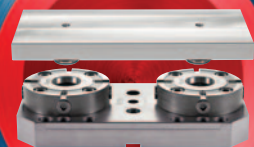
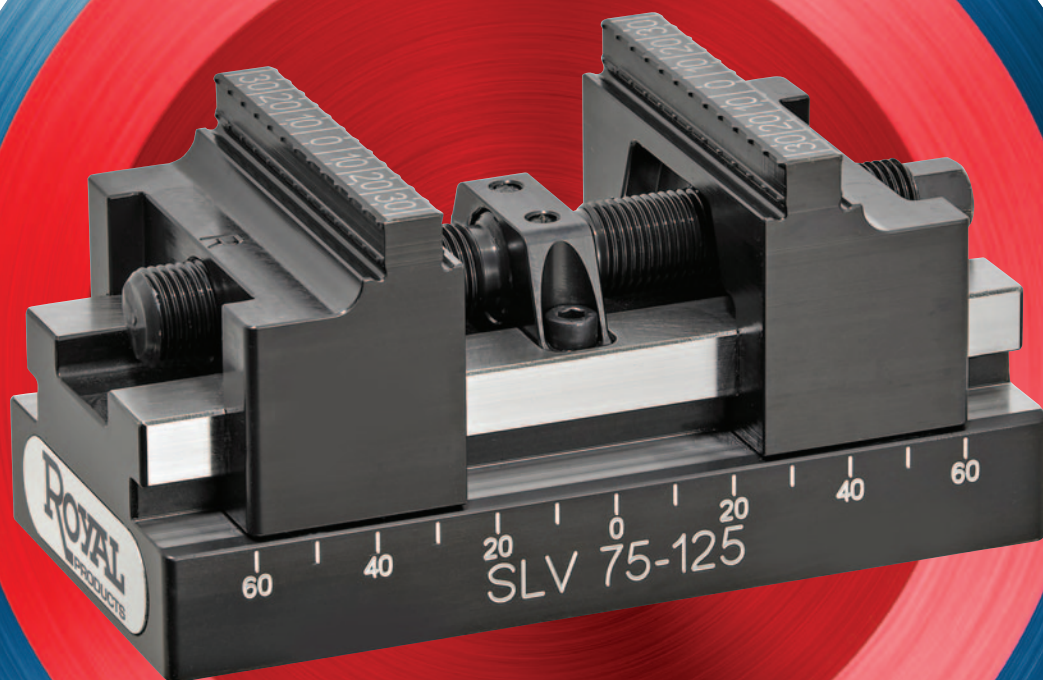




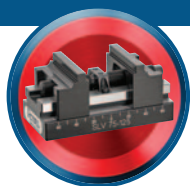
WORKHOLDING FOR MACHINING CENTERS

SLV™ – NEW SELF-CENTERING VISES WITH TREMENDOUS GRIP FORCE AND RIGIDITY

Z-LOCK™ – A ZERO-POINT WORKHOLDING SYSTEM WITHOUT ALL OF THE \$000'S



ROYAL
PRODUCTS
Optimize everything.



ROYAL SLV™ SELF-CENTERING VISES

SLV → Sturdy Little Vise

Superior Design

Outstanding performance over other self-centering vises is achieved through a combination of several unique design elements:

- ✓ Extremely rigid one-piece jaw design is modeled after a CNC box way to minimize deflection through captive, multi-plane contact. Jaw lift is virtually non-existent.
- ✓ The massive drive spindle is elevated to apply the clamping force much closer to the workpiece compared to other vises.
- ✓ The hardened vise body is machined from a proprietary tool steel for maximum strength and rigidity.

Incredible Grip Force

The Royal SLV™ Self-Centering Vise has been optimized to deliver tremendous grip force and rigidity in a very compact package. This is one **Sturdy Little Vise!**

Never Needs Realignment

The central guide bushing is both pinned and bolted to the vise body to maintain perfect alignment and eliminate any need for readjustment.

Multiple Jaw Options

All Royal **Sturdy Little Vises** come equipped with a set of standard-grip jaws. Additional jaw models are available for more specialized applications.

