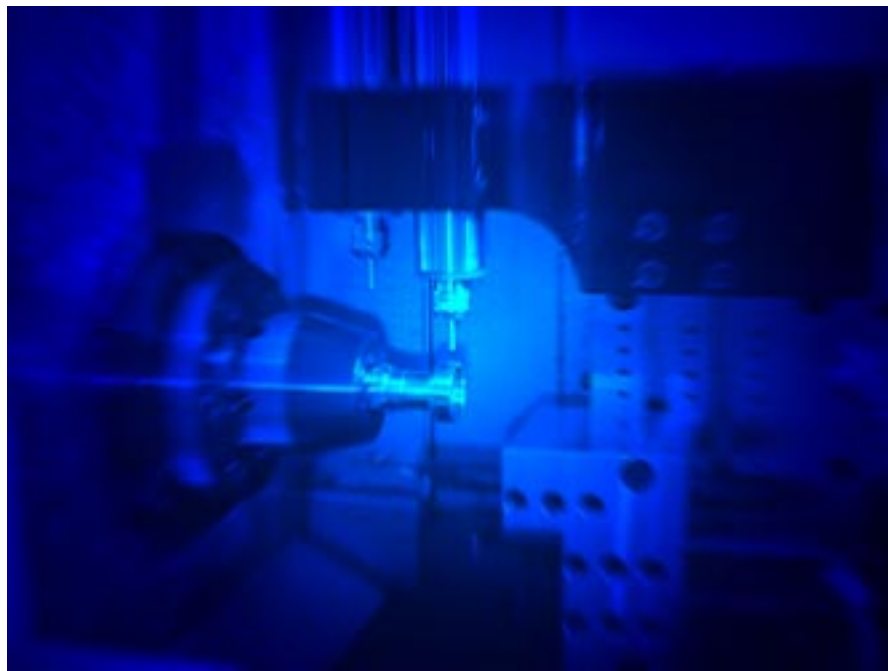


# **Dynamic**

**Machine Resources, Inc.**



## **Tooling Catalog – 2034**

Phone: (949) 481-3375

Fax : (949) 481-8559

## Multi-Position Tool Stations

*When fast changeover is critical*

- ◆ Ideal for mounting groups of tools for 1 setup.
- ◆ Allows quick changeover of jobs.
- ◆ Available in 5/8" and 3/4" bore diameters.

Differential spacing of the holes in each holder allow different tool configurations for narrow and wide spaced tools on one block.

An end stop mounted to the table provides repeatable location of the tool block for quick changeover of setups.

## Single Position Holders

- ◆ 3/8" 1/2" & 3/4" center height
- ◆ 5/8" & 3/4" bore size.
- ◆ Left or right handed



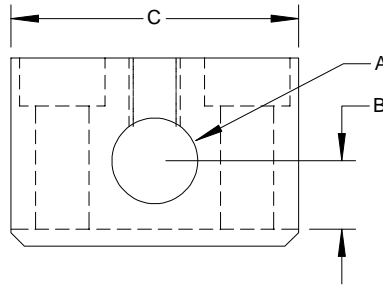
Ideal for mounting tools for odd sized work.  
These holders let you set the spacing on any sized work.

Great for use with Posi-lock holders,  
Use a single position for bar stops.  
Great for drilling applications

Part No.	Description	A	B	C	Price
TBS-1356	3/8" center height 5/8" bore Right hand	0.6250	0.3750	1.500	\$80.00
TBS-1357	3/8" center height 5/8" bore Left hand	0.6250	0.3750	1.500	\$80.00
TBS-1456	1/2" center height 5/8" bore Right hand	0.6250	0.5000	1.500	\$80.00
TBS-1457	1/2" center height 5/8" bore Left hand	0.6250	0.5000	1.500	\$80.00
TBS-1466	1/2" center height 3/4" bore Right hand	0.7500	0.5000	1.500	\$90.00
TBS-1467	1/2" center height 3/4" bore Left hand	0.7500	0.5000	1.500	\$90.00
TBS-1666	3/4" center height 3/4" bore Right hand	0.7500	0.7500	1.500	\$100.00

## Single Position Heavy Duty

- ◆ Double bolt down for heavy cutting
- ◆ 3/8", 1/2" & 3/4" center height
- ◆ 5/8" & 3/4" bore size.

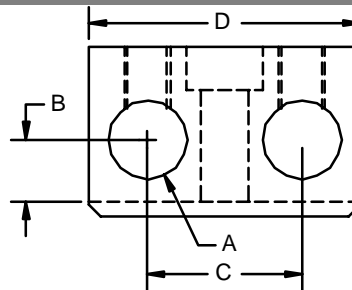


These holders are designed for heavier cuts.  
Double hold down bolts provide  
extra clamping for heavy turning and boring.  
Great for tangential type heads.

Part No.	Description	A	B	C	Price
TBS-1450	1/2" center height 5/8" bore	0.6250	.500	2.100	\$95.00
TBS-1460	1/2" center height 3/4" bore	0.7500	.500	2.100	\$100.00
TBS-1660	3/4" center height 3/4" bore	0.7500	.750	2.100	\$120.00

## 2 Position Holders

- ◆ 3/8", 1/2" & 3/4" center height.
- ◆ 5/8" & 3/4" bore size.



Ideal for holding 2 boring bars, or a center drill, and drill in 1 holder.

Easy change over modular tooling.

Use with a 6 or 8 position for non changing tools

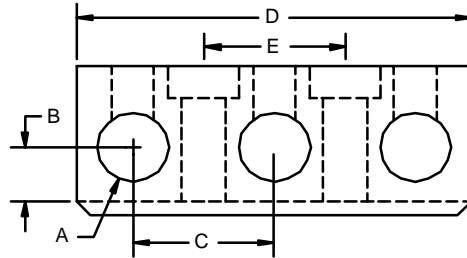
Part No.	Description	A	B	C	D	Price
TBS-2354	3/8" center height 5/8" bore	0.6250	0.3750	1.250	2.200	\$95.00
TBS-2454	1/2" center height 5/8" bore	0.6250	0.5000	1.250	2.200	\$95.00
TBS-2464	1/2" center height 3/4" bore	0.7500	0.5000	1.250	2.200	\$105.00
TBS-2664	3/4" center height 3/4" bore	0.7500	0.7500	1.250	2.200	\$125.00

## 3 Position Holders

This tool is ideal for mounting groups of tools for drilling, turning or boring work.

3 spacing for optimum tool plate spacing

- ◆ 3/8", 1/2" & 3/4" center height.
- ◆ 5/8" & 3/4" bore size
- ◆ 1.25" hole spacing



Part No.	Description	A	B	C	D	E	Price
TBS-3354	3/8" center height 5/8" bore	0.6250	0.5000	1.250	3.500	1.250	\$105.00
TBS-3454	1/2" center height 5/8" bore	0.6250	0.5000	1.250	3.500	1.250	\$105.00
TBS-3464	1/2" center height 3/4" bore	0.7500	0.5000	1.250	3.500	1.250	\$115.00
TBS-3664	3/4" center height 3/4" bore	0.7500	0.7500	1.250	3.500	1.250	\$135.00

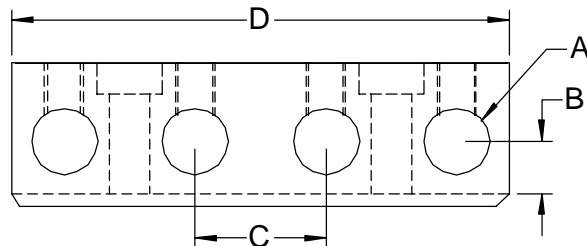
## 4 Position Holders

A versatile mid size holder.

