



## **Drawbars for Milling Machines**





#### **Made in USA Drawbars**

Manufactured from low carbon steel, soft and black oxide plated. Drawbars are manufactured from two parts—the shaft and the hex.

Drawbars for Milling Machines						
Fits Milling Machine	Overall Length	Hex Length	Shaft Length	Thread & Length	Spacer Length	Order Number
Bridgeport & Copies 2J Vari Speed Head 1J Step Pulley Head	22-3/4" 20-1/4	4-1/4" 1-3/4	18-1/2" 18-1/2	7/16-20 X 1-3/4" 7/16-20 X 1-1/2	1/4" 1/4	Z9005 Z9004
<b>Lagun</b> Vari Speed Head	25-3/4	7-1/8	18-5/8	7/16-20 X 1-1/2	none	Z9005LAGR
<b>Wells Index</b> Vari Speed Head	24-1/2	5-1/4	19-1/4	7/16-20 X 2	none	Z9005WEL
<b>Kondia</b> Vari Speed Head	23-1/4	4-1/4	19	7/16-20 X 1	1/4	Z9005KON
<b>Excello</b> Vari Speed Head	23	3-1/2	19-1/2	7/16-20 X 1	1/4	Z9005EXC





Our Universal Draw Bar was developed by our engineering staff in response to requests from many customers who were unable to find Drawbars to fit their machines. Both the Hex or wrench end, and the threaded end were designed with enough adjustments to fit almost any machine in use today!

Order Number Z9005UNIV

The Universal Drawbar is provided with a variety of spacers which allows the user to adjust the shaft length (measured from under the spacer to the end of the threaded shaft) from a maximum length of 20", down to 17-1/4". Sufficient spacers are included to allow shaft length adjustments by one quarter inch increments.

The 7/16-20 thread on the shaft is a full 1-1/2" long, and can be used with any R-8 collet. The Hex head measures 7-1/4" long, which will accommodate a wide range of milling machines.

All the above attributes give a wide range of flexibility and allow this drawbar to be fitted onto a wide variety of milling machines.

The overall length of the drawbar is 27-1/2". Material is low carbon steel, unhardened, with black oxide finish.

## SPECIAL ORDERS AVAILABLE— Small Quantities

to Large Volume

#### Drawbars for Milling Machines w/Right Angle Attachments Overall Hex Order Shaft Spacer Fits Milling Machine Length Number Length Length Length Thread Bridgeport & Kondia 26-1/4" 7-3/4" 18-1/2" 7/16-20 1/4" Z9005R1 10-3/4 Z9005R2 Index & Lagun 29 18-1/4 7/16-20 1/4 Alliant & Sharp 27-1/4 18-1/4 7/16-20 Z9005R3

**Drawbars for Milling Machines w/Right Angle Attachments** 



**USA**MADE

**Phone: 317-472-9000 ●** FAX: 317-472-9010 **●** *email: sales@ampg.com* **●** www.ampg.com

Accurate Manufactured Products Group

WWW.SWIFTTOOL.COM

G2

### **Quill Feed Handles & Spider Handles**

#### **USA**MADE

#### **Quill Feed Handles**

#### for all Bridgeport-type Milling Machines

Manufactured to fit the Bridgeport-type Series 1 & 2 Milling Machines. Speeds up all quill operations.

A flick of the wrist retracts the pin from the quill feed index plate, allowing you to move the handle to any desired position. Eliminates the slow process of pulling off the standard quill feed handle, and resetting it for different positions.



- 1" hole diameter. 3/16" diameter pin.
- All steel construction with heavy duty spring action.
- All parts Zinc plated for protection and appearance.
- Made In USA

Quill Feed Handles				
Style	Order Number			
for Bridgeport Mills	Z9900			
For Bridgeport (Zinc Plated)	Z9900-ZINC			
for Lagun Mills	Z9900-LAG			



Discontinued



#### **Spider Handle**

A quality USA made spider handle that replaces the standard quill feed handle on most milling machines. Perfect for all drilling operations.