No More Cutting Dovetails

The Royal SLV™ securely grips workpieces at a depth of as little as 3mm (1/8"), reducing scrap and eliminating the need to cut dovetails or emboss the workpiece contact surface.

Precision Repeatability

0.0006" or better repeatability – guaranteed.

Great for 5-Axis

Mounting pyramids available for multi-vise setups – especially useful in five-axis applications.

Reduced Chip Buildup

Shallow throat depth allows for easy and complete chip blow-off.

Same-Day Shipping

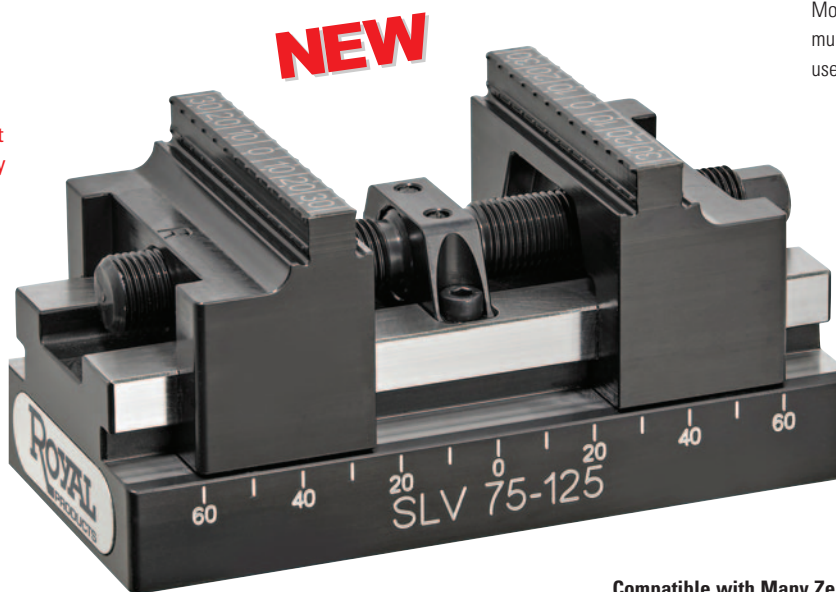
All vises, jaw sets, and pyramids are in stock for same-day shipping.

Compatible with Many Zero-Point Receivers

The Royal SLV™ is also configured to accept the mounting studs of other zero-point systems based on common 52 and 96mm bolt patterns (see compatibility chart).

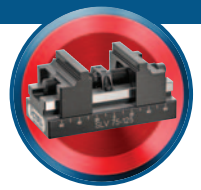
Direct Integration with Royal Z-Lock™

The Royal SLV™ is the perfect complement to our Z-Lock™ Zero-Point Workholding System – each SLV™ vise contains a central tapped hole to accept our heavy-duty Z-Lock™ positioning stud).



Never Let Your Workholding be the Limiting Factor in Your Machining Processes – Try a Royal SLV™ on Your Toughest Application RISK-FREE!

ROYAL SLV™ SELF-CENTERING VISES

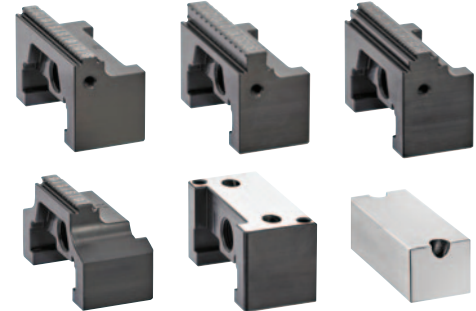


Extreme Clamping Force



Elevated Drive Spindle
applies tremendous clamping force because it is positioned much closer to the workpiece than other vises

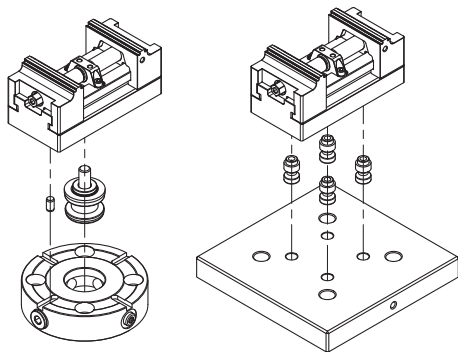
Extremely Rigid Box Way
construction virtually eliminates jaw lift



