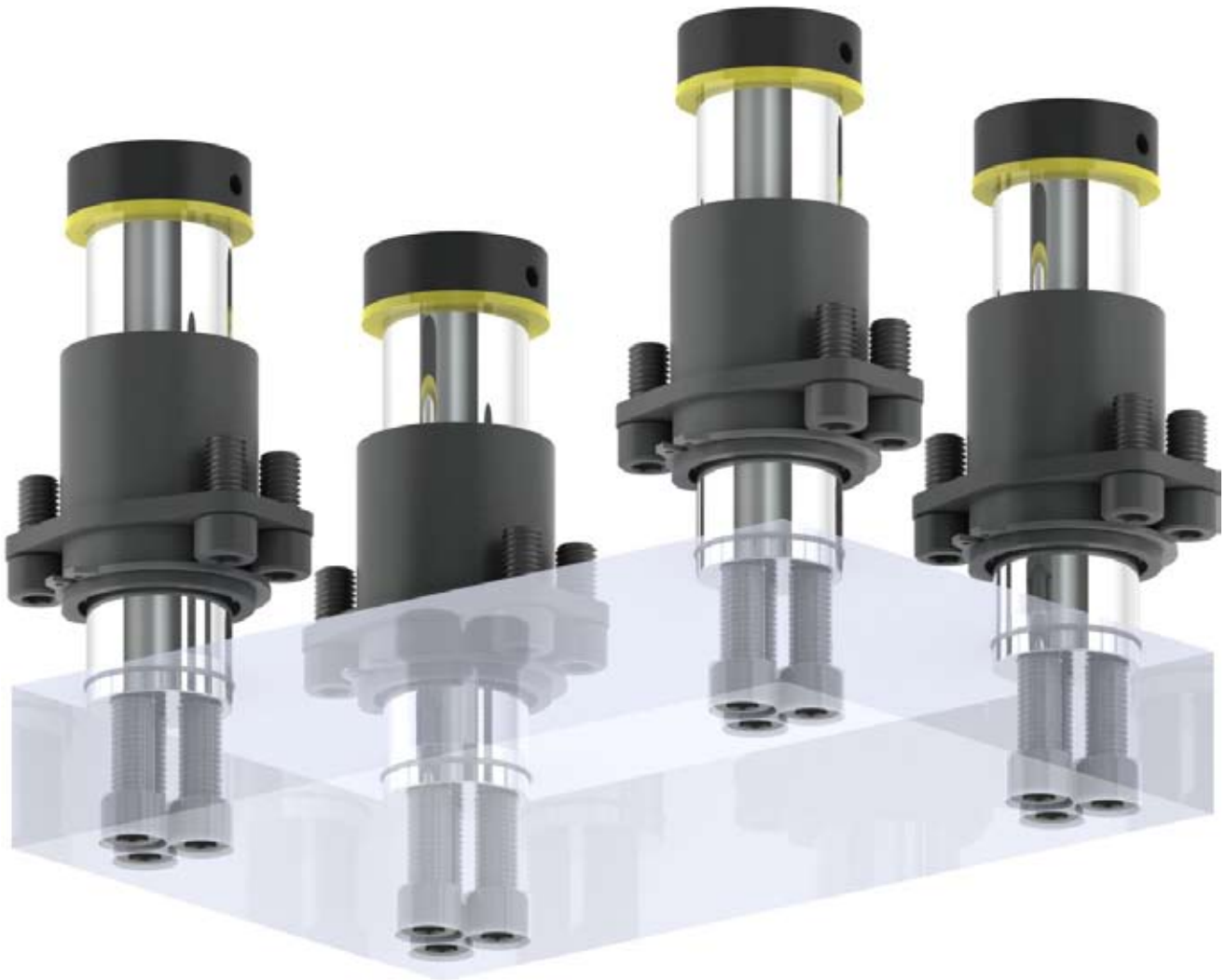


STANDARD LIFTERS

MAKING INNOVATION THE STANDARD®



Why Use Guided Keepers



Guidance and Retention - ALL-IN-ONE

May be covered by one or more of the following patents:

6,848,290 - 7,024,910 - 7,730,757 - 7,950,262 - and other Patents Pending

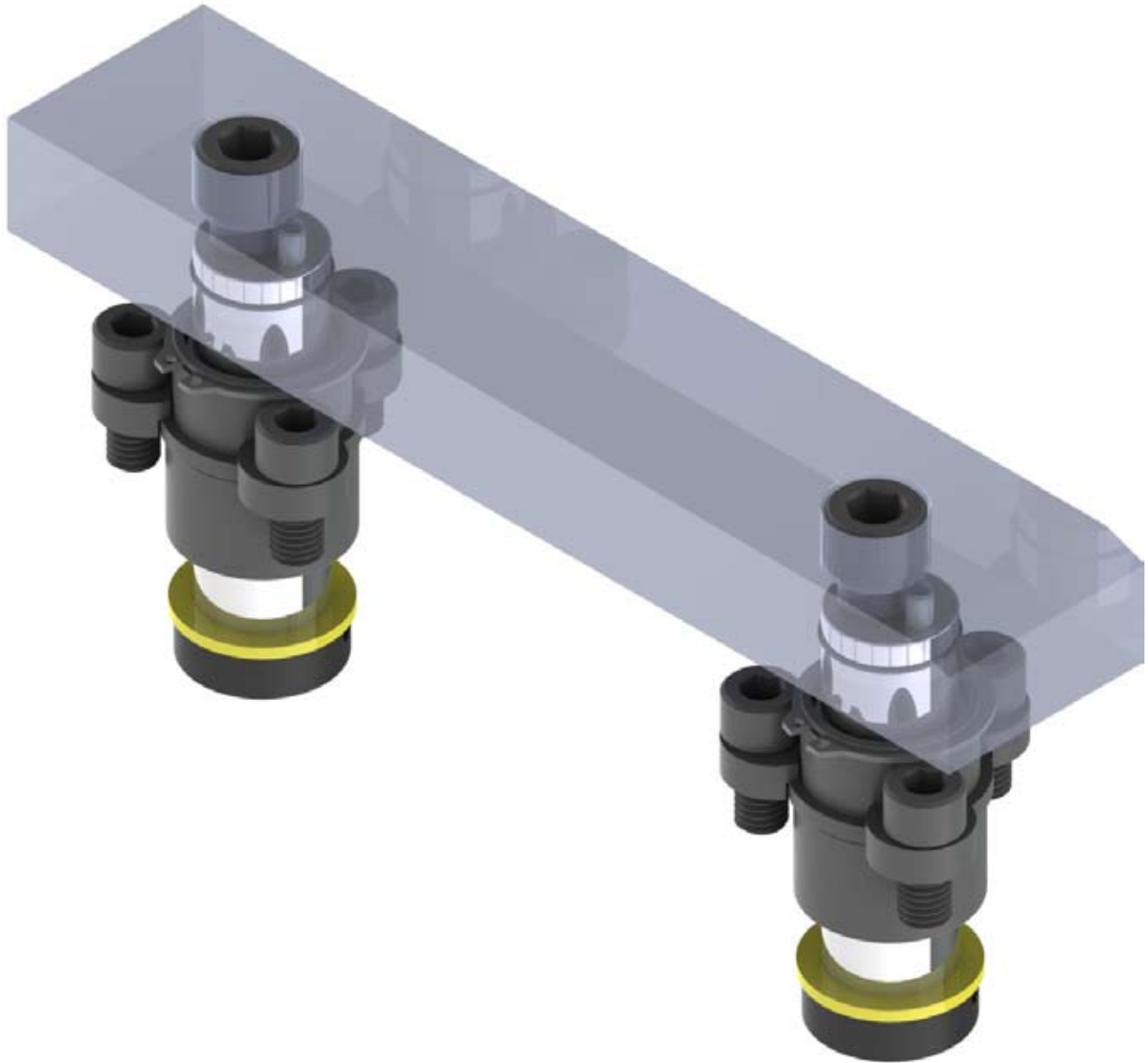
Application - Stripper Pads



The primary application for Guided Keepers is on
Stripper Pads.