Sturdy construction features a solid aluminum machined center (not a casting), with a 1" bore and a 3" diameter. (3) heavy duty solid steel spokes and knobs extend aprox. 6-1/2" from center. Plated finish. Made in USA.

Order Number Z9910



**USA**MADE







### **Milling Machine Accessories**





#### **Precision Adjustable Mill Stop**

A rigid stop for milling set ups. Mounts to the table.

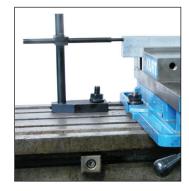
This time saving and handy accessory was designed for use on Milling Machines, Jig Borers, and for horizontal and vertical milling set ups.

Use with Angle Plates, Vises, Jigs, etc. to serve as a rigid stop. Made in USA.

- 1/2" hole for T Slot mounting
- 3/8" Diameter Rod x 7" Long
- Base 2" x 4-1/2"
- Overall height: 7"
- Steel, Black Oxide Plated
- · Weight- 3lbs.



**USA**MADE





#### **Quill Stop**

#### For All Milling Machines—Quickly Sets Quill Depth

To insure a perfectly aligned Quill Stop, we assemble each stop, then face it off, drill and tap it. This process is expensive but it guarantees you the finest Quill Stop. Made in the USA at a most affordable price!

- Quick Action Clipping
- Rapid Depth Setting
- · Easily and Quickly Removeable
- Extra Strong Spring
- asily Positioned
- Sturdy Aluminum Knobs
- Positive Locking Action
- Unconditionally Guaranteed
- Made in USA

Quill Stop					
Description	Order Number				
1/2 - 20 threads for Mills	Z9006				
1/4 - 20 threads for drill presses	Z9006A				
3/8 - 24 threads for drill presses	Z9006B				





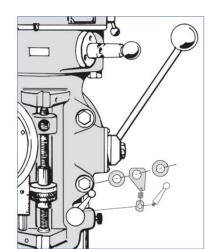
#### SPECIAL ORDERS AVAILABLE— Small Quantities to Large Volume

#### **Quill Free**

Stops the Quill Lock handle from falling and putting drag on the Quill. Provides positive lock engagement and eliminates all drag. Made in USA









**Phone: 317-472-9000 ●** FAX: 317-472-9010 **●** *email: sales@ampg.com* **●** www.ampg.com



G4

## **Milling Machine Accessories**

#### **USA**MADE

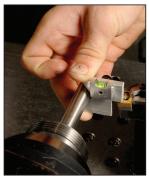
### **Machine Set-Up Gage with Level**

- Aluminum Body
- Made In USA

Order Number Z8995









#### **Directional Lube—Fluids Dispenser for Machines**

Keeps table free, by mounting under the head of your Mill. Mounts with one screw. Works with all coolant systems. Valve regulates coolant flow, and the Lube can be mounted for right or left hand supply.

- Comes complete with Valve, flexible hose and nozzle, and pipe plugs.
- All parts corrosion resistant.
- Made In USA.

Directional Lube				
Description	Order Number			
Fits Mills	Z9080			
Universal	Z9082			















## **Milling Machine Accessories**

#### **Shell End Mill Arbor Screws**

Fits Style "C" and other styles of Shell End Mill Arbor

- Material: Cold Rolled Steel
- Heat Treat: Carburized to Rc C45-50
- Finish: Black Oxide and Oil



Shell End Mill Arbor Screws								
Thread	Head Diameter	Head Height	Thread Length	Order Number				
1/4-28	5/8"	17/64	1/2"	Z1500				
3/8-24	7/8"	19/64	5/8	Z1501				
1/2-20	1-3/16"	5/16	13/16	Z1502				
5/8-18	1-1/2"	5/16	61/64	Z1503				
3/4-16	1-7/8"	23/64	1-1/8	Z1504				
1-14	2-1/2"	7/16	1-1/4	Z1505				





#### **Milling Machine Arbor Spacers**

Imported — Manufactured of Hardened Steel Ground for parallel and perpindicular surfaces, to insure that Milling Cutters mounted on a Milling Arbor operate correctly.