Multiple Jaw Styles to Handle a Wide Range of Applications

Universal Zero-Point Receiver Compatibility

- Royal SLV™ Vises have been designed for **compatibility with many popular zero-point quick-change receivers.**
- If you don't already own a zero-point system, it's hard to beat the Royal Z-Lock™ in terms of accuracy, rigidity, and cost. See page 78-81 for details.
- If you've already standardized on a zero-point system that utilizes 52 or 96mm square mounting patterns, you can still upgrade your vises to the Royal SLV™ and enjoy increased performance, productivity, and profits. Simply screw your studs right into the hardened vise base. See receiver compatibility chart below.



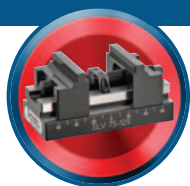
Zero-Point Mounting Compatibility

| SLV™ VISE MODEL | ROYAL Z-LOCK™ (M12X1.75 STUD) | 52 MM SQUARE PATTERN (M8X1.25 STUDS) | 96 MM SQUARE PATTERN (M10X1.5 STUDS) |
|-----------------|-------------------------------|--------------------------------------|--------------------------------------|
| SLV 54-70 | X | X | X |
| SLV 75-125 | ✓ | ✓ | X |
| SLV 75-150 | ✓ | ✓ | X |
| SLV 125-180 | ✓ | ✓ | ✓ |
| SLV 125-230 | ✓ | ✓ | ✓ |

Multi-Vise Pyramids Optimize 5-Axis Production



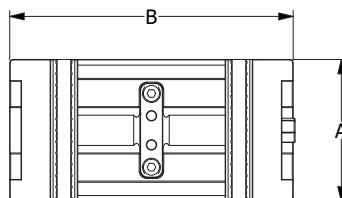
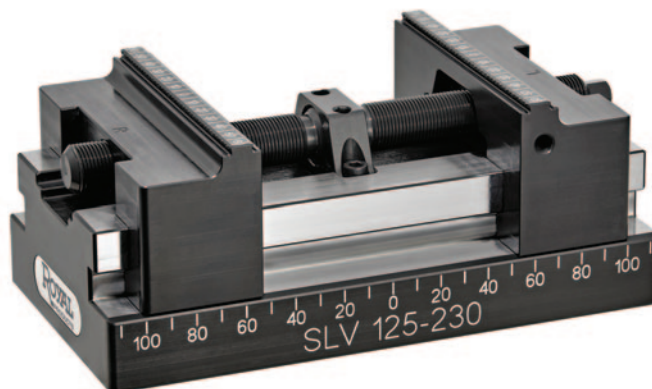
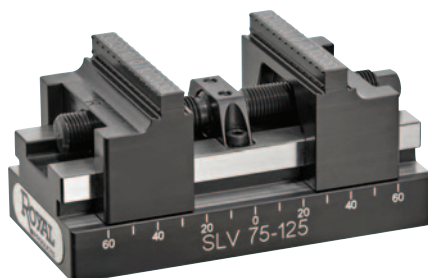
- With Royal Multi-Vise Pyramids, you can take advantage of 5-axis flexibility and **increase throughput by machining several parts in a single setup.**
- Model 66051 is made from aluminum, includes three SLV™ 54-70 vises, and is machined to accept three additional 54-70 vises (sold separately).
- Model 66052 is made from hardened steel and includes three SLV 75-125 vises.
- All vises are supplied with standard jaws.
- Removable lifting ring supplied for installation ease.