Even spacing to accommodate any operations.

Available in 5/8" or 3/4" bore.

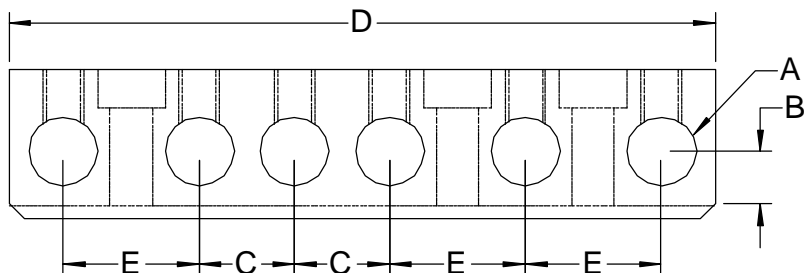
- ◆ 3/8" and 1/2" center
- ◆ 5/8" & 3/4" bore size
- ◆ 1.25" hole spacing



Part No.	Description	A	B	C	D	Price
TBS-4454	1/2" center height 5/8" bore	0.6250	0.5000	1.250	4.750	\$155.00
TBS-4464	1/2" center height 3/4" bore	0.7500	0.5000	1.250	4.750	\$165.00

## 6 Position Holders

The 6 position holder provides all the benefits of the 8 position for work that requires less tools.



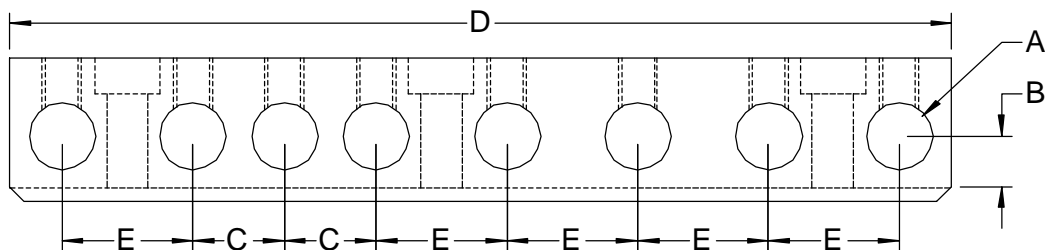
Part No.	Description	A	B	C	D	E	Price
TBS-6350	3/8" center height 5/8" bore	0.6250	0.3750	0.875	6.500	1.250	\$240.00
TBS-6450	1/2" center height 5/8" bore	0.6250	0.5000	0.875	6.500	1.250	\$240.00
TBS-6460	1/2" center height 3/4" bore	0.7500	0.5000	0.875	6.500	1.250	\$275.00
TBS-6660	3/4" center height 3/4" bore	0.7500	0.7500	0.875	6.500	1.250	\$295.00

## 8 Position Holders

This holder is perfect for a repeat production run on a wide range of work.

8 tool positions allow for the exact spacing you need.

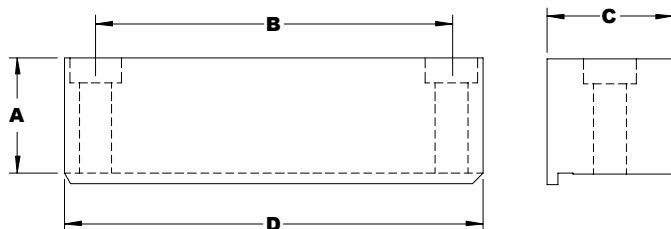
Overall length of 9" allows flexibility on big setups.



Part No.	Description	A	B	C	D	E	Price
TBS-8350	3/8" center height 5/8" bore	0.6250	0.3750	0.875	9.000	1.250	\$320.00
TBS-8450	1/2" center height 5/8" bore	0.6250	0.5000	0.875	9.000	1.250	\$320.00
TBS-8460	1/2" center height 3/4" bore	0.7500	0.5000	0.875	9.000	1.250	\$375.00

## Machinable Tool Station

The perfect solution to the custom job. 3 7/8" of space for any special bore centers or diameters to suit your application. Machinable steel, black oxide finish, complete with hold down hardware.

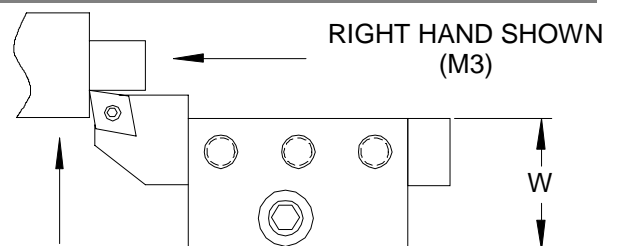


Part No.	Description	A	B	C	D	Price
TBS-0600	Machinable Station	1.375	3.875	1.5	5.0	\$50.00

## Turning and Facing Holders

Convenient space saving design

- ◆ Turn and face with the same tool.
- ◆ Accepts 0.500" or 0.750" shank square tools
- ◆ Cut down on unnecessary additional tools .
- ◆ Offered in right or left hand to accommodate any application.
- ◆ Solid positive lock down directly to the table for deeper cuts.
- ◆ Eliminates chatter and harmonics.
- ◆ Recommended inserts: 80 deg diamond , triangle or trigon



TOP VIEW



Part No.	Description	W	Price
TBA-1446	1/2" center 1/2" Square tool RH	1.250	\$80.00
TBA-1447	1/2" center 1/2" Square tool LH	1.250	\$80.00
TBA-1666	3/4" center 3/4" Square tool RH	1.250	\$90.00
TBA-1667	3/4" center 3/4" Square tool LH	1.250	\$90.00

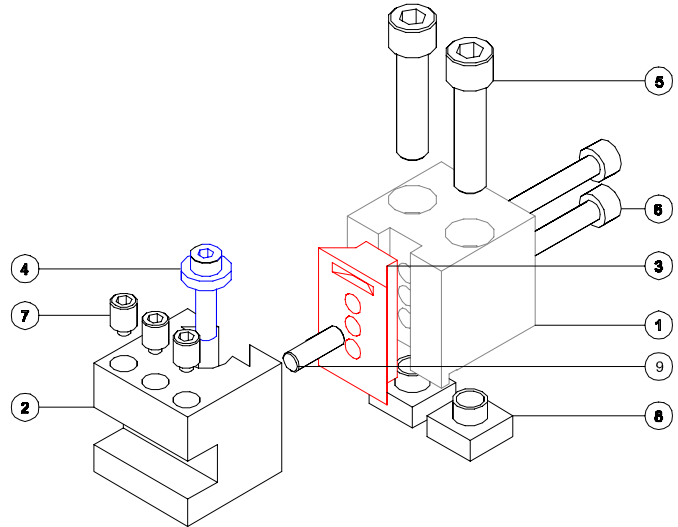
# Posi-Lock™ System Operation

The Posi-Lock™ system provides an easy to use, accurate tool alignment system.