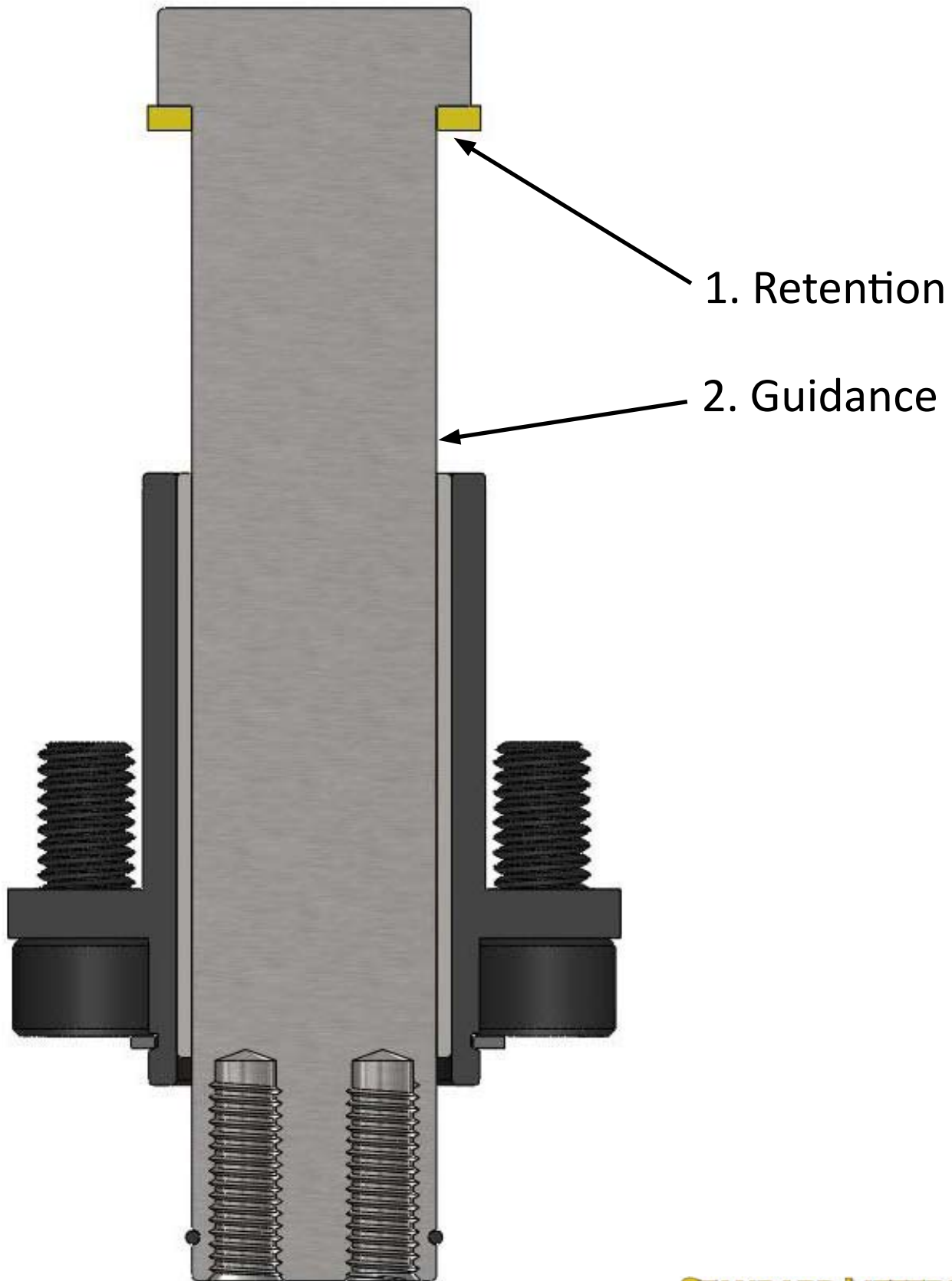
Guided Keepers provide Guidance and
Retention all in one assembly.

Application - Lifter Rails



Another application for Guided Keepers is under Lifter Rails.

Guidance and Retention - All-In-One



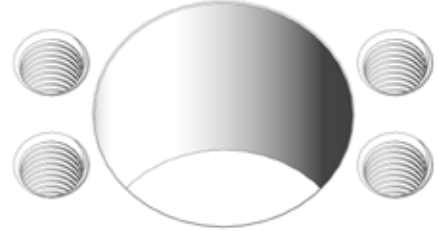
Saves Space and Less Machining

Guided Keepers

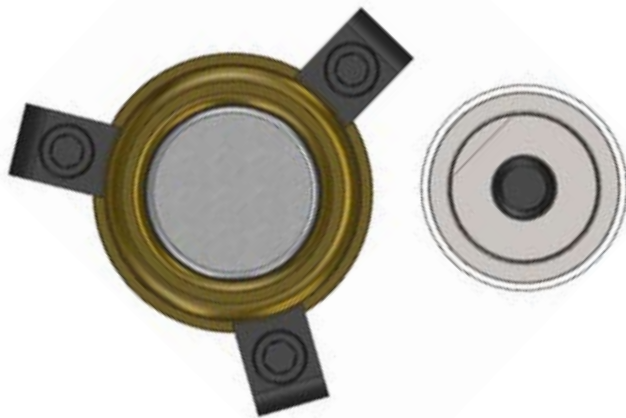


Ex. "L" Style Base

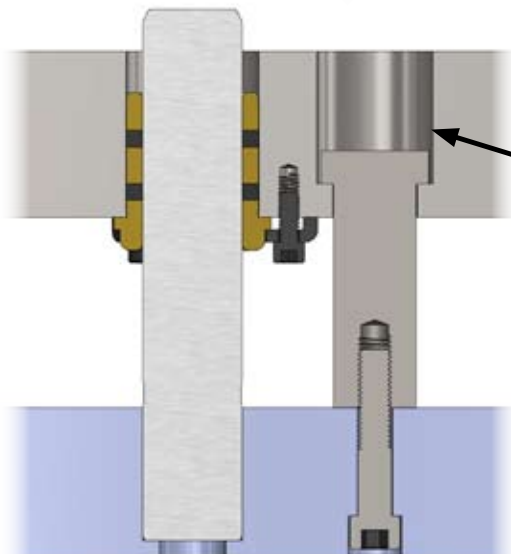
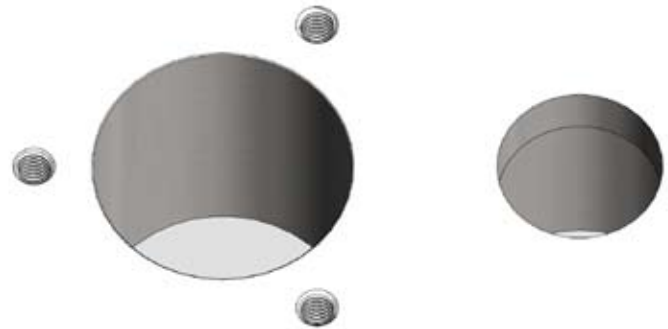
Small footprint due to all-in-one guidance and retention.



Pins, Bushings, Spools



More space is required because two locations are needed to provide guidance and retention.



In addition to more space, spools also require a second machining setup to c'bore the back of the die shoe in order to retain the head of the spool.

O-ring/C-Ring Feature



This feature retains the Guide Pin in the Base/Bushing during assembly and disassembly.

This prevents the guide pins from “falling” through the base and on to the floor.

