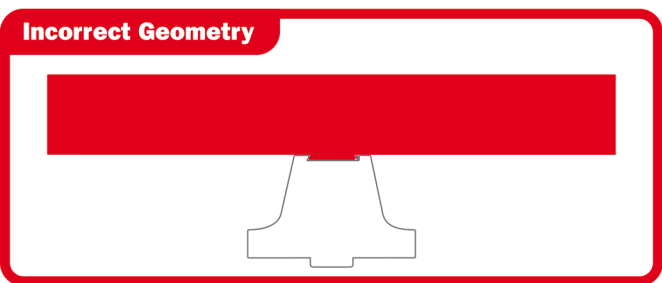
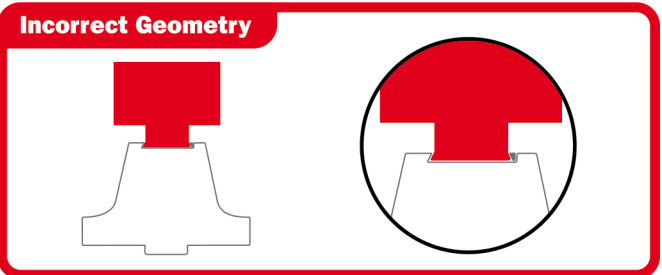
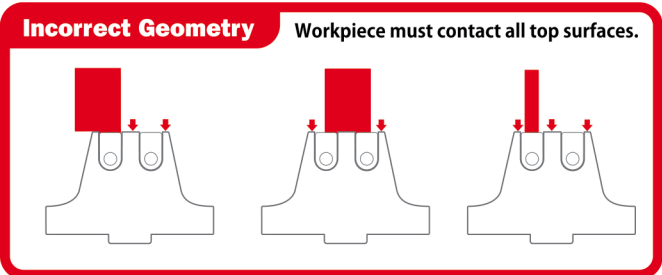
PREFERRED GEOMETRY

When choosing a dovetail fixture and determining the geometry of your workpiece, it is important to ensure the proper fit. Your workpiece should contact the entire top of the fixture and have modest overhang for additional strength. Failure to follow these guidelines can result in a broken fixture or workpiece and harm repeatability.

PROPER GEOMETRY



INCORRECT GEOMETRY



PRODUCT SAFETY

Please read and comply with all instructions regarding proper use of this product.

Warning: Do not Alter this Product: Purchaser / Owner must not alter or modify product in any way.

Use of this product for anything other than what it was intended for may cause damage to the tool or personal injury.

WARNING: Failure to follow these warnings and instructions may result in property damage, serious bodily injury, and/or death.

Warning: Purchaser / Owner must ensure that product is installed according to these instructions. Installation of this product must conform to the guidelines provided.