These instructions explain the operation of each component.

## System Breakdown

1. Posi-Lock Post.
2. Posi-Lock Head.
3. Clamp Wedge.
4. Adjusting Screw.
5. Hold Down Screws.
6. Locking Screws.
7. Tool Clamp Screws.
8. T Nuts.
9. Dowel Pin.



## Initial Assembly

Each post (1) arrives with a wedge clamp (3) and locking screws (6) attached. A dowel pin (9) aligns the wedge to stop vertical movement. The hold down screws (5) are attached to the T nuts (8).

The heads (2) have the adjusting screw (4) assembled, along with the tool clamp screws.

To setup a post to a head, remove the adjusting screw from the head and loosen the locking screws on the post.

Slide the head onto the clamp wedge, and replace the adjusting screw so that the flange of the adjusting screw is interlocked into the clamp wedge.

This allows the adjusting screw to lift or lower the head. For odd size tools or special center heights the adjusting screw can sit on top of the wedge.

To fine adjust a center height, follow these steps.

1. Loosen the top locking screw and lightly snug back down (just enough to support the weight of the head.)
2. Loosen the 2<sup>nd</sup> screw (usually the lower screw.)
3. Adjust the tool up or down with the adjusting screw.
4. Lock the 2 locking screws in place.

If the locking screws are both loosened together, the head will move easily causing erratic adjustment.

If the screws are not loosened enough it is possible to bend the wedge lip or the adjusting screw.

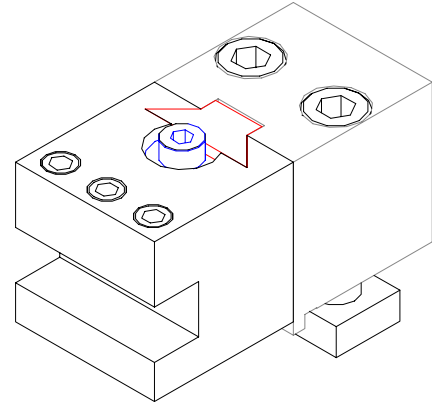
If you are setting live tools or require exact positioning of the tool, a dial indicator on a mag-base can be used to check the amount of movement.



# Posi-Lock™ System Operation

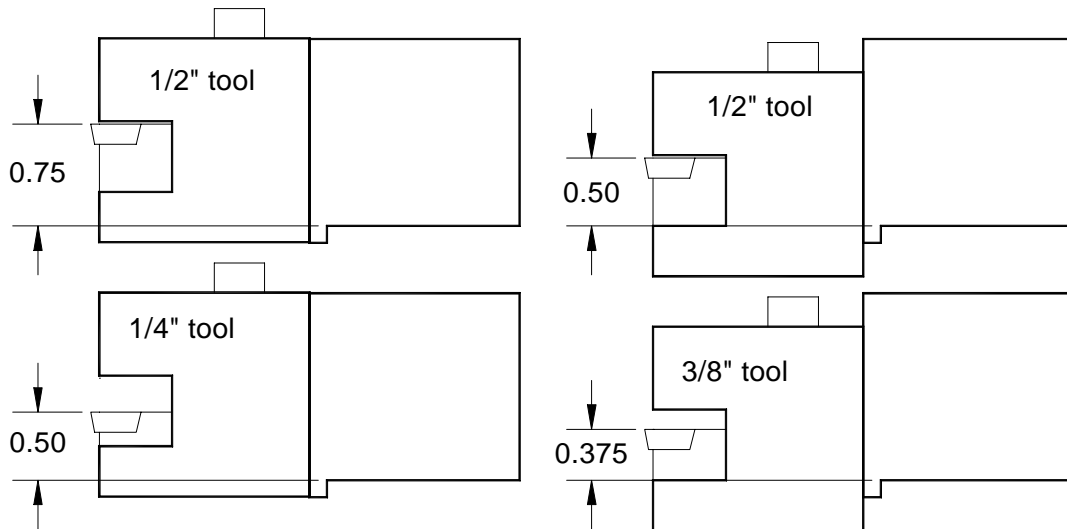
## Assembled View

This view shows a post and a 1.5" extension head assembled.

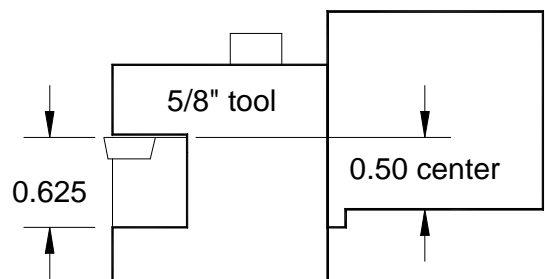


## Center Height Choices

On a standard 1.5" post, the ranges of center heights are shown below.



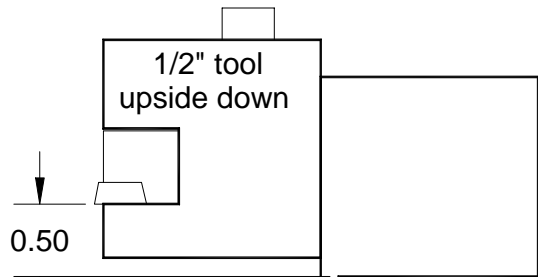
It is possible to open up the tool slot to 5/8" (16mm) for slightly larger tools.  
Always remove metal from the top of the slot.



## Setting Tools Upside Down

The tool blocks have been designed to allow the base of the slot to be raised to 1/2" center.

This allows any size tool up to 5/8" shank to be mounted upside down to optimize spindle rotation for special needs.



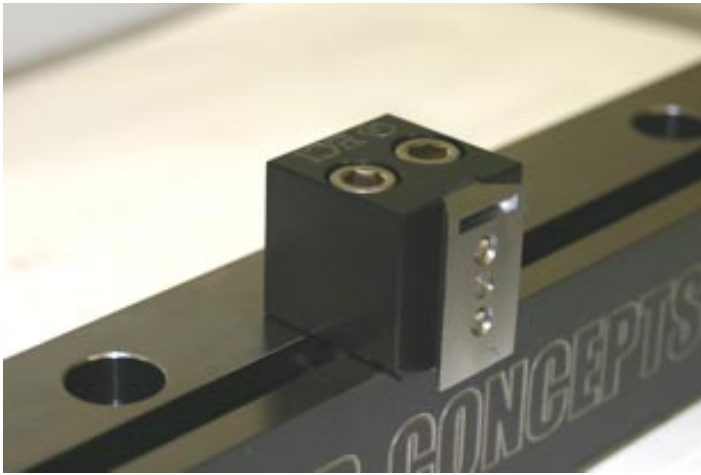
We do not recommend the use of negative rake insert tools of 3/4" center height in these holders.

The head extension can cause undue loading.