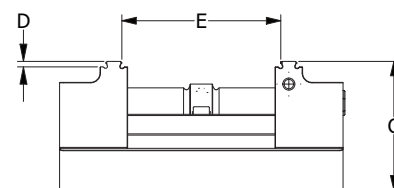
ROYAL SLV™ SELF-CENTERING VISES

Vise Models For All Applications

NEW



Top View



Side View

Royal SLV™ Self-Centering Vises

| SLV™ VISE MODEL | A BODY/JAW WIDTH | B BODY LENGTH | C HEIGHT WITH STANDARD JAWS | D CLAMPING DEPTH WITH STANDARD JAWS | E MIN/MAX CLAMPING RANGE | MAX TIGHTENING TORQUE (ft.-lbs.) | MAX CLAMPING FORCE (lbs.) | WEIGHT WITH STANDARD JAWS (lbs.) | PART NUMBER | PRICE** |
|-----------------|------------------------|---------------------|-----------------------------------|---|--------------------------------|--|---------------------------------|--|-------------|---------|
| SLV 54-70 | 2.13/1.57* | 2.76 | 1.77 | 0.11 | 0.24-1.85 | 29 | 2,250 | 2 | 66000 | \$1,065 |
| SLV 75-125 | 2.95 | 4.92 | 2.68 | 0.11 | 0.24-4.01 | 52 | 3,600 | 8 | 66002 | 1,285 |
| SLV 75-150 | 2.95 | 5.91 | 2.68 | 0.11 | 0.24-5.00 | 52 | 3,600 | 9 | 66004 | 1,330 |
| SLV 125-180 | 4.92 | 7.09 | 3.62 | 0.11 | 0.24-6.06 | 73 | 5,850 | 26 | 66008 | 2,385 |
| SLV 125-230 | 4.92 | 9.06 | 3.62 | 0.11 | 0.24-8.03 | 73 | 5,850 | 31 | 66010 | 2,560 |

*For the model 54, please note that the jaw width is narrower than the body.

** Price includes one set of standard jaws and wrenches.

Additional dimensional information available at royalproducts.com



66051

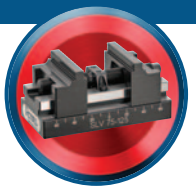


66052

Royal SLV™ Multi-Vise Pyramids

| FOR VISE MODEL | PYRAMID DIAMETER | COMBINED WEIGHT OF PYRAMID AND THREE VISES (lbs.) | PART NUMBER | PRICE* |
|-------------------|---------------------|--|-------------|---------|
| SLV 54-70 | 8.4 | 20 | 66051 | \$8,340 |
| SLV 75-125 | 14.7 | 44 | 66052 | 7,240 |

* Includes pyramid and three vises with standard jaws.



Royal SLV™ Jaw Sets



Royal SLV™ Standard-Grip Jaw Set

Included with Each Vise

| FITS VISE MODEL | CLAMPING WIDTH | CLAMPING DEPTH | PART NUMBER | PRICE/SET |
|-----------------|----------------|----------------|-------------|--------------|
| SLV 54 | 1.57 | 0.11 | 66020 | \$557 |
| SLV 75 | 2.95 | 0.11 | 66022 | 651 |
| SLV 125 | 4.92 | 0.11 | 66024 | 1,135 |



Royal SLV™ Double-Grip Jaw Set

Increased Clamping Depth and a Second Row of Serrations for Very Aggressive Machining

| FITS VISE MODEL | CLAMPING WIDTH | CLAMPING DEPTH | PART NUMBER | PRICE/SET |
|-----------------|----------------|----------------|-------------|--------------|
| SLV 75 | 2.95 | 0.35 | 66026 | \$798 |
| SLV 125 | 4.92 | 0.35 | 66028 | 1,395 |



Royal SLV™ Combo Jaw Set

Both Serrated and Smooth Gripping Surfaces for Roughing and Finishing

| FITS VISE MODEL | CLAMPING WIDTH | CLAMPING DEPTH | PART NUMBER | PRICE/SET |
|-----------------|----------------|----------------|-------------|--------------|
| SLV 75 | 2.95 | 0.11/0.31 | 66034 | \$783 |
| SLV 125 | 4.92 | 0.11/0.42 | 66036 | 1,240 |



Royal SLV™ Slim-Grip Jaw Set

Extra Clearance for Narrow Workpieces

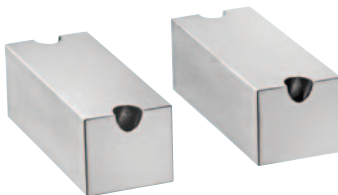
| FITS VISE MODEL | CLAMPING WIDTH | CLAMPING DEPTH | PART NUMBER | PRICE/SET |
|-----------------|----------------|----------------|-------------|--------------|
| SLV 75 | 1.73 | 0.11 | 66038 | \$707 |