KEEP OUT OF THE REACH OF CHILDREN - PROFESSIONAL USE ONLY

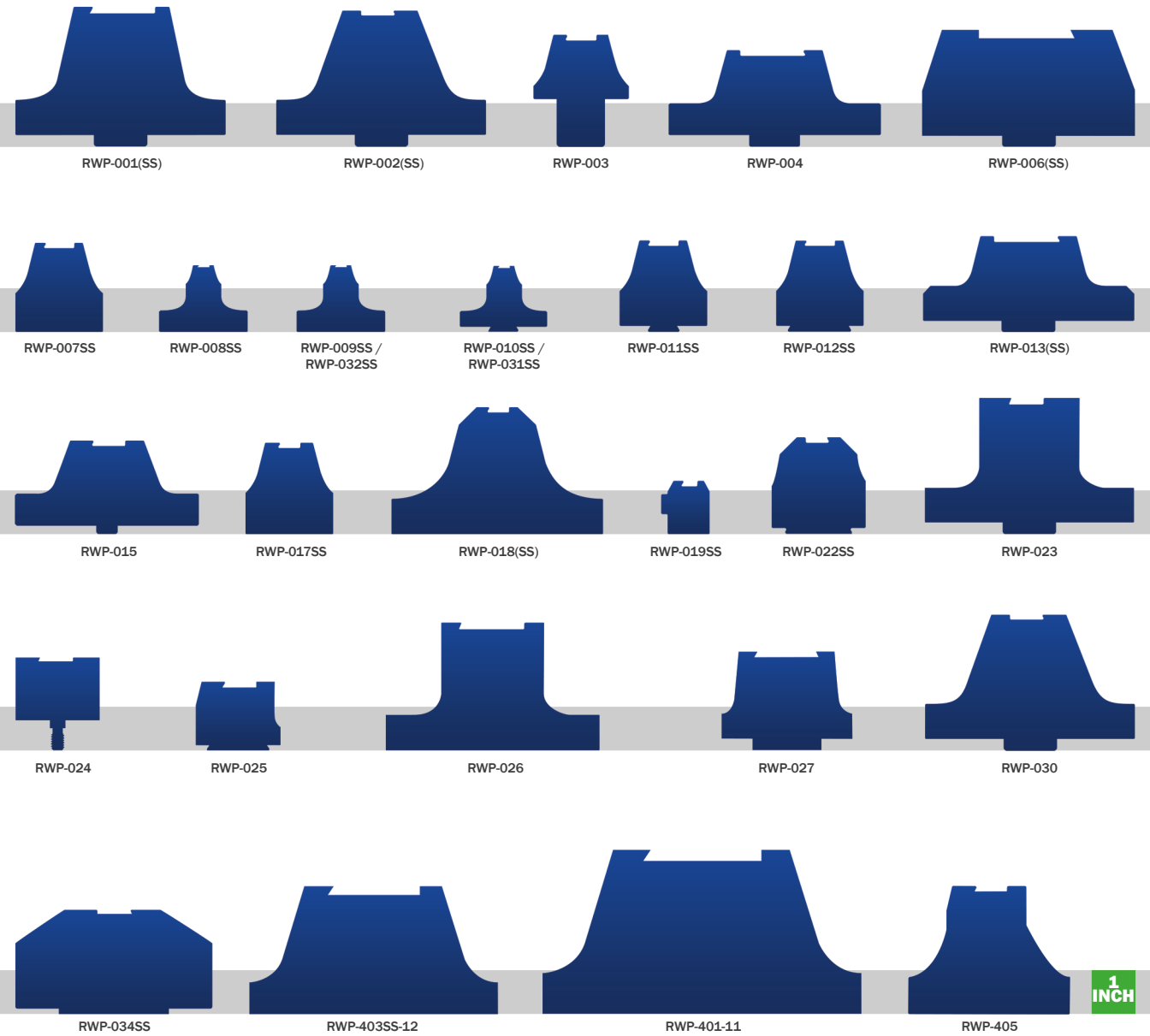
- * Read and follow all operating instructions as well as all warnings and precautions included with your RWP product before attempting to use it.
- Be sure to familiarize yourself with the item before attempting to use it
 - Review all instructions and precautions periodically to maintain awareness
 - Do not drop or otherwise abuse this item.
 - Never use a damaged or malfunctioning product
 - Do not attempt to modify the product construction or use unapproved accessories
 - Keep product out of the reach of anyone who has not read all enclosed instructions and warnings

USAGE GUIDELINES

- Fixtures must be bolted down firmly to your Pallet or Table using the screws provided.
- Do not alter or replace any screw, spring or clamp with anything other than the exact item provided.
- Tighten clamps only to published torque limits. Do not exceed torque limits.
- When machining your workpiece with the dovetail it is critical that you follow our sketches. Failure to do so may result in the workpiece coming loose and or damage to your fixture. Pay close attention to required sizes and radius requirements on the sketches.
- Failure to follow these instructions may result in injury or damage to your workpiece, tools, fixtures and/or machine.

RAPTOR IS FLEXIBLE.

The parts you make come in different sizes and so does Raptor. Our Micro-Raptors work great for small parts while our Raptor Rails, Raptor Nests and Raptor Tombstone solutions can hold multiple parts or workpieces as heavy as 150 pounds.



Similar-sized fixtures omitted for clarity.



RaptorWorkholding.com



Patent No. US8,672,310 B2

Raptor Product Guarantee

We are so confident in our workholding products that we offer our customers a 30-day no-questions-asked return policy on our dovetail fixtures, adapters and risers. If you are not satisfied with the product for any reason, return it for a full refund*

Raptor Products are protected with a 1 year limited warranty for parts*

* Subject to the terms as described in our Limited Warranty Policy.