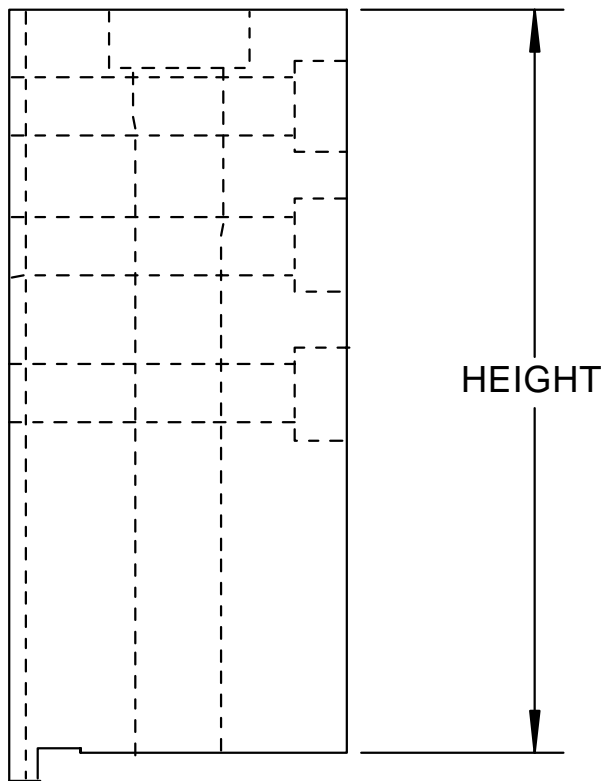
When using negative rake holders, we recommend the axial tool holders that have a fixed center height.

Posi-lock post and the Quadrant logo are trademarks of Engineered Concepts Inc.



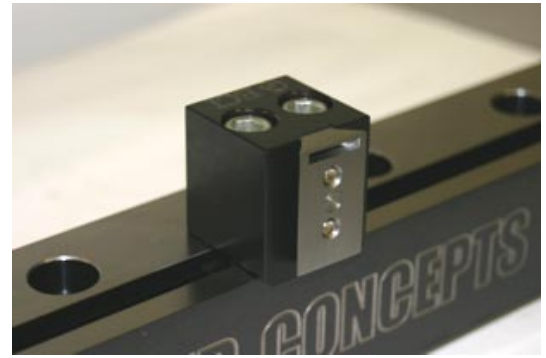


**PPS-0150**



- PPS-0150 = 1.375 1/2" CTR TOOLING**
- PPS-0175 = 1.625 3/4" CTR TOOLING**
- PPS-0350 = 3.500 1/2" CTR LIVE TOOLING**
- PPS-0400 = 4.000 1/2" CTR LIVE TOOLING**
- PPS-0500 = 5.500 3/4" CTR LIVE TOOLING**

Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PPS-0350	Posi-Lock Post for 1/2" ctr. live	\$150.00
PPS-0400	Posi-Lock Post for 1/2" ctr. live	\$160.00
PPS-0500	Posi-Lock Post for 3/4" ctr. live	\$195.00



**PPS-0175**



**PPS-0350**



**PPS-0400**



**PPS-0500**

## Posi-Lock Dovetail Systems *Mount universal posts & just change the heads*

When it comes to locking the tool block to the post we don't mess around with weak set screws or "cam type" wedges.

The dovetail plate is drawn back to the post with two cap head **bolts** from the rear. Creating a solid, vibration free, won't loosen up, work horse of a holder. To adjust center simply loosen the rear bolts, insert a hex key in the jack screw, center the tool, and lock it back in place. **PATENT PENDING**

### Extension Heads

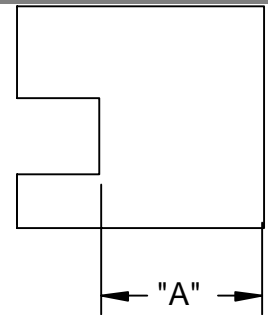
*Great for turning or cut-off tools*

- ◆ Compact....Post is only 1.50" wide.
- ◆ Double cap head bolts for solid lock down to the table.
- ◆ Vibration free double bolted dovetail.
- ◆ Can be used on either side of the work piece.
- ◆ Fine adjustment leveling screw for precise centering.
- ◆ Holds square tools up to 0.5"
- ◆ All components... hardened alloy steel.



**>>Post and heads are sold as separate items. <<**

Part No.	Description	A	Price
PPS-0150	Posi-Lock Post for 1/2" center.		\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.		\$105.00
PEX-2100	1" Extension Turning Tool Holder	1.000	\$95.00
PEX-2200	2" Extension Turning Tool Holder	2.000	\$115.00
PEX-2300	3" Extension Turning Tool Holder	3.000	\$125.00



### Combo Turn Heads

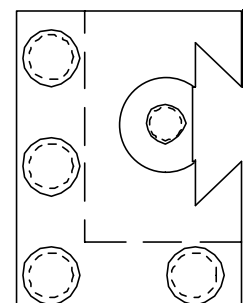
*Ideal for facing & turning*

- ◆ Accepts up to 0.50" square tools
- ◆ Used in turning and / or facing.
- ◆ Offered in right or left hand to accommodate any application.
- ◆ Fine adjustment leveling screw for precise centering.
- ◆ Easy change over for modular tooling.
- ◆ Could be used to hold 2 tools.
- ◆ Shown with post, sold separately



Left hand shown

Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PST-2106	Right Hand Combo Turning Holder	\$115.00
PST-2107	Left Hand Combo Turning Holder	\$115.00



## **Replaceable Blade Cut-off Head** *Use with HSS or carbide tipped "T" blades*

- ◆ Accepts 0.04" to 0.125" wide blades. 5/8" to 11/16" high
- ◆ Position on far side of table to conserve space.
- ◆ Right or left hand approach.
- ◆ Sturdy design insures straight cuts.
- ◆ Fine adjustment leveling screw for precise centering.
- ◆ Easy change over modular tooling.
- ◆ Shown with post.



Post and heads are sold as separate items

Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PCO-2160	11/16" Blade Cut-off Holder	\$95.00

## **Three Position Drill Head**

*Ideal for small work when table room is tight*

Enables use of three drills or other tools only taking 2" of space.

Uses 1/2" standard bushings.

Fine adjustment leveling screw for precise centering.



Post and heads are sold as separate items

Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PDA-3040	Compact 3 Position Tool Holder	\$125.00

## Live Spindle Holders

Live tool work is now easier than ever

### All of our Live tool heads have these standard features :

Accepts 0.898" / 0.905" (23 mm), 1.181" (30 mm) or 1.417" (36 mm) diameter **NSK** or **Finley** live tooling spindles.

Heads are only 2" wide.

Available in both right and left hand orientation on most items.

2 secure front clamping bolts.

Adjustment leveling screw for precise centering.

Vibration free double bolted dovetail design.

## Radial Live Holders

Cross drill or milling

- ◆ Used for cross drilling or slot milling.
- ◆ Also used with C axis for contour milling.
- ◆ Milling and engraving capability with C axis.
- ◆ Leveling screw for precise height adjustment.
- ◆ Adapter bushing available for 30 mm NSK spindles
- ◆ Live tool or post not included.



NSK 23 mm Spindle

Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PLR-5100	23 mm Radial Live Tool Holder	\$135.00
PLR-5360	36 mm Radial Live tool Holder	\$195.00

### 36MM REDUCERS

Part No.	Description	Price
ABR-3630	36 mm TO 30 mm Adapter Bushing	\$60.00
ABR-3625	36 mm TO 25 mm Adapter Bushing	\$60.00
ABR-3610	36 mm TO 1.00 in Adapter Bushing	\$60.00



Finley 36 mm Spindle

## Two Position Radial Live Holders

For 23 mm NSK

- ◆ Two in the space of one.
- ◆ More flexibility when using different drill sizes in one operation.
- ◆ Milling and engraving capability with C axis.
- ◆ Micrometer leveling screw for precise height adjustment.
- ◆ Live tool or post not included.



Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PLR-5200	23 mm 2 Pos. Radial Live Tool Holder	\$155.00

## Axial Live Holders

Face drill or contour mill

Precise centering for high speed small diameter drilling or milling.

The perfect tool for off center holes.

Add a 90° head to do cross drilling applications.

Universal indicates head can be mounted right or left of post.

Live tool or post not included.



**30 mm & 36 mm spindles can only be used on a 3/4" tool center. Requiring a PPS-0175 post.**

**Finley 36 mm Spindle**



**NSK 23 mm Spindle**

Part No.	Description	Price
PPS-0150	Posi-Lock Post for 1/2" center.	\$95.00
PPS-0175	Posi-Lock Post for 3/4" center.	\$105.00
PLA-5006	Right Hand 23 mm Axial Live Tool Holder	\$135.00
PLA-5007	Left Hand 23 mm Axial Live Tool Holder	\$135.00
PLA-5306	Universal Hand 30 mm Axial Live Tool Holder	\$155.00
PLA-5366	Universal Hand 36 mm Axial Live Tool Holder / use with PPS-0175	\$165.00



## Vertical Live Holders

Slot, saw or shape mill

- ◆ Precise vertical adjustment for accurate parts.
  - ◆ The perfect tool for sawing, slotting, and shape milling.
  - ◆ Adapter bushing available for 30 mm NSK spindles
  - ◆ Choose a 3.5" 4" or 5.5" high post
  - ◆ Adapter bushing available for 30 mm NSK spindles
  - ◆ Universal indicates head can be mounted left or right of post.
- Live tool or post not included.

**For machines with 1"+ capacity, a PPS-0500 is required for vertical (overhead) operations.**



NSK 23 mm Spindle

Part No.	Description	Price
PPS-0350	3.5" Overhead Dovetail Post	\$150.00
PPS-0400	4.0" Overhead Dovetail Post	\$160.00
PPS-0500	5.0" Overhead Dovetail Post	\$195.00
PLV-5206	Universal 23 mm Overhead Live Tool Holder	\$150.00
PLV-2300	Neutral 23 mm extended 2" from post	\$150.00
PLV-5366	Universal 36 mm Overhead Live Tool Holder	\$195.00



Finley 36 mm Spindle

## Axial Live Holders

Face drill or contour

- ◆ Designed for light duty precise machining.
- ◆ Double bolt down for vibration free operation.
- ◆ Two locking set screws arranged in parallel.

Delrin locking elements.  
 For **NSK** Live spindles.  
 1/2" center height only  
 Live air tool not included.



Part No.	Description	Price
TLA-1470	23 mm Axial, Fixed Center, live tool holder	\$175.00
TLA-1250	25 mm Axial, Fixed Center, live tool holder	\$175.00
TLA-1254	1.00 in Axial, Fixed Center, live tool holder	\$175.00

## Tap Holder, Adjustable Center

*,Bushing Type*

- ◆ 0.625 +0" / -0.0005" shank diameter.
- ◆ Black oxide finish and ground shank.
- ◆ Smooth slide floating inner sleeve.
- ◆ Spring load set for wide range of taps.
- ◆ Tap sizes 00-90 thru ½ -13.
- ◆ Adjustable head for exact centering.
- ◆ Uses standard ½ " tap bushings.



A perfect tool for consistent, repeatable tapping. Free sliding inner sleeve protects the smallest tap while rigid enough for heavy coarse threads. Exact centering insures critical tap alignment.

Part No.	Description	Price
ATJ-2050	Non-releasing adjustable center tap holder	\$125.00

## Tap Holder, Fixed Center

*Bushing Type*

- ◆ 0.625 +0" / -0.0005" shank diameter.
- ◆ Smooth slide floating inner sleeve.
- ◆ Spring load set for wide range of taps.
- ◆ Tap sizes 00-90 thru ½ -13.
- ◆ Black oxide finish and ground shank.
- ◆ Uses standard ½ " tap bushings.
- ◆ Short overhang reducing tap extension.
- ◆ Fixed center



Same superb qualities as the adjustable center tap holder, with a "floating" fixed center. Short overhang reduces the tap length to align with other tools in the holders.

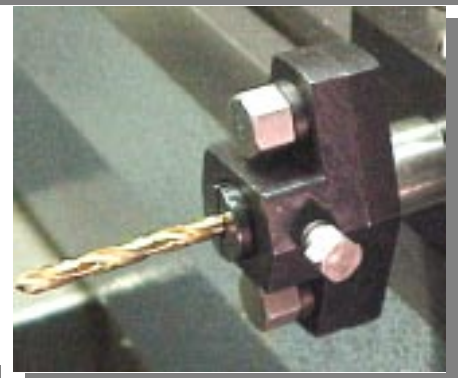
Part No.	Description	Price
ATF-2050	Non-releasing fixed center tap holder	\$125.00

## Drill Holder, Adjustable Center

*Bushing Type*

- ◆ 5/8" shank diameter.
- ◆ Secure, center locking bolts.
- ◆ Accepts standard ½" bushings.
- ◆ Thru hole in shank for deep drill insertion.
- ◆ Head adjusts for exact centering.
- ◆ Hardened alloy steel hardware.

Once locked on center this tool provides a rigid platform for positive drilling. Also useful for small drill operations to achieve accurate centering.

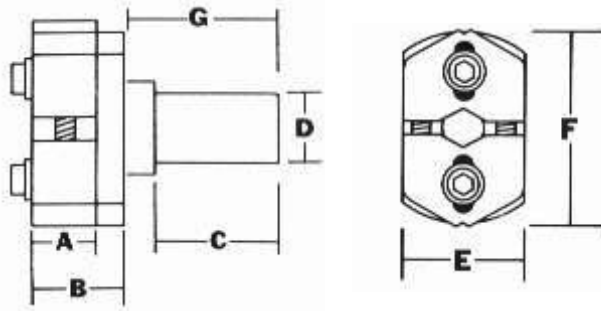


Part No.	Description	Price
ADJ-2050	Adjustable center drill holder	\$65.00



## Tap Holder, Adjustable Center, Clamp Type

Bushingless



Adjustable Center, Tap Holder, Clamp Style

Non-releasing type

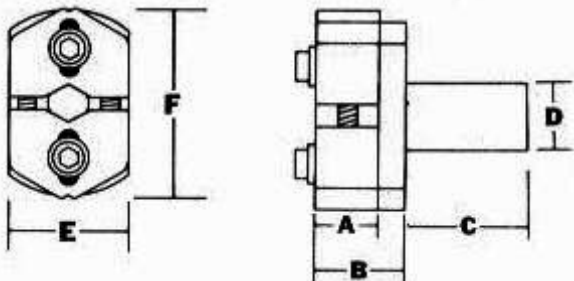
Tap Holder requires no bushings, no collets, no extra jaws. Also important: need for cutting off tool shanks is completely eliminated. Tap Holder jaws firmly grip the tool along the full length of the jaws. This unit is the only tap holder with concentric self-alignment and adjustability for all taps within the capacity of the machine for which it is designed. Adaptable for use as a floating reamer holder