Royal SLV™ Base Jaw Set

Use with Machinable Top Jaws

| FITS VISE MODEL | CLAMPING WIDTH | CLAMPING DEPTH | PART NUMBER | PRICE/SET |
|-----------------|----------------|----------------|-------------|--------------|
| SLV 75 | 2.95 | N/A | 66040 | \$683 |
| SLV 125 | 4.92 | N/A | 66042 | 1,195 |



Royal SLV™ Machinable Aluminum Top Jaw Set

Use with Base Jaws

| FITS VISE MODEL | CLAMPING WIDTH | CLAMPING DEPTH | PART NUMBER | PRICE/SET |
|-----------------|----------------|----------------|-------------|--------------|
| SLV 75 | 2.95 | 0.9 | 66044 | \$171 |
| SLV 125 | 4.92 | 1.0 | 66046 | 246 |



ROYAL Z-LOCK™ QUICK-CHANGE WORKHOLDING SYSTEM

Quick-Change Workholding For All Machining Centers

- ✓ Precision Receiver Mounts to Your Machining Center Table or Five-Axis Rotary Table
- ✓ Mount Workpieces to Top Plates Offline, Keeping Your Spindles in the Cut for Maximum Production
- ✓ Greatly Reduces Setup Times - Top Plates Interchange in Seconds with Precision Repeatability
- ✓ The Royal Z-Lock™ Keeps Your Machining Centers Making Parts – and Profits!



Simple Manual Actuation

A few turns of a hex key and it's locked – no risk of the top plate loosening from vibration, spring wear, or air/hydraulic failure. The Royal Z-Lock™ is also a breeze to implement – no external air or hydraulic lines to install so you'll be running parts more efficiently in no time!

Precision Repeatability

X-axis – 0.0001"

Y-axis – 0.0001"

Z-axis – 0.0005"

Extremely Powerful Clamping Force

Easily achieves up to 11,240 lbs. (50kN) of clamping force – far greater than other zero-point systems (even those with a "turbo" feature). The hardened locking screw contains a large, sturdy engagement surface for failsafe operation.

Massive Locating Surface

Up to 50% greater surface area than other brands for **superior stability and vibration damping**.

No "Machinist's Touch" Required When Changing Top Plates

All stud models have been optimized to eliminate binding, making top plate changeovers a breeze.



Simple Manual Actuation – no air or hydraulic lines to mess with. Each receiver uses a single clamping screw that can be fitted to any of the four available locations for easy access.

Designed to overcome the limitations and high-cost of other zero-point systems, the Royal Z-Lock™ is a simple, precise, and affordable quick-change workholding system that offers unmatched clamping strength.

Royal Z-Lock™

An Affordable Quick-Change Workholding System That Makes Sense for All Shops!

ROYAL Z-LOCK™ QUICK-CHANGE WORKHOLDING SYSTEM



How it Works:

The heavy-duty clamping screw of the Royal Z-Lock™ rigidly and precisely engages the matching tapered groove in the stud, providing secure, consistent clamping force. Simple – yet powerful and reliable!



Other systems rely on spring-loaded balls to retain the stud. Over time, springs weaken, reducing the force they can apply to the balls. This can result in vibration and increased risk of the top plate disengaging under heavy machining loads.

Royal Z-Lock™



Other Systems

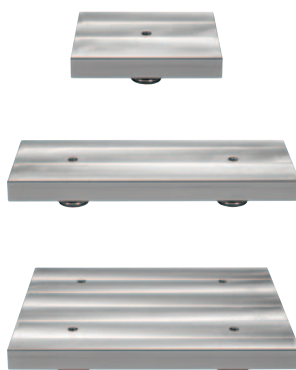


Easy to Understand, Easy to Use, Easy to Order!