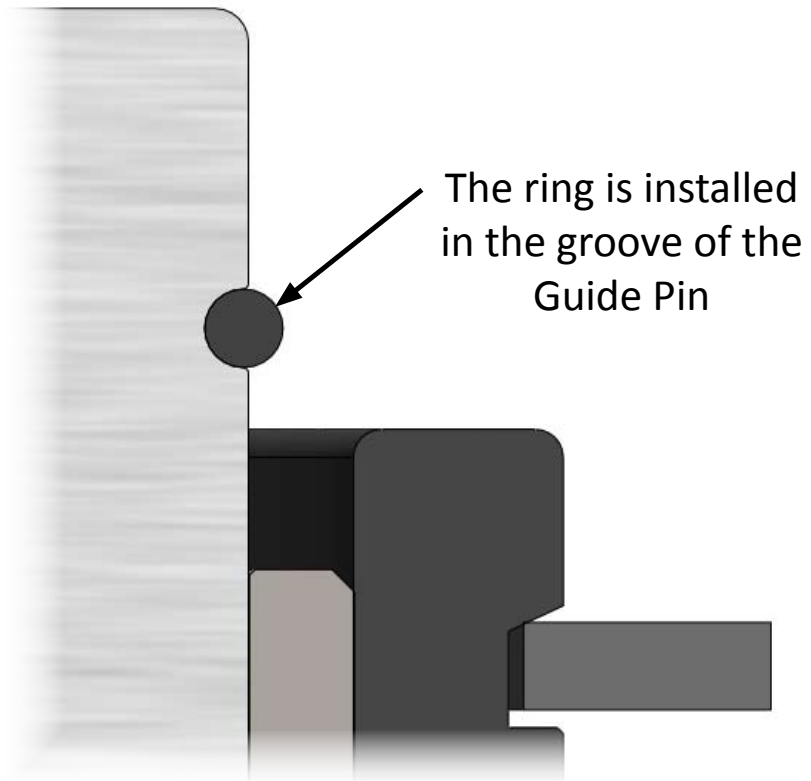
2 ring styles to choose from ...



A Rubber O-ring is provided with every Guide Pin



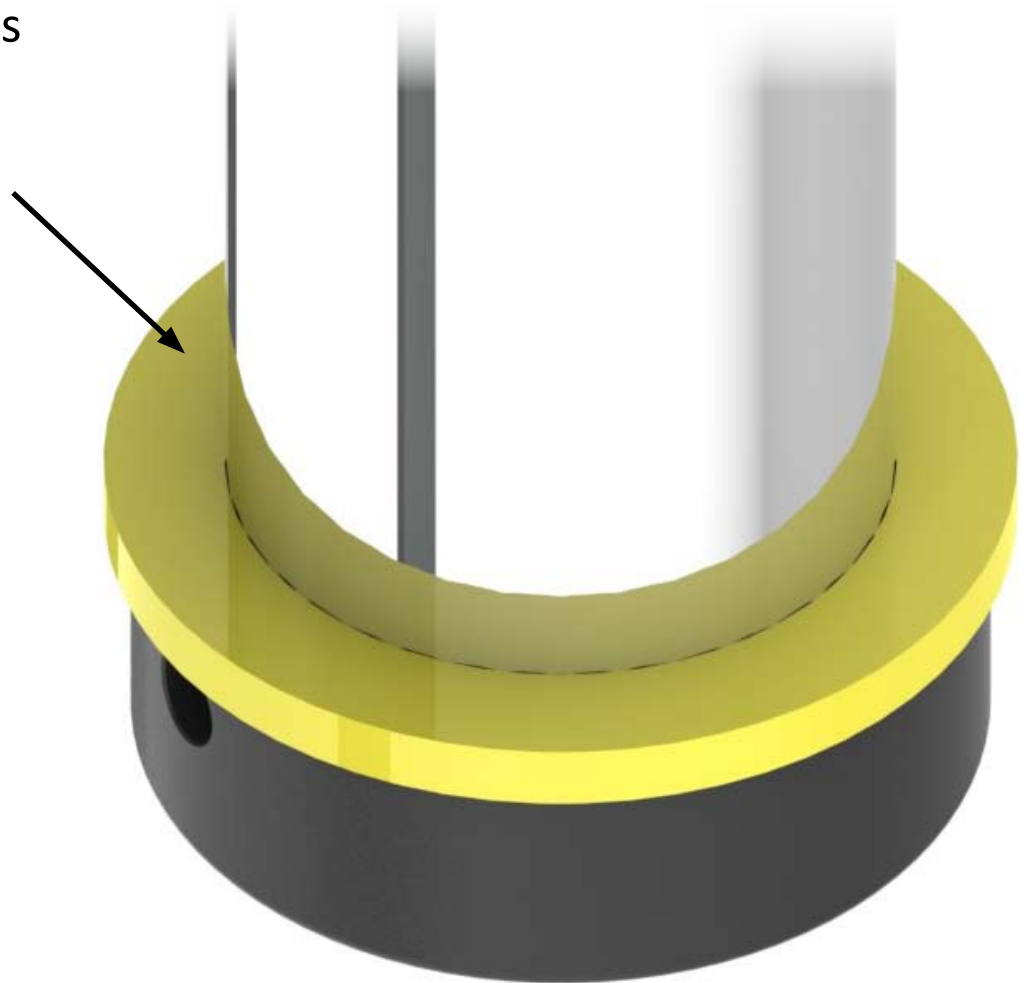
A Steel C-ring is also provided with Guide Pins of 1.25” diameter and greater



The ring is installed in the groove of the Guide Pin

Dampening Washer

All Guide Pins
feature a
Heavy-Duty
Urethane
Dampening
Washer



Benefits:

1. Reduced Impact Forces - The dampening washer provides a cushion when the Guide Pin head makes contact with the base. This cushion provides a longer deceleration period, thus reducing the impact force and vibration on the assembly.

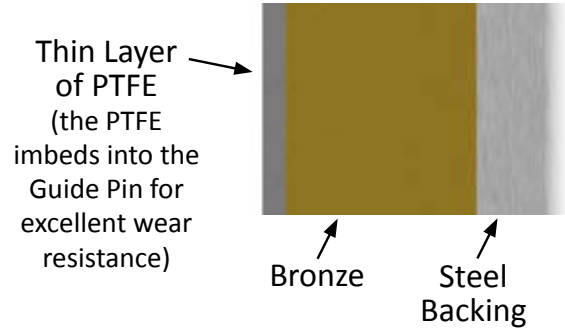
2. Sound Dampening - Press rooms are loud enough as is with the forming and cutting of sheetmetal. The dampener provides an isolator between the Pad and the Die Shoe that reduces noise.

Premium Maintenance-Free Bushing

Proven Track Record

Number of units currently in the field:	Number of replacement units sold from Jan 2010 - March 2011:
126,194	42
2006 - March 2011	(due to normal wear)

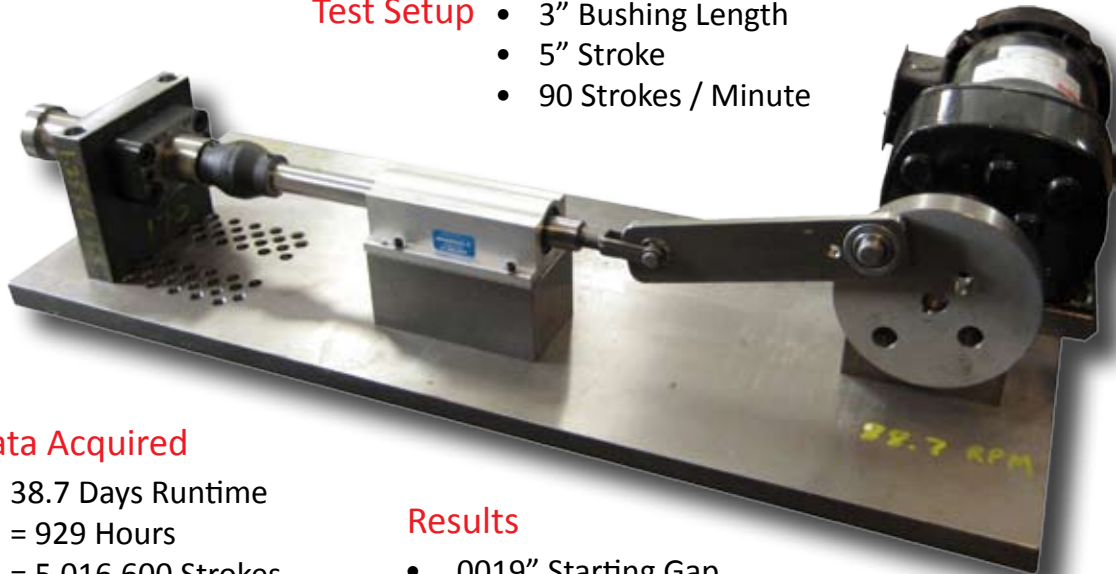
Bushing Construction



Bushing Test Fixture Results

Over 5 Million Strokes ... 791 Miles0004" Wear!