A	B	C	D	E	F	G	CAPACITY
.500	.750	1.187	.625	1.125	1.875	1.437	.030 to .406

Part No.	Description	Price
NBT-3050	Adj Center 5/8" Shank Tap Holder, Clamp type	\$145.00

## Drill Holder, Adjustable Center, Clamp Type

Bushingless

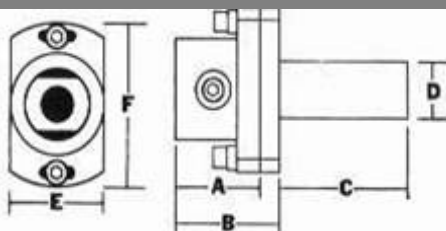


Drill Holder firmly grips all tools within the capacity of the machines for which it is designed. Completely eliminates the need for cutting off tool shanks. Each pair of sliding jaws is independently mounted for adjustable movement. Jaws may be quickly inverted to hold the smallest standard size drills.

A	B	C	D	E	F	CAPACITY
.500	.750	2.375	.625	1.125	1.875	.030 to .406

Part No.	Description	Price
NBD-3050	Adj Center 5/8" Shank Drill Holder, Clamp type	\$75.00

## Adjustable Floating Reamer Holder



Designed for precision reaming, quick and accurate set-up. The Adjustable Floating Reamer Holders are self-centering, completely floating holders. The floating feature is simplicity itself. The master bushing with convex base engages a concave, loose-seating disc. After set-up, the setscrews, which center the bushing, are loosened slightly and the bushing is permitted to float. Eight sleeves are furnished for each standard size chucking reamer shank within capacity of the holder. Thus, the holder is complete in itself – no accessories needed. All these advantages add up to big savings in set-up and down time. Bushing sizes included: 7/64, 9/64, 11/64, 13/64, 15/64, 9/32,

5/16, 3/8"

A	B	C	D	E	F	CAPACITY
.500	.750	2.375	.625	1.125	1.875	.030 to .406

Part No.	Description	Price
ARJ-2050	Adjustable Floating Reamer Holder,	\$90.00

## Drill Holder, Fixed Center

- ◆ Quick setting on fixed center.
- ◆ Two sizes for wide range of drilled diameters.
- ◆ Uses 1/2" standard bushes (ADF-2050)
- ◆ Thru hole allows deeper insertion for long drills.
- ◆ Large set screw for positive gripping. (No push-back).
- ◆ Machined on common center 0.0002 max run out.



Part No.	Description	A	B	C	Price
ADF-2050	5/8" Shank fixed center, drill holder	.500	.625	.400	\$35.00
ADF-2060	3/4" Shank fixed center, drill holder	.750	.750	.550	\$45.00

## ER Collet Holders

- ◆ Designed specifically for gang turn lathes.
- ◆ Adjustable inner stop to prevent push back & easy relocating.
- ◆ Flat on shank insures no twisting.
- ◆ No need to buy individual collets for each drill size.
- ◆ No special wrenches to buy.
- ◆ Made from heat treated hardened & ground alloy steel.
- ◆ Collets not included.



Part No.	Description	Shank	Price
AER-1140	ER 11 Collet holder	0.500"	\$75.00
AER-1150	ER 11 Collet holder	0.625"	\$75.00
AER-1650	ER 16 Collet holder	0.625"	\$85.00
AER-1660	ER 16 Collet holder	0.750"	\$85.00

## Turning & Threading Tool

A real space and time saver.

Turn and thread with one tool without reversing the spindle.

Front and back turning possible by changing the threading insert.

Hex key wrench included.

Rigid, well supported.

Hardened alloy steel.



Part No.	Description	Shank Dia.	Price
AST-4152	Turning / Threading Tool	0.6250"	\$125.00

## Bar Type Turning Tools

- ◆ Right hand turning shown.
- ◆ Can be flipped over to use on either side of work.
- ◆ Two styles to choose roughing & general purpose.
- ◆ Hex key wrench included.
- ◆ Rigid, well supported turning.
- ◆ Hardened alloy steel.
- ◆ Uses TPGB-321 insert



Part No.	Description	Insert size	Price
AST-4151	General Purpose 5/8" shank	TPGH-321	\$35.00

## Axial Approach Knurling Tool

- ◆ The perfect tool when space is an issue.
- ◆ Knurl from either side to save travel time.
- ◆ Quick change c-clip release.
- ◆ Hardened alloy steel.  
Knurl not included.



Part No.	Description	Knurl Type	Knurl I.D.	Price
AKA-6250	5/8" Shank Axial Knurling Holder	GK or KN	0.250	\$30.00
AKA-7500	3/4" Shank Axial Knurling Holder	GK or KN	0.250	\$35.00
AKA-7501	3/4" Shank Super Duty Knurling Holder	PH	0.500	\$38.50

## Side Knurling Tool

- ◆ A very sturdy & rigid tool
- ◆ Ideal for bump or straight turn knurling
- ◆ Quick change c-clip release.
- ◆ Uses **GK series** knurls.
- ◆ Can be used on either side of the work piece.
- ◆ Heat treated alloy steel.
- ◆ Hardened and ground pin.
- ◆ For 3/8" square turning tool holders & up.  
Knurl not included



Part No.	Description	Knurl I.D	Price
AKR-0375	Side Knurling Holder	.250	\$56.50

## Revolving Stops

- ◆ Smooth rotating head and positive stopping action insures precise feed outs with out the need for facing.
- ◆ Can withstand severe conditions and still outperform other types on the market.
- ◆ Available in 5/8" or 3/4" diameter shank.



Part No.	Description	Price
ARS-0050	5/8" revolving bar stop	\$35.00
ARS-0060	3/4" revolving bar stop	\$45.00

## Threading Die Holder

- ◆ Allows threading of long small diameter threads.
- ◆ Oil wash cross holes for proper lubrication.
- ◆ 5/16" shank (also fits swiss automatics)
- ◆ Made from strong aircraft aluminum.
- ◆ Use with sliding tap holder, (not included)
- ◆ Uses 13/16" button dies.



Small diameter threads are difficult to impossible when single pointing. This tool will provide a final solution for this type of application, while maintaining the versatility to thread up to 5/16"-18. ECI initially developed for Swiss cam automatics.

Part No.	Description	Price
BDH-1316	Button Die Holder	\$35.00

## Z-Zero Tool Setting Fixture

- ◆ Lines up all tools on a single plane.
- ◆ Set one tool "zero " point on the part and enter the same offset for all, without doing each individually.
- ◆ Simply insert and lock into a .750 collet.
- ◆ Tool plate is ground to insure accurate length setting.
- ◆ 3/4" shaft size, 12" long setting area.



Part No.	Description	Price
ASA-7500	Tool setting fixture	\$90.00

## Bushing Sets

- ◆ 3 sets available in each size. Fraction, wire, & letter
- ◆ Split for easy insertion.
- ◆ Banded to prevent loss.
- ◆ Hardened alloy steel.