	Milling N	lachine Ar	bor Space	rs
Thickness	ID	OD	Keyway	Order Number
1/4"	1"	1-1/2"	1/4"	ARB112
1/4	1-1/4	1-3/4	5/16	ARB113
1/4	1-1/2	2-1/8	3/8	ARB114
1/4	2	2-3/4	1/2	ARB115
3/8"	1	1-1/2	1/4	ARB212
3/8	1-1/4	1-3/4	5/16	ARB213
3/8	1-1/2	2-1/8	3/8	ARB214
3/8	2	2-3/4	1/2	ARB215
1/2"	1	1-1/2	1/4	ARB312
1/2	1-1/4	1-3/4	5/16	ARB313
1/2	1-1/2	2-1/8	3/8	ARB314
1/2	2	2-3/4	1/2	ARB315
3/4"	1	1-1/2	1/4	ARB412
3/4	1-1/4	1-3/4	5/16	ARB413
3/4	1-1/2	2-1/8	3/8	ARB414
3/4	2	2-3/4	1/2	ARB415
1"	1	1-1/2	1/4	ARB512
1	1-1/4	1-3/4	5/16	ARB513
1	1-1/2	2-1/8	3/8	ARB514
1	2	2-3/4	1/2	ARB515



SPECIAL ORDERS
AVAILABLE—
Small Quantities
to Large Volume

G6





### **5C Fixture Mounts & Precision Chucks**

#### **5C Fixture Mounts**

A lathe tool for use in place of face plate fixturing.

Has a 5C back for quick mounting, and a soft face for ease of machining to your workpiece.

- Low carbon steel
- Made In USA

Used on Lathes with 5C spindles — for turning or boring odd shaped parts that cannot go into a collet. Useful for turning any off-center holes, or odd shapes. Machinable soft face allows you to mill the fixture mount to accept the work piece, then drill and tap holes to clamp the part onto the fixture mount.

Boring off-center holes is the perfect application. Mount the work piece with clamps to the fixture mount off-center, to perform the required bore, which would line up to the latthe center point.

Excellent for working on castings. Mounts and dismounts very quickly — takes the same amount of time as mounting a 5C collet. You can design the clamping system to hold your part, so that by loosening a few screws, you can mount and dismount your parts for production.

The longer lengths are used for long parts. Boring into the fixture mount allows you to nest the long part inside, increasing the rigidity of the part being machined.

The longer heads can be faced off after one part is done, presenting a fresh face for reuse!

Also can be used on Mills—5C Collet fixtures can use this for fixturing parts for measuring, or any secondary operations on the Mills.

		e Mounts	5C Fixtur	
	Order Number	Overall Length	Face Length	Face Diameter
	Z9560	4-1/2"	1"	2"
	Z9561	6-1/2	3	2
4	Z9564	4-1/2	1	3
	Z9565	6-1/2	3	3
	Z9569	4-1/2	1	4
	Z9570	6-1/2	3	4
	Z9575	4-1/2	1	5
	Z9580	4-1/2	1	6

Special and
Custom sizes can be
manufactured to your
specs. Call for price
& delivery.

Discontinued



#### **5C Mount Precision Chucks**

#### A handy accessory for Lathe Collets

Eliminates tearing down a collet set up on a lathe when working with material diameters that you don't have the correct size collets for.

We manufacture the adaptor back in the USA, and assemble it onto an imported Chuck.

#### Our 5C precision chucks work with any 5C tooling!

To mount your own 3" or 4" Chucks, see our Fixture Mounts.