- Test Setup**
- 3" Bushing Length
 - 5" Stroke
 - 90 Strokes / Minute



Data Acquired

- 38.7 Days Runtime
- = 929 Hours
- = 5,016,600 Strokes
- = 4,180,500 Linear Feet
- = 791 Linear Miles

Results

- .0019" Starting Gap (Guide Pin to Bushing)
- .0023" Ending Gap



The number of linear miles that ran through the bushing is equivalent to the distance from Chicago to New York!

Easy Guide Pin Assembly to the Pad



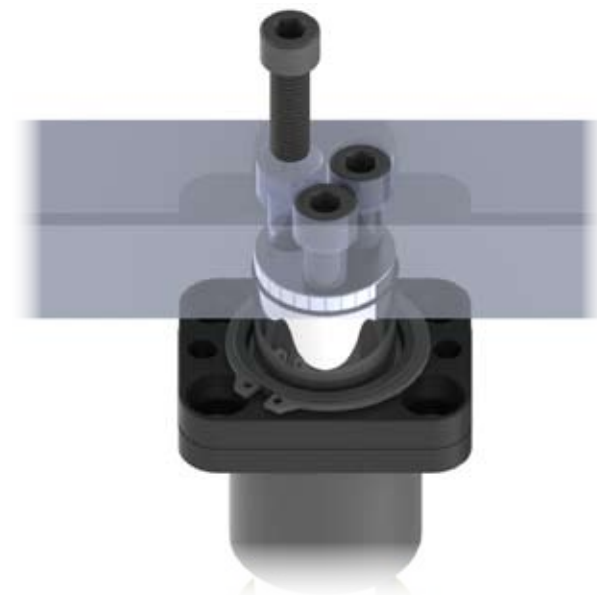
Step 1 - Thread a long screw or threaded rod into one of the tapped holes in the Guide Pin end.



Step 2 - Pull up until Guide Pin makes contact with the Pad.












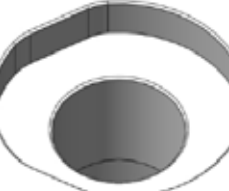





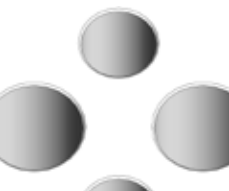


Step 3 - Thread the first fastener into the Guide Pin.



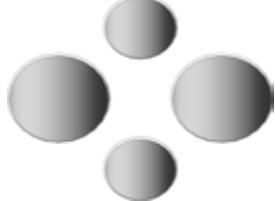

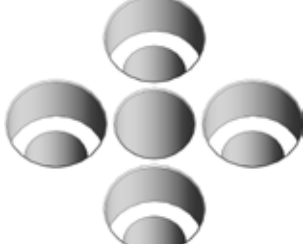
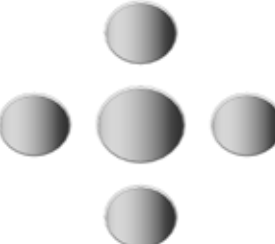

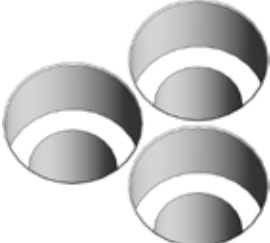


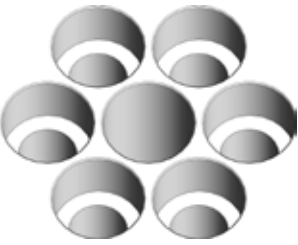
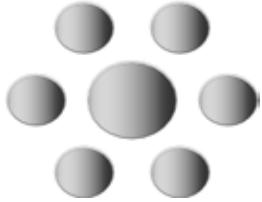


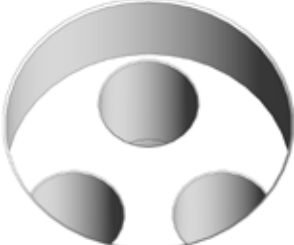


Step 4 - Remove the long screw or threaded rod and install the remaining fasteners into the remaining holes.

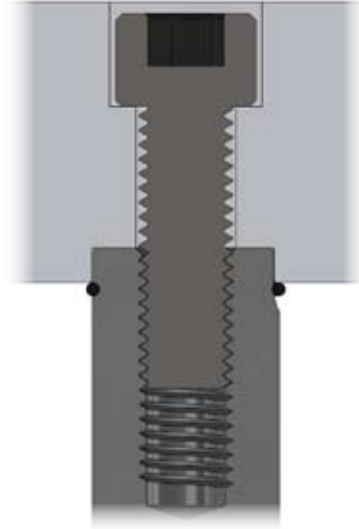
Guide Pin Index (1 of 2)

Dia.	Series	Pin End	Working Side	Back Side
.75" (19.05mm)	GK70			
.75" (19.05mm)	GK75			
1.00" (25.40mm)	GK95			
1.00" (25.40mm)	GK105			
1.25" (31.75mm)	GK115			
1.25" (31.75mm)	GK120			

Guide Pin Index (2 of 2)

Dia.	Series	Pin End	Working Side	Back Side
1.50" (38.10mm)	GK150			
1.75" (44.45mm)	GK175			
1.75" (44.45mm)	GK180			
2.00" (50.80mm)	GK200			
2.00" (50.80mm)	GK205			

Center Tap / Flats - Guide Pin Style



Specs/Details

- The body of the Guide Pin provides location
- The flats on the Guide Pin provide anti-rotation in the pocket during assembly and disassembly
- For the 1" Guide Pin - Machining in the Pad does not require an endmill smaller than 3/8"
- The 3/4" Guide Pin has 2 flats
- The 1" Guide Pin has 3 flats

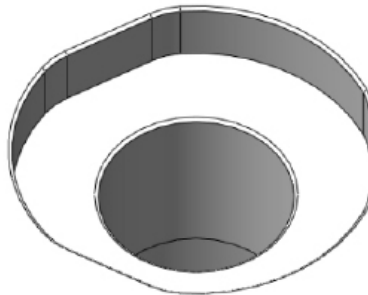
Machining Required

Working Side



- Clearance Drill
- C'Bore

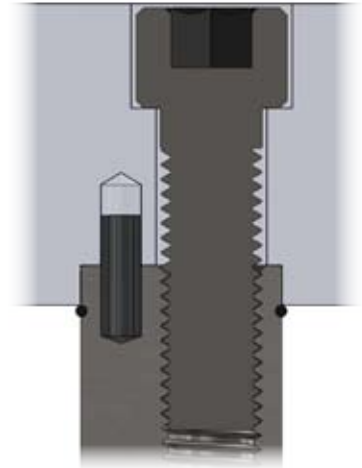
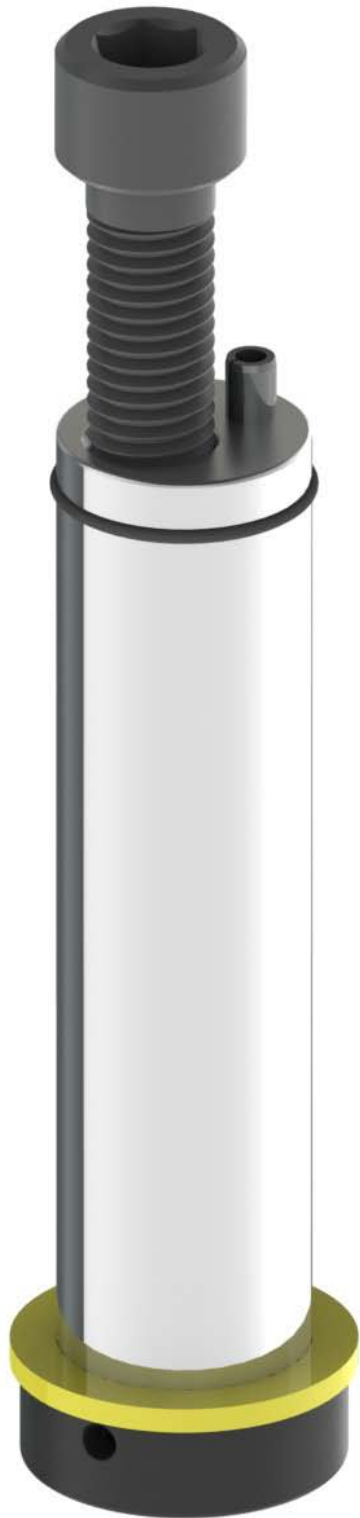
Back Side