Receiver with Baseplate

- Available from stock in single, dual, and quad configurations.
- Baseplates include multiple bolt-patterns to accommodate most common machining center T-slot spacing.
- Single receivers may be ordered without baseplates for tombstone and angle plate applications.



Top Plates

- Made of machinable aluminum to accommodate vises, collet fixtures, Mitee-Bite® clamps, etc. – the possibilities are limitless.
- All top plates are precision ground and include the appropriate studs pre-mounted and ready to go.
- 1" thick to accommodate milled locating pockets up to 1/4" deep.



Studs

- Three stud types for single, dual, and quad setups.
- Hardened and ground to handle thousands of changeovers.
- Studs are included with all top plates and are also available separately for customers who wish to use their own top plates, fixtures, or even screw them into the workpiece.

*Mitee-Bite is a registered trademark of Mitee-Bite Corporation.



ROYAL Z-LOCK™ QUICK-CHANGE WORKHOLDING SYSTEM

Receiver Specifications

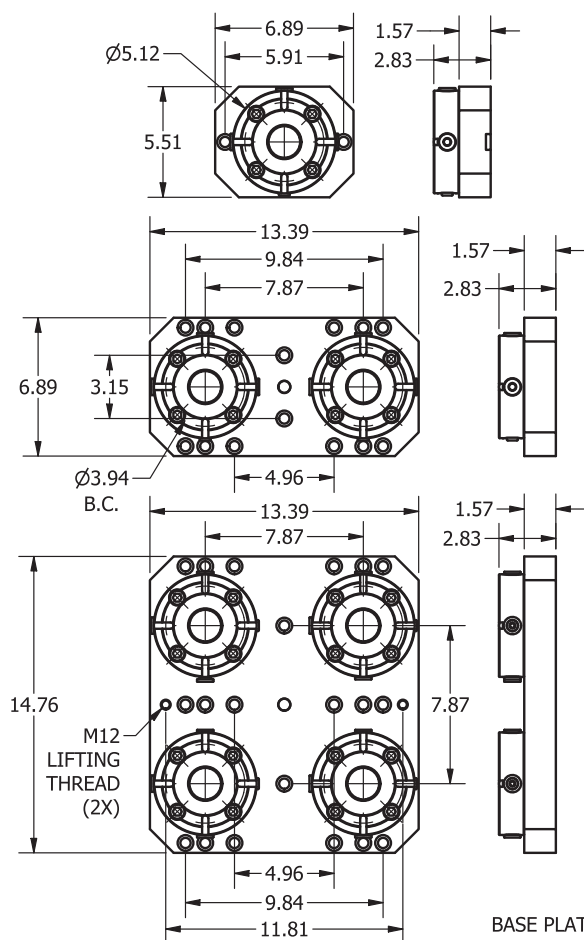
| | |
|----------------------|--------------------|
| Clamping Force | 11,240 lbs. |
| X-Axis Repeatability | 0.0001" or better |
| Y-Axis Repeatability | 0.0001" or better |
| Z-Axis Repeatability | 0.00005" or better |
| Receiver Height | 1.25" |
| Receiver Diameter | 5.12" |
| Receiver Weight | 5.6 lbs. |

Top Plate Stud Parameters

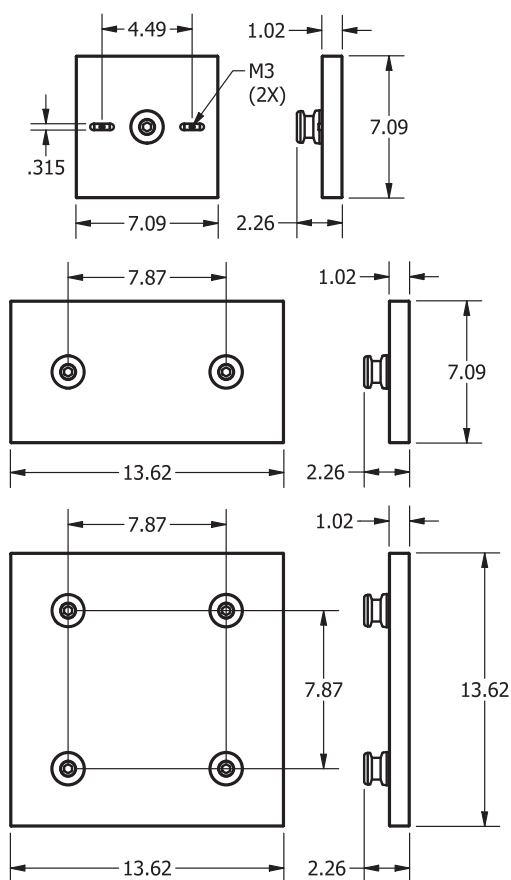
| | |
|--------|---|
| Single | 1x Positioning Stud |
| Dual | 1x Positioning Stud 1x Orienting Stud |
| Quad | 1x Positioning Stud 1x Orienting Stud 2x Clamping Studs |