5C Mount Precision Chucks							
Chuck Diameter	O.D. Clamping Range	I. D. Holding Range	Hole Size 5C Back	Hole Size thru chuck	T. I. R. Repeatability	Weight	Order Number
3" 3-Jaw, Self-Centering (Extra Chuck Jaws & Chuck Key included)	5/64—2-15/32	63/64—2-3/4	3/4	5/8	.003	5 Lbs	Z9550
3" 4-Jaw, Independent (Chuck Key included)	5/8—2-1/2	45/64—2-1/2	3/4	57/64	.003	5 Lbs	Z9551
4" 3-Jaw, Self-Centering (Chuck Jaws & Chuck Key included)	5/64—3-5/32	1-3/16—3-35/64	3/4	7/8	.003	9 Lbs	Z9552

Attachment Back Made in USA—Imported Chuck









## **5C Adapter Body, Collet Heads & Pads**





#### **5C Adapter Body**

Used to customize for your exact workpiece. Works anywhere a 5C Collet can be used. Insert the Expander Pin, bore, mill, or step out to size, remove the pin, and go! 5C Adapter body takes steel or aluminum heads.

Made in USA.

Order Number	
Z1140	

**USA**MADE



Photo of 5C Adapter Body and Steel Soft Collet Head. 5 C Adapter Body fits all the Heads shown below.

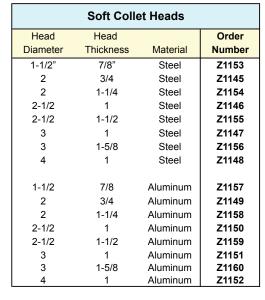


#### **Soft Collet Heads**

Each Soft Collet Head comes with one expander pin and fits the **Z1140** 5 C Adapter Body shown above.









### **Internal Expanding Collet Heads**

Soft Steel with Expansion Screw

**USA**MADE

Internal Expan	ding Collet	Heads
Collet Diameter	Collet	Order
Range	Length	Number
5/16 to 9/16	5/8"	Z1105
1/2" to 1"	1"	Z1106
1/2" to 1"	1-3/4"	Z1107
1/2" to 1-1/2"	1"	Z1108
1/2" to 1-1/2"	1-3/4"	Z1109
1/2" to 2"	1"	Z1110
1/2" to 2"	1-3/4"	Z1111
1/2" to 2-1/2"	1"	Z1112
1/2" to 2-1/2"	1-3/4"	Z1113
1/2" to 2-15/16"	1"	Z1114
1/2" to 3-15/16"	1"	Z1115
1/2" tp 4-15/16"	1"	Z1116



#### **Collet Pads**

SPECIAL ORDERS AVAILABLE— Small Quantities

to Large Volume

G8

Collet Pads							
Collet Pad	Collet		Order				
Diameter	Length	Material	Number				
3-1/2"	1"	Steel	Z1130				
3-1/2"	1"	Aluminum	Z1131				
4-1/2"	1"	Steel	Z1132				
4-1/2"	1"	Aluminum	Z1133				



**USA**MADE



## **USA**MADE

## Machine Tool & Workholding Accessories

#### **5C Expanding Collet Body**

Precision made in the USA for custom set ups. 5C Adapter Body can be used anywhere a 5C Collet goes, and the individual expanding collet attachments can be modified for your particular job.

**5C Collet Bodies & Collet Stops** 

#### **Order Number** Z1100 **USA**MADE



#### **5C Step Collet Body**

### Z1125 **USA**MADE

## **Order Number**



#### **Adjustable Collet Stop**

Adjustable Stop has fine threaded stud for incremental positioning. Screwdriver slot in stud allows quick and accurate setting.

- Steel with Black Oxide plating.
- Stud is 4" long.

#### **Order Number** Z9002



- Made in USA

#### Adjustable Work Stop for all 5C Chucks

A handy positive work stop for repetitive operations. Steel center attaches to the internal thread of the 5C back. 8" long stud allows for a wide range of adjustment. Made in USA.