- Pocket (for location and anti-rotation)

Diameter	.75"	1.00"
Series	GK75	GK105

Offset Tap - Guide Pin Style

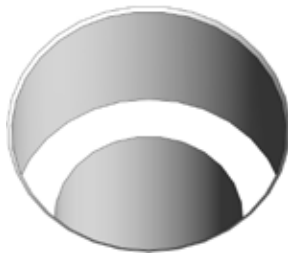


Specs/Details

- Simple Machining in the Pad - Round Pocket and Drilled hole (for roll pin)
- Large fastener is used for retention
- The body of the Guide Pin provides location
- The Roll Pin is used to orient and retain the Guide Pin during assembly

Machining Required

Working Side



- Clearance Drill
- C'Bore

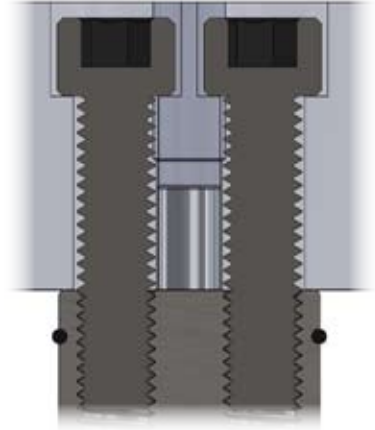
Back Side



- Pocket (for location)
- Drill for Roll Pin

Diameter	.75"	1.00"	1.25"
Series	GK70	GK95	GK115

2 Screw / 2 Dowel - Guide Pin Style

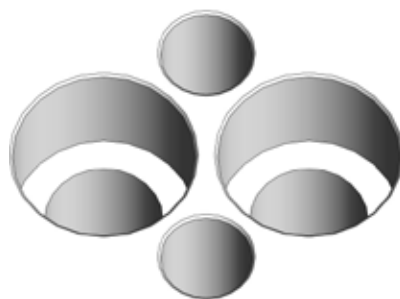


Specs/Details

- Two options for locating the Guide Pin
 1. Guide Pin Body - Pocketed in Pad
 2. Dowel Pins - Surface mounted
- Two Fasteners provide redundancy
- Easy Assembly - One tapped hole can be used to lift the Guide Pin while threading a fastener in the other
- Common machining/tooling used

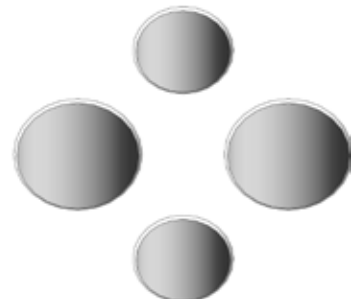
Machining Required

Working Side



- Clearance Drills
- C'Bores
- Reams (for location)

Back Side



- No Machining Required

Diameter	1.25"	1.50"
Series	GK120	GK150

Multi-Screw - Guide Pin Style

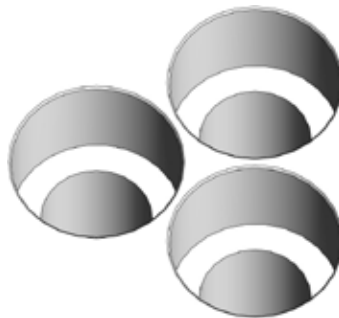


Specs/Details

- Large Fasteners provide increased strength
- Multiple fasteners provide redundancy
- The body of the Guide Pin provides its location
- Easy Assembly - One tapped hole can be used to lift the Guide Pin while threading a fastener in the other

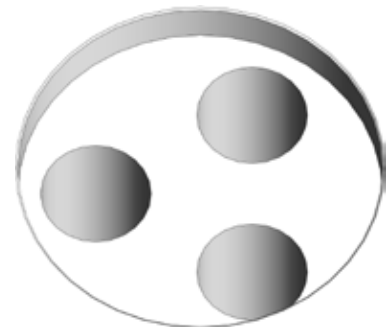
Machining Required

Working Side



- Clearance Drills
- C'Bores

Back Side



- Pocket (for location)

Diameter	1.75"	2.00"
Series	GK180	GK205

Stud / Multi Screw - Guide Pin Style

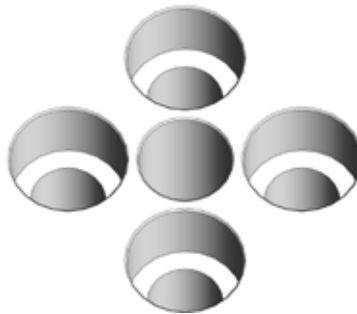


Specs/Details

- Machining is done in one setup from one side
- Solid Center Stud provides location using a simple reamed hole
- Multiple fasteners provide redundancy
- Easy Assembly - One tapped hole can be used to lift the Guide Pin while threading a fastener in the other
- Common machining/tooling used

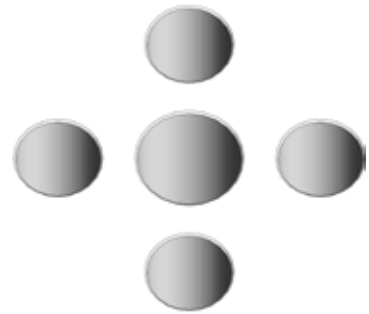
Machining Required

Working Side



- Clearance Drills
- C'Bores
- Ream (for location)

Back Side



- No Machining Required

Diameter	1.75"	2.00"
Series	GK175	GK200

GK Locking Collar - Optional Accessory

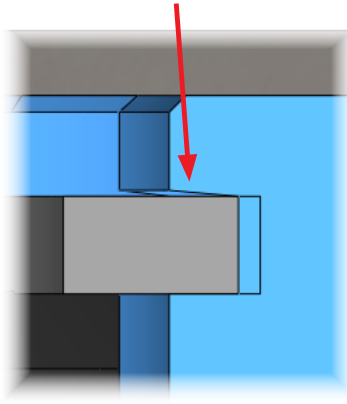
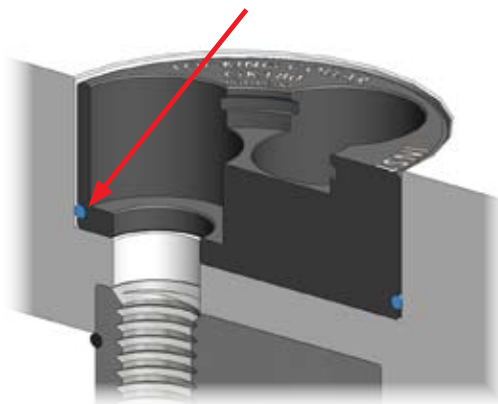
The GK Locking Collar prevents screws from possibly coming loose and falling into the tool during operation.



Note: This is an optional accessory that some stampers require in their tools.