Part No.	Description	# in set	Price
ABD-2140	5/64" thru 3/8" 1/2" OD Bushing Set	26	\$225.00
ABD-2141	#1 thru 47 1/2" OD Bushing Set	47	\$440.00
ABD-2142	A thru Z 1/2" OD Bushing Set	26	\$298.00
ABD-2150	3/32" thru 1/2" 5/8" OD Bushing Set	27	\$298.00
ABD-2151	#1 thru 41 5/8" OD Bushing Set	41	\$445.00
ABD-2152	A thru Z 5/8" OD Bushing Set	26	\$298.00

## Standard 1/2" Tap Bushings

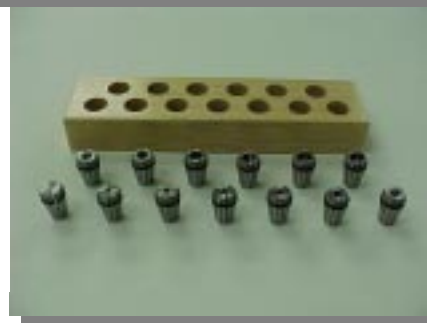
- ◆ 8 piece set 0-80 thru 1/2"-13
- ◆ Split for easy insertion.
- ◆ Square drive for positive locking.
- ◆ Twist-torque design won't pull out.
- ◆ Hardened alloy steel.



Part No.	Description	Price
ABT-2100	Set of 8 tap bushings	\$150.00

## ER Collet Sets

- ◆ 16 jaws provide parallel clamping & powerful gripping.
- ◆ 8 Deg taper for highest gripping power.
- ◆ Wide holding range of .0394 (1.0 mm) collapse.
- ◆ Accurate to within 0.0005
- ◆ Sold in sets only.



Part No.	Description	# in set	Price
AER-1113	1/32" thru 17/64" 1/2" OD Bushing Set	13	\$234.00
AER-1610	1/32" thru 25/64" 1/2" OD Bushing Set	10	\$180.00



## Reducer Sleeves

- ◆ Large clearance holes for positive locking from screw to shaft.
  - ◆ 0.0002" concentricity .
- ◆ By purchasing all 3/4" multi-station tool blocks, both 3/4" & 5/8" shank tooling can be used.



Part No.	Description	Price
ABR-3458	3/4" to 5/8" Reducer sleeve	\$25.00
ABR-3412	3/4" to 1/2" Reducer sleeve	\$25.00
ABR-3438	3/4" to 3/8" Reducer sleeve	\$25.00
ABR-5812	5/8" to 1/2" Reducer sleeve	\$25.00
ABR-5838	5/8" to 5/8" Reducer sleeve	\$25.00

## 36 mm Precision Reducer Sleeves

- ◆ Precision ground
- ◆ Easily switch out live spindles
- ◆ Eliminates the need to purchase additional holders.



Part No.	Description	Price
ABR-3630	36 mm TO 30 mm Adapter Bushing	\$60.00
ABR-3625	36 mm TO 25 mm Adapter Bushing	\$60.00
ABR-3610	36 mm TO 1.00 in Adapter Bushing	\$60.00



## Gang Tool Machining Advantages

Gang tooled lathes provide a reliable, fast method of tooling setup, yet very few operators extract the best from this style of machine and tooling.

We hope these pages assist you in optimizing your next set-ups.

### More Tools on the table

When we purchase machine tools, we want the best range of features, at the best price, so we generally buy more than we need, just in case that big job comes in, but we have to make sacrifices for that flexibility.

With gang tool lathes that generally means that the larger standard holders are great for that big job, (because the machine manufacturer has to provide for the maximum load that you can put on the tools.)

But for the small work, we are always looking for room to load that last tool, This is where you can benefit the most.

**If you can stack the tools closer together for parts under 1" you can :**

- Get more tools on the plate
- Change over setups quickly
- Be more flexible on the small jobs

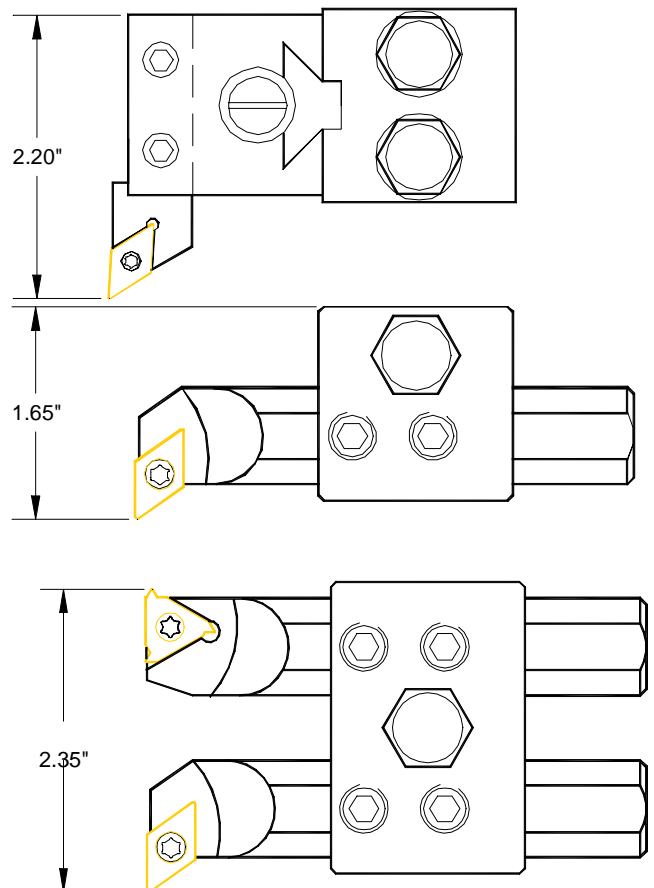
Most turning tools are square shank, but you can get the same results by using boring bars for turning,

There are other benefits also, you can cut inside the part and outside with 1 tool, plus a boring bar takes up a lot less room on the tool plate.

You can stack 2 bars back to back for outside turning and threading.

Consider that most jobs 1" & under, on a gang tool lathe run up to 3" long, and you can overhang a boring bar 4 times its diameter.

A 3/4" boring bar is not over extended for that application. ( $3/4" \times 4 = 3"$ )



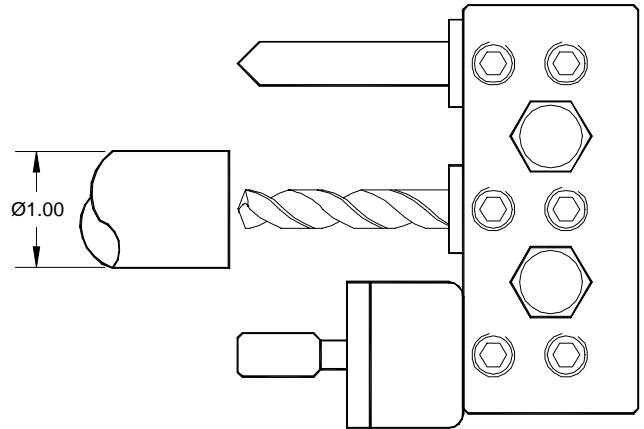
## Multi hole holders

When drilling you can use a multi tool holder and stack your drills close together.