RECEIVERS - BASE PLATES



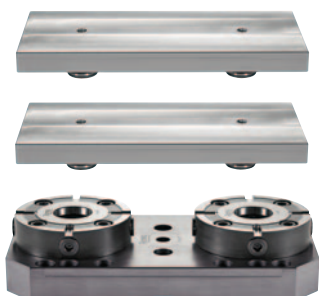
TOP PLATES



BASE PLATE HARDWARE - M12 X 1.75 SHCS

Important – all dimensions for reference only. If you plan to machine your own mating components, please contact Royal for precise dimensions/tolerances.

ROYAL Z-LOCK™ QUICK-CHANGE WORKHOLDING SYSTEM



Not Sure What to Order? Here's a Popular Setup:

- ✓ 1 pc. Royal Z-Lock™ Dual **Part Number 65002**
(Includes two receivers mounted to baseplate)
 - ✓ 2 pcs. Z-Lock™ Top Plate Dual **Part Number 65022**
(One plate gets loaded offline while the other is working inside your machining center)
- Note:** Studs included with all top plates – no need to order separately.

Royal Z-Lock™ Zero-Point Workholding Systems

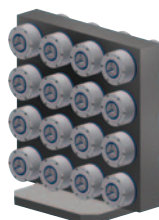
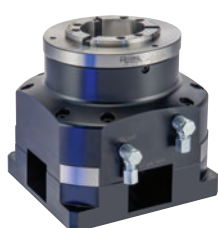
| DESCRIPTION | PART NUMBER | PRICE |
|--|-------------|----------------|
| Z-Lock™ Single (one receiver mounted to baseplate) | 65001 | \$1,490 |
| Z-Lock™ Dual (two receivers mounted to baseplate) | 65002 | 2,570 |
| Z-Lock™ Quad (four receivers mounted to baseplate) | 65004 | 4,940 |
| Z-Lock™ Top Plate Single (includes one positioning stud and two keys) | 65021 | 485 |
| Z-Lock™ Top Plate Dual (includes one positioning stud and one orienting stud) | 65022 | 768 |
| Z-Lock™ Top Plate Quad (includes one positioning stud, one orienting stud, and two clamping studs) | 65024 | 1,490 |
| Z-Lock™ Receiver Only (no baseplate) | 65000 | 790 |

Note – due to the wide variety of T-slot configurations, baseplate mounting bolts and T-nuts are not included.

Royal Z-Lock™ Accessories and Parts

| DESCRIPTION | PART NUMBER | PRICE |
|--|-------------|--------------|
| Positioning Stud | 65030 | \$140 |
| Orienting Stud | 65031 | 140 |
| Clamping Stud | 65032 | 140 |
| Receiver Bore Cover (protects receiver bore from chips when Z-Lock™ is not in use) | 65033 | 98 |
| Base Plate Reducer Bushing M12-M10 (for machines with narrow T-slots) | 65035 | 21 |
| Anti-Rotation Keys (included with Single Top Plate, not needed for Dual or Quad) | 65034 | 37 |
| Replacement Locking Screw | 65036 | 57 |

Additional Machining Center Workholding Solutions from Royal



- ✓ Power-Block™ Collet Fixtures
- ✓ I.D. Workholding Fixtures
- ✓ Custom Collet Profiles
- ✓ Custom Multi-Unit Systems