O-ring maintains the radial location and prevents collar from falling out during disassembly

Tapered groove forces Retaining Ring down which provides locking force to the Cap Screws






Machining Required:
Simple Round Pocket

Base/Bushing Index (1 of 2)

Style	Style	Picture	
Bushing with Flange	L2 L3 L4		
Bushing with Clamps	H2 H3 H4		
Threaded	K2 K3 K4		

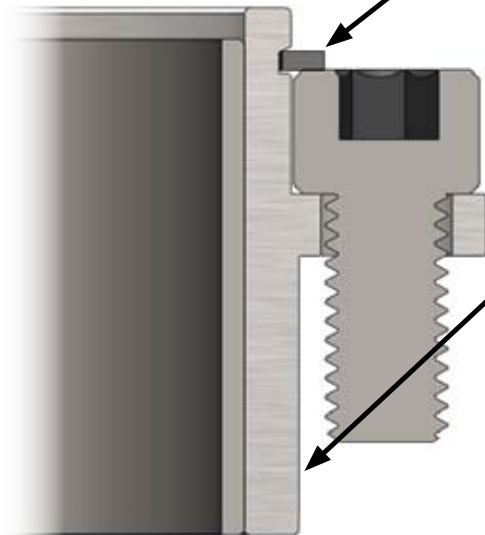
Base/Bushing Index (2 of 2)

Style	Style	Picture
Flanged / Body Locating	F2 F3	
Flanged / Dowel Locating	D D2 D3 D4	
Surface Mount	A B	

Bushing with Flange -L- Base Style



Socket Head Cap Screws with the flange retain the Base in the die shoe



Retaining Ring prevents Cap Screws from loosening and falling into the tool during operation

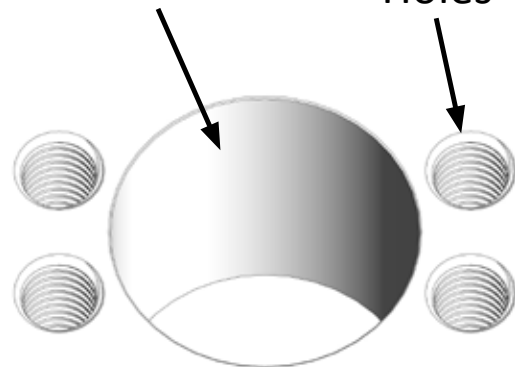
Location is accomplished using the body of the Base in the shoe



Machining Required

Bored Hole
(-0 +.001")

Tapped Holes



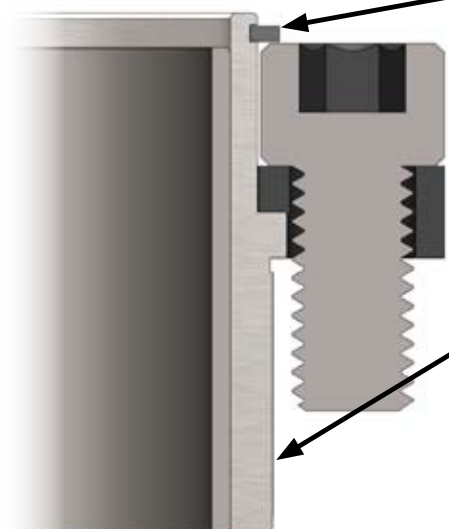
Callout	L2	L3	L4
Bushing Length	2"	3"	4"

Bushing with Clamps -H- Base Style



Socket Head Cap Screws with Flange Clamps retain the Base

Flange Clamps can be moved around the Base so that the assembly can fit into tight areas

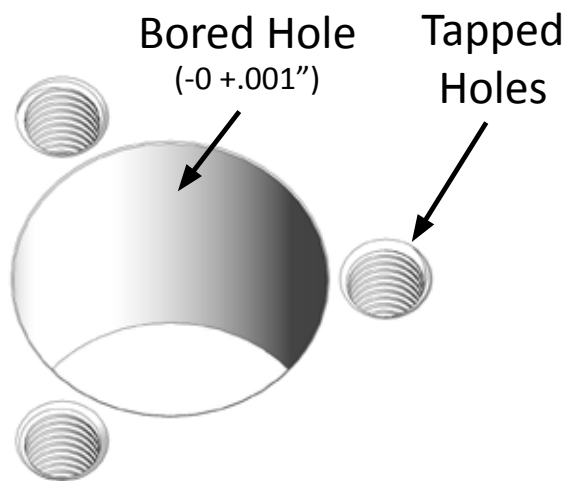


Retaining Ring prevents Cap Screws from loosening and falling into the tool during operation

Location is accomplished using the body of the Base in the die shoe



Machining Required



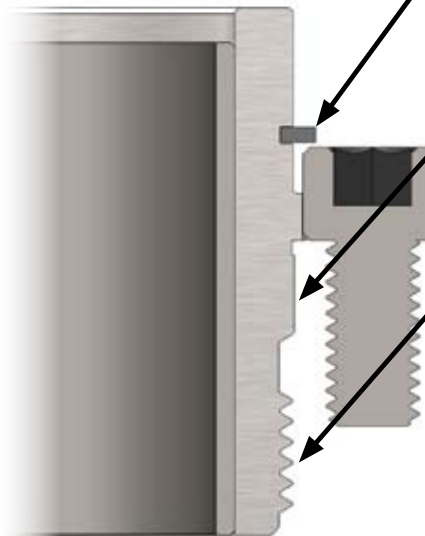
Callout	H2	H3	H4
Bushing Length	2"	3"	4"

Threaded -K- Base Style



Screw prevents the Base from unthreading because of the ridges on the base

Retaining Ring prevents the cap screw from loosening, creating a locked assembly



Upper portion of Body provides location

Large threads provide a strong method to retain the base, yet still allows for a small footprint

Taps and Sockets available from SL

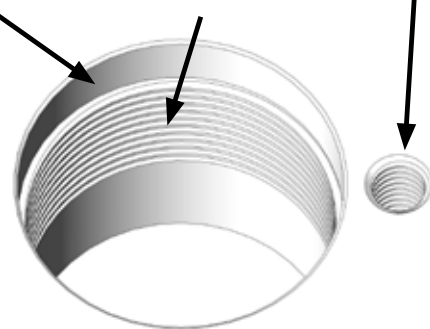


Machining Required

Bored Pocket
(-0 +.001")

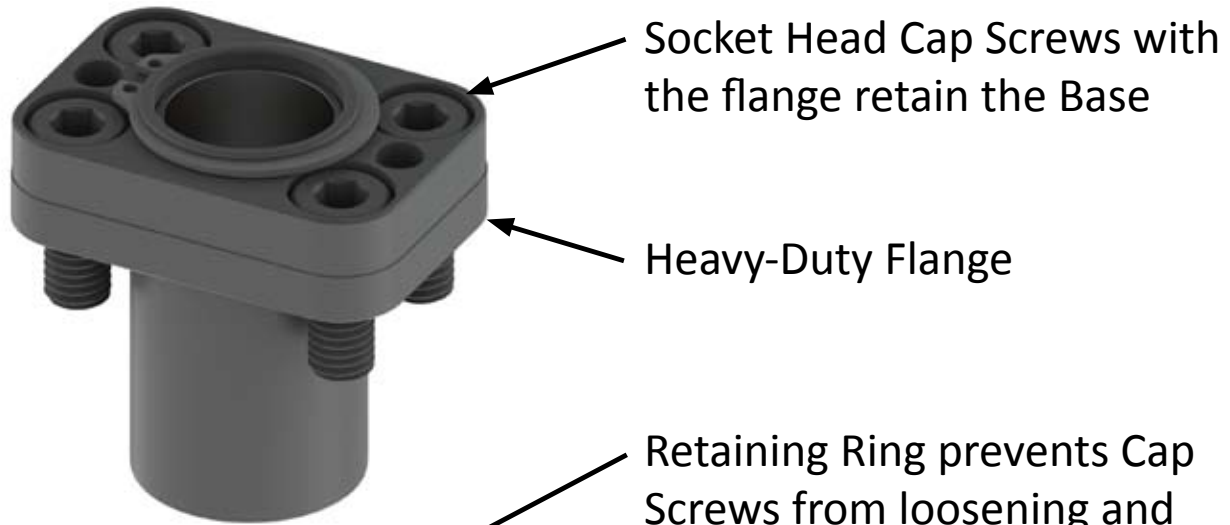
Large Tapped Hole

Tapped Hole



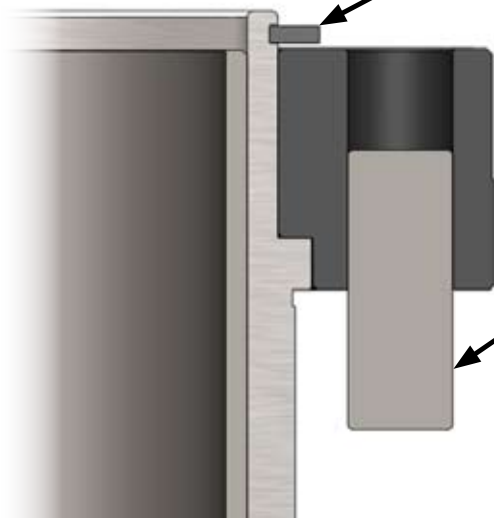
Callout	K2	K3	K4
Bushing Length	2"	3"	4"