- · Low carbon steel, black oxide plated.
- Stud is 7/16" diameter for rigidity. with a screwdriver slot in the end.
- Body has a 7/8-20 thread to fit our 5C Backs.
- PLEASE NOTE: this stop will not fit standard 5C Collets.

#### **Order Number Z**9553



#### **Universal 5C Collet Stop**

5 piece Set converts standard 1" Lathe Collets into solid or ejector stop collets. Comes complete with all attachments and springs.

- Made from steel with black oxide plating.
- Made in USA

#### **5C Extra Length Collet Stop**

#### For all 5C collets

For chucking parts to a depth of 7-1/2" from collet face.

- Steel with black oxide plating.
- Stop stud is 7/16" diameter.
- Made in USA

#### **5C "Finger" Collet Stop**

5 piece Set is versatile and quick adjusting



Complete Set Includes:

- (1) Stop body
- (1) Extra 1/8" Dia. End Rod
- (1) Extra 1/2" Dia. End Rod
- (1) Extra 3/4" Dia. End Rod
- (1) Extra 1" Dia. End Rod





**Order Number** Z8996

**Order Number** 

Z8997

**USA**MADE









### Grinder Bushings & Slitting Saw Arbors USA SMADE

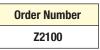




#### **Reducer Bushing for Air Die Grinders**

#### 1/4" to 1/8" Reducer Bushing

A quick change solution that allows the use of any tool with a 1/8" shank tool in a 1/4" Collet. Precision **USA made** split brass bushing grips tightly. Saves time and money!







#### **Slitting Saw Arbors**

Long, Precision Ground, extra rigid Arbors are manufactured by Accurate here in the USA. Steel, case hardened, and Black Oxide plated.

We grind the shanks after machining and heat treating for best results.

- 6 sizes with ground Weldon Flat shanks
- · Bodies are ground to match the caps:

#### **USA**MADE

# Saw Blade not included

#### Tolerances:

- +/- .003 concentricity from shank to mating bore of cap.
- +/- .001 square from shank to clamping surface of cap.

Slitting Saw Arbors							
Fits Saw	OD	Сар	Body	Shank	Shank	Order	
ID "A"	"B"	Height "C"	Length "D"	Length "E"	Diameter "F"	Number	
3/8	5/8"	.080	1-3/16"	1.700	1/2"	Z1305	
1/2	3/4"	.095	1-3/8"	1.700	1/2"	Z1310	
5/8	1"	.122	1-1/2"	2.030	3/4"	Z1315	





## 3 Pc. Slitting Saw Arbor Sets

**USA**MADE

3 Piece Set	
Fits Saws:	
5/8", 1", 1-1/4"	
Order Number	
Z1335	





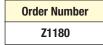
SPECIAL ORDERS AVAILABLE—

Small Quantities to Large Volume

G10

#### **Multi Saw Arbor**

This Multi Saw Arbor with a teloscopic centering assembly is made to accomodate any saw or cutter with one of five standard hole sizes: 1/2", 5/8", 3/4", 7/8", and 1". Works with thicknesses up to 3/16" and diameters to 4". Comes in plastic holding tube, allen wrench included.







Saw Blade not included





## **Expanding Arbors**

#### **8 Piece Expanding Arbor Set**

Chuck the Expanding Arbor in your Machine Tool, tighten the expansion screw, and the Arbor expands by up to 0.002".

Machine the Arbor to your correct part holding dimensions. Back off the Expansion screw reducing the Arbor diameter, position your part on the Arbor, and retighten.

8 Piece Set Includes: (1) 1/4" Arbor (Z9110) (1) 3/8" Arbor (Z9111)

(1) 1/2" Arbor (Z9112) (1) 5/8" Arbor (Z9113)

(1) 3/4" Arbor (Z9114) (1) 7/8" Arbor (Z9115)

(1) 1" Arbor (Z9116)

(1) 1-1/4" Arbor (Z9117) in wooden stand

Set Order Number Z9125





**USA**MADE

Arbors are Low Carbon Steel, soft for easy machining.