Combining groups of tools simplifies setup greatly.

An NC spot drill (90° point), a drill, and a tap holder provide an ideal 3 position group for many jobs.

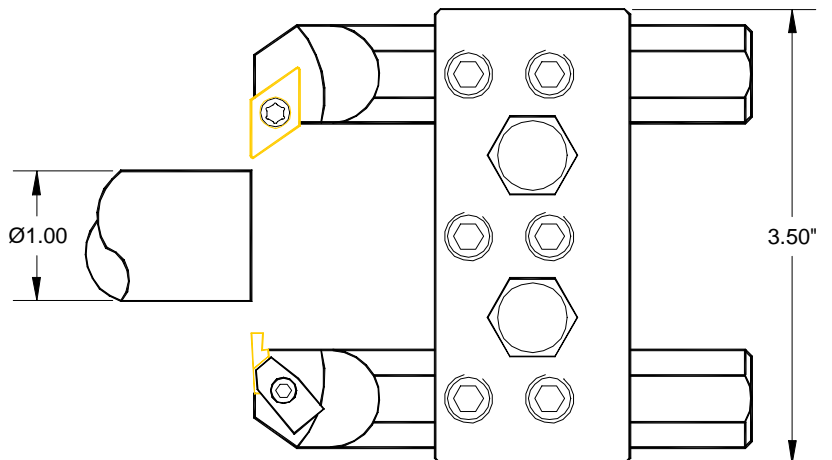
Simply swapping a drill and tap and a quick change over is achieved.



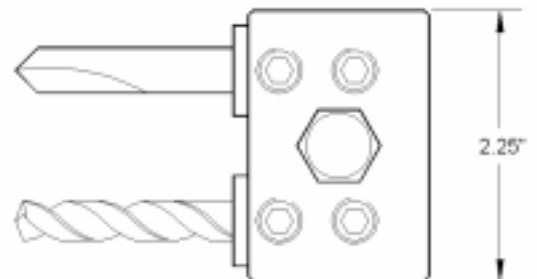
When choosing a threading tool, a grooving style holder (Top notch style) can provide a quick change from grooving to threading inserts.

Combining turning & grooving bars in a 3 position holder can allow fast rough and finish of the front & back of a part in a small table space.

The setup shown requires a spindle direction change, this can be solved by using a left hand boring bar running upside down.



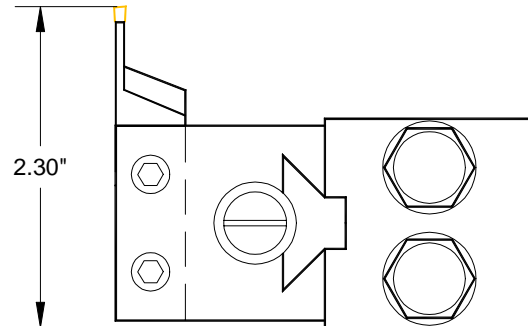
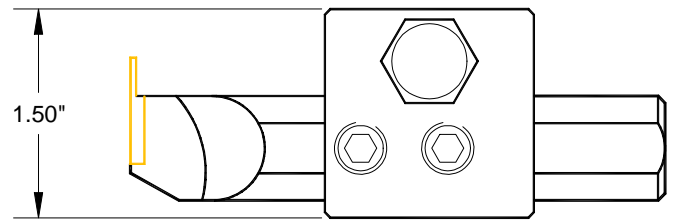
A two position holder is ideal for a simple center drill & drill.  
The picture shown uses 2 reducer bushings.  
ER11 or ER16 collet holders offer great flexibility for drill holding.



## Cutoff Tools

Cutoff tools for large diameter holders require a deep throat to accommodate 1" diameters, if your part is less than 0.5" diameter a thin grooving insert works well, (Nikcole manufacture a great range of inserts for grooving and turning) Thin Bit also has a wide range of inserts.

This allows a 5/8" or 3/4" bar for cutoff, saving almost an inch of table space. The boring bar cutoff can also be used in a multi-position holder,



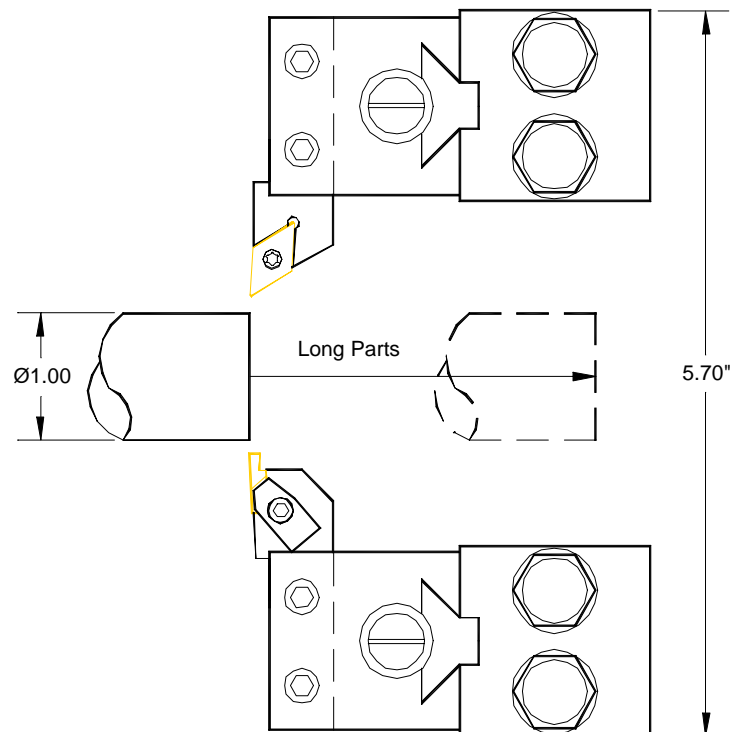
## Longer Parts

Sometimes a longer part requires machining using 2 holders, this can be achieved easily.

This example shows the ability to turn a longer part, or perhaps a tough material that required more rigid tooling than a boring bar.

This setup lends itself to form tooling to decrease cycle times even further.

Either tool can be upside down so that a change of spindle direction is not required.



## 4, 6, & 8 Position Holders

**If your parts require frequent repeat setups a large capacity holder can save time and money.**

Load your tools once in the holder, setup your offsets and at the end remove the tool holder with the tools still mounted. The next time this part is required, simply load the holder onto the plate and locate it against a known stop,

Load the offsets from the last time it was setup. And you are ready to run.

(On most CNC controls you can download the offsets to a PC or load the offset data in a program that is after the M30 end of program) simply run the stored offset program to load the tool data.

**This method of setup may seem expensive (saving tools on the shelf) but let us evaluate these numbers:**

1 eight position holder = \$320.00  
6 tools at \$150.00 each = \$900.00  
Total tool cost = \$1220.00

If your setup labor rate is \$80.00 hour and a new setup takes 2.5 hours typical setup cost is \$200.00

A new setup with would cost \$200.00

The next setup should take 10 minutes to load the new tool bar and run offset section of program.

Saving you \$190.00 per setup. Pay back is achieved at 6.4 setups. The more complex the setup the faster the payback time. If a 6 position holder is used payback is even faster (lower holder cost).

This example can be used as a basis for your payback time.