Flanged / Dowel Locating -D- Base Style



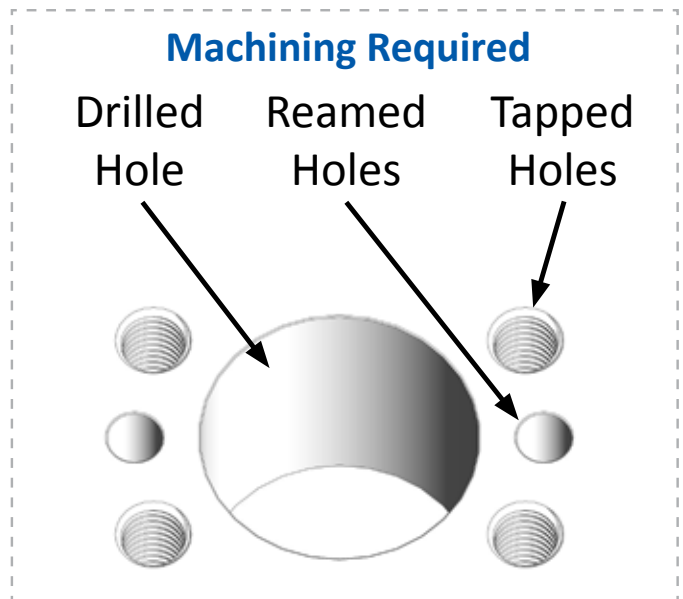
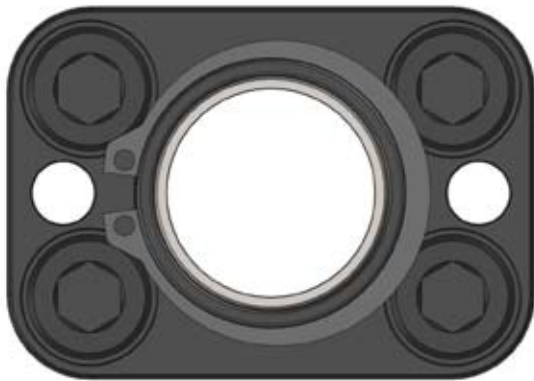
Socket Head Cap Screws with the flange retain the Base

Heavy-Duty Flange



Retaining Ring prevents Cap Screws from loosening and falling into the tool during operation

Dowels provide location

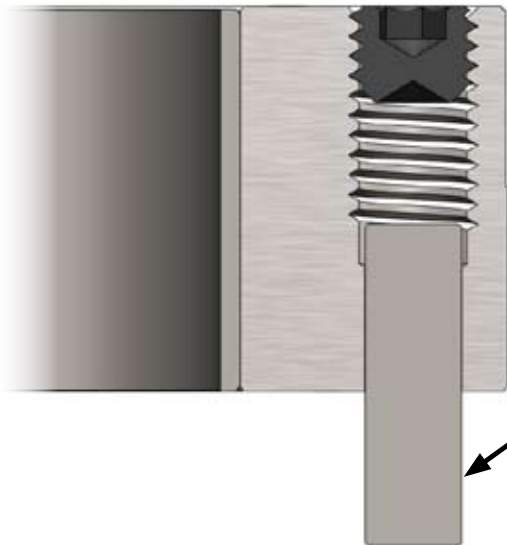


Callout	D2	D3	D4
Bushing Length	2"	3"	4"

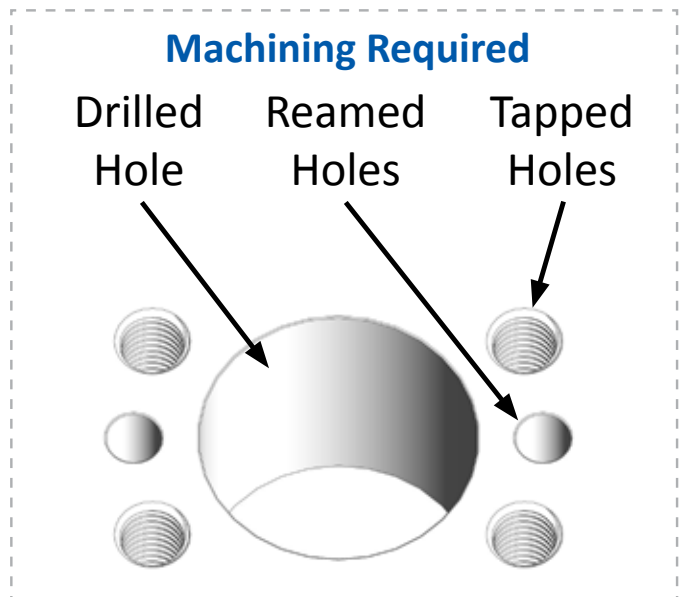
Surface Mount -A,B- Base Style



Set Screws above the dowels prevent the dowels from falling out, and also can be used to “jack” the base up after the screws are removed




Dowels provide location

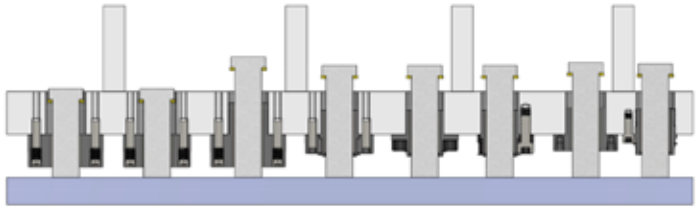
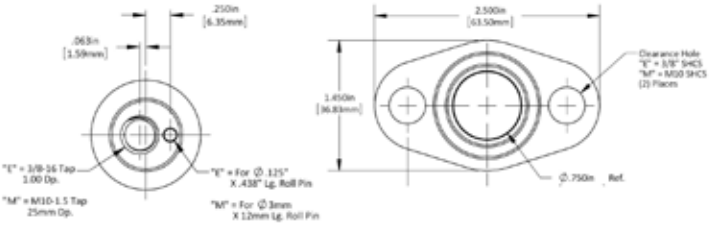
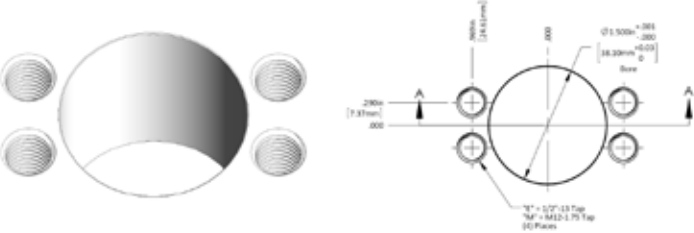


Callout	A	B
Base Style	Standard	Compact

Want more details ... See our Engineering Data Booklet



Engineering Data Guided Keepers

Product Options	
Component Dimensioned Prints	
Machining Guidelines	

Guidance and Retention - All-In-One

Patent # 7,730,757 and other Patents Pending

4/11 - Rev. 1

Purchasing Cost Comparison

Purchase Cost vs Labor Cost

Don't make the mistake of only considering your purchasing costs ...
Those succeeding in today's competitive environment are reducing their labor costs ...