#### **3 Piece Expanding Arbor Set**

Low Carbon Steel, Black Oxide plated. Made In USA

3 Piece Set Includes: (1) 1-1/2" Arbor (Z9118) (1) 1-3/4" Arbor (Z9119) (1) 2" Arbor (Z9120) in wooden stand

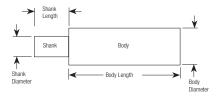






#### **Individual Expanding Arbors**

Low Carbon Steel, Black Oxide plated. Made In USA



Individual Arbors					
Body	Body	Shank	Shank	Replacement	Order
Diameter	Length	Diameter	Length	Screw	Number
1/4"	4"	none	none	Z9110-2	Z9110
3/8	4	none	none	Z9111-2	Z9111
1/2	4	none	none	Z9111-2	Z9112
5/8	4	none	none	Z9113-2	Z9113
3/4	4	none	none	Z9113-2	Z9114
7/8	4	none	none	Z9115-2	Z9115
1 1-1/4	4	none	none	Z9115-2	Z9116
	2-1/2	1"	1-7/16"	Z9115-2	Z9117
1-1/2 1-3/4	2-1/2 2-1/2 2-1/2	1	1-7/16 1-7/16	Z9118-2 Z9118-2	Z9118 Z9119
2	2-1/2	1	1-7/16	Z9118-2	Z9120
2-1/2	2-1/2	1	1-7/16	Z9118-2	Z9122
3	2-1/2		1-7/16	Z9118-2	Z9123









### Vise Speed Handles, Vise Jaws & Chuck Keys **USA S** MADE



#### **Vise Speed Handles**

#### For All Sizes of Milling Machine Vises

Quality made in our shop, we offer this Speed Handle with a choice of Hub Centers. New design nests the steel arms inside the solid aluminum hub for a much stronger unit.

- Hub is machined Aluminum, (not a casting).
- (3) Arms project about 4-1/2" inches from hub, and are cold rolled steel, with a plated finish.
- Hub height is aprox. 1-9/16".
- Handle weighs 1.7 Lbs.



Vise Speed Handles		
Description	Order Number	
9/16" Hex Broach - Fits 4" Vise	Z9022	
5/8 Hex Broach - Fits 5 Vise	Z9024	
3/4 Hex Broach - Fits 6 Vise	Z9021	
7/8 Hex Broach - Fits 8 Vise	Z9025	
5/8 Square Broach - Fits Imports	Z9023	





Aluminum Vise Jaws create a larger, machinable, and customizable holding jaw on your vise. Create steps, pockets, and custom shapes to hold all types of odd shaped workpieces. May be machined over and over again for use on many jobs. Made in USA.



Aluminum Soft Jaws for Vises					
Fits Vise	Length	Height	Thickness	Bolt Size	Order Number
4"	4"	1-1/2"	3/4"	3/8"	Z1190
5	5	1-1/2	3/4	7/16	Z1191
6	6	2	3/4	1/2	Z1192
6	6	2-1/2	1	1/2	Z1193
6	6	3	1	1/2	Z1194
6	6	3	1-1/2	1/2	Z1195
7	7	2	1-1/4	1/2	Z1196





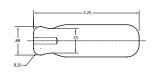
G12

#### **Hand-E-Key Chuck Key**

 Handle Material: 6061T6 Aluminum, with Protective Anodized Finish.

#### **PATENTED**

USA & Worldwide Patents





Hand-E-Key Chuck Keys				
Chuck Key Size	Order Number			
K0	Z0360			
K1	Z0361			
K2	Z0362			
K3	Z0365			
K7	Z0366			
K30	Z0367			
K32	Z0368			





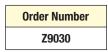


## Vise Stops & Arbor Press Work Stop USA SMADE

#### **E-Z Vise Stop**

#### Our quickest and easiest to use Vise Work Stop.

- Attaches to any Vise jaw (1/2" thru 1" wide) with one screw adjustment.
- Made from hardened steel, with protective Black Oxide coating.
- Stop is 1" wide by 1-7/16" long.
- Made In USA.





