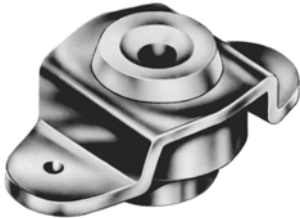


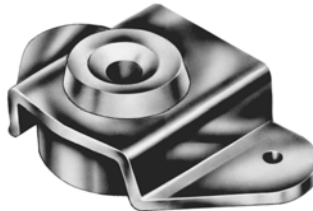
UNITED's Anchor® and Twisfit® Bushings

Twisfit® Bushings
Anchor® Bushings

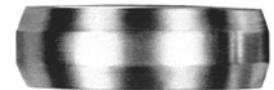
Our Long Time Classics!



REGULAR ANCHOR® BUSHINGS
Page B16



CORNER ANCHOR® BUSHINGS
Page B16



MULTI-GROOVE PIN RETAINERS



MULTI-GROOVE PIN BUSHINGS
Page B18



SERRATED PRESS
Page B20



SER-CAST
Page B13



TWISFIT® LOCK RINGS
Page B7



ANCHOR® PIN RETAINERS
Page B20



TWISFIT® LOCK RINGS
Page B7



SLOTTED ANCHOR® PIN BUSHINGS
Page B20



TWISFIT® SLOTTED