Guided Keeper System GK115-L2 Assembly

Total Cost = \$112.50

Starting Price = \$92.25 + \$0.75 per .125"
of additional Guide Pin length

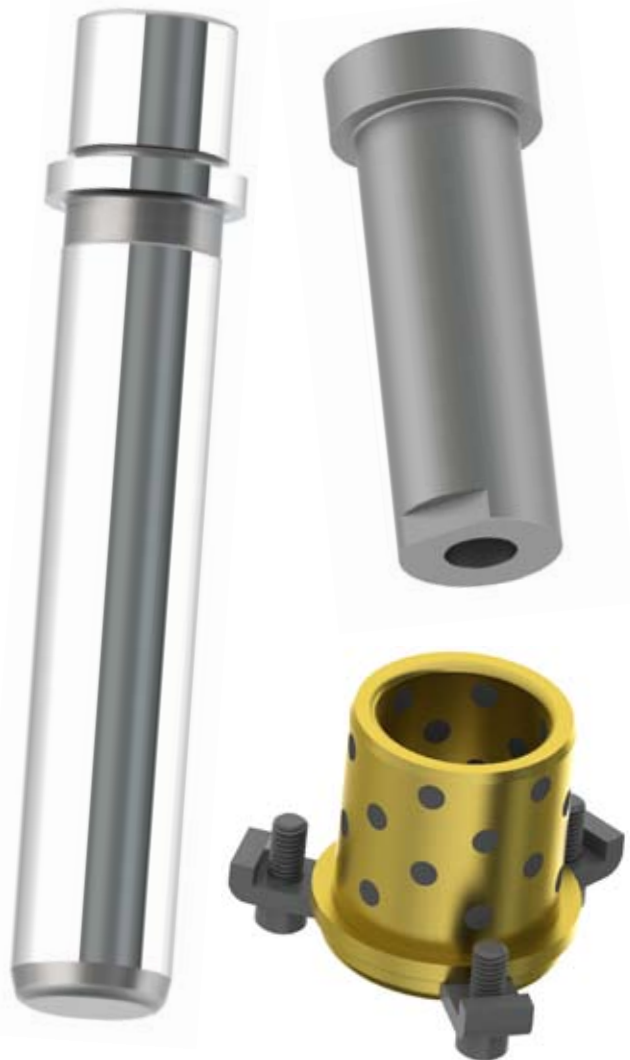


1.25" Diameter - 6" Guide Pin

Pins, Bushings, Spools

Total Cost = \$136.96







- Guide Pin = \$50.30
- Bushing (Self Lubed) = \$68.75
- Pad Retainer (Spool) = \$17.91



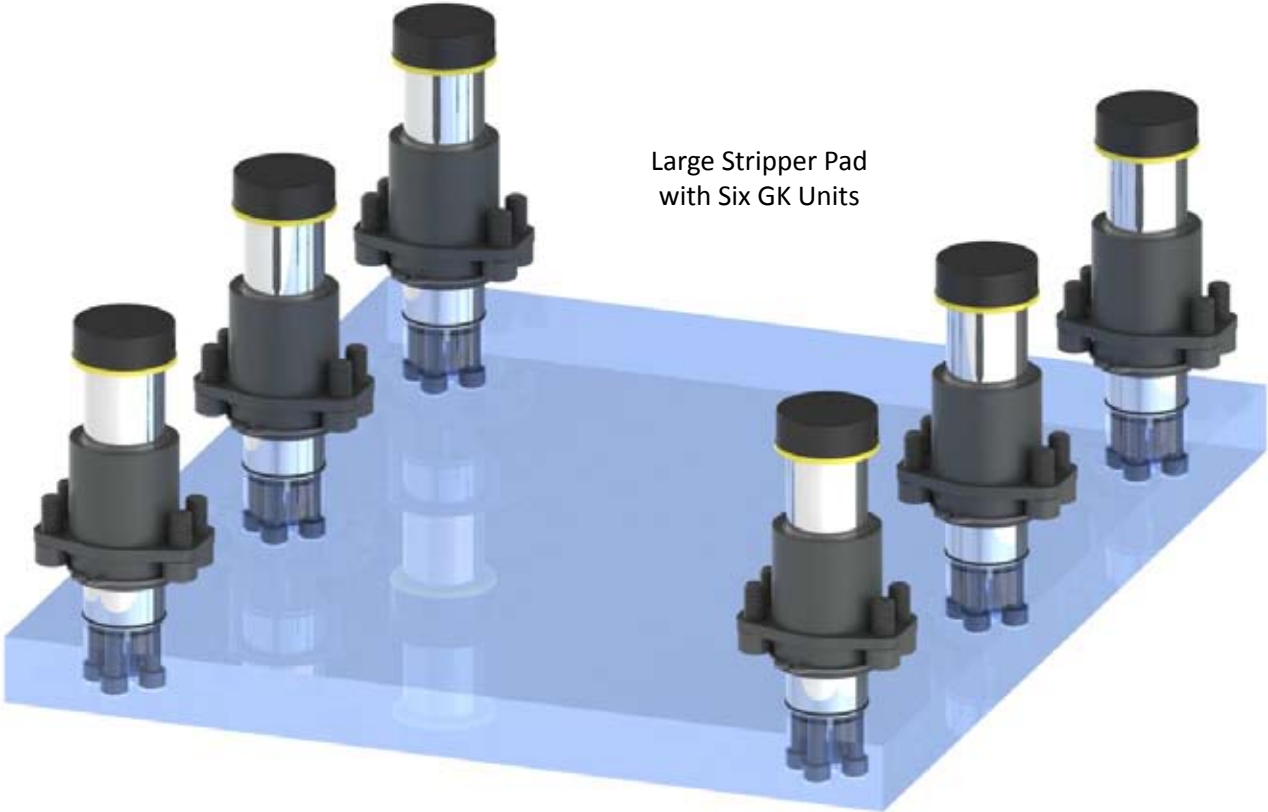
Both comparisons include
Maintenance-free Bushings

Starting Prices

- Prices shown are for full assemblies with shortest guide pin available
- For detailed pricing based on specific base style and guide pin length, contact Standard Lifters

Location Method	Bore / Body			Bore / Tap	Reams / Dowels	
Base Style						
Guide Pin Diameter	L	H	F	K	A-B	D
.75	\$78	\$80		\$80	\$90	\$96
1.00	\$82	\$86		\$86		\$106
1.25	\$91	\$95	\$132	\$95	\$121	\$115
1.50	\$102	\$106		\$106		\$126
1.75	\$111	\$116	\$152	\$116	\$142	\$136
2.00	\$140	\$146	\$168	\$146	\$159	\$166

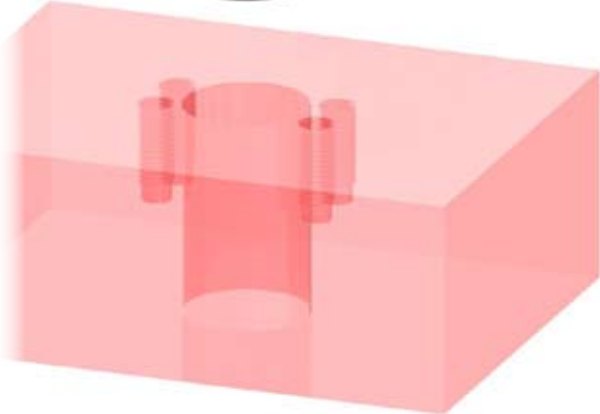
Pictures



Large Stripper Pad
with Six GK Units



New Flange Style
Base(L Series) is
easy to assemble
and provides a
locked assembly



Pictures

New Threaded Style Base(K Series)
provides Location and Retention
in a small footprint



GK180-L3
assembly
with optional
Locking Collar
accessory



Guided Keepers can be
used in many applications
including Rack Lifters

For New and Updated Information
www.standardlifters.com