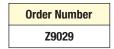




#### **Mini Vise Stop**

#### A handy low cost Work Stop for vises.

Has the capacity to accept jaws up to 0.740" wide, and the three socket screws provide a secure stop.





#### **Mini Stop**

Can be used on vise jaws up to .740" wide.







#### **Arbor Press Work Stop**

Manufactured in the USA of hardened steel, this is a handy stop that fits most standard Arbor Presses. A quick and secure double set screw mounting system provides a positive lock, that stops the ram of the arbor press at your pre-set point. An adjustment screw allows fine adjustment of the ram travel.

Speeds up and improves the quality of production and prototype operations.

	Arbor Press Work Stops			
Г			Order	
	Fits	OD	Number	
Γ	3/4" Square Ram	2"	Z1197	
	1" Square Ram	2-1/8"	Z1198	
1	1-1/4" Square Ram	2-1/4"	Z1199	







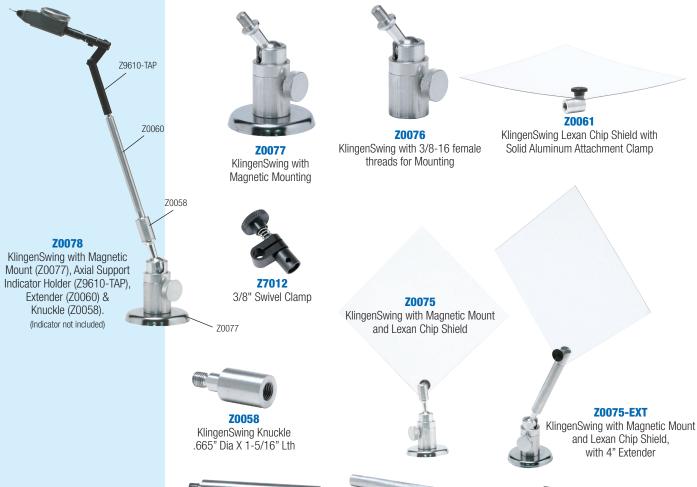






## The KlingenSwing





Z0059

KlingenSwing Long Knuckle .665" Dia X 4-1/4" Lth

**Z0062**KlingenSwing Solid Clamping Bar 3/8" Dia X 5-3/4" Lth no threads



**Z9610-TAP** 

Axial Support

Attachment

with Internal

Tap Connec-

tion

Order Number Description KlingenSwing with Magnetic Back Z0077 KlingenSwing with 3/8-16 internal Threads for Mounting Z0076 KlingenSwing with Extender and Axial Support Indicator Holder Z0078 KlingenSwing with Knuckle and 6" X 8" Chip Shield Z0075 KlingenSwing with Long Knuckle and Chip Shield Z0075-EXT Axial Support Attachment—Internal Tap Connection Z9610-TAP Swivel Clamp—3/8" Clamp Z7012 KlingenSwing Knuckle—.665 Dia X 1-5/16" Length Z0058 KlingenSwing Long Knuckle--.665 Dia X 4-1/4" Lth Z0059 KlingenSwing Solid CLamping Bar—no threads or attachment points (for use with Indictator Clamps - 3/8" Dia X 5-3/4" Lth) Z0062

SPECIAL ORDERS
AVAILABLE—
Small Quantities
to Large Volume

G14





External & Internal Thds

Accurate
Manufactured
Products
Group

WWW.SWIFTTOOL.COM

Z0060

Z0061

Phone: 317-472-9000 • FAX: 317-472-9010 • email: sales@ampg.com • www.ampg.com

KlingenSwing Extender Bar-3/8" Dia X 4-1/4 Lth-

KlingenSwing Lexan Chip Shield—6 X 8 Shield w/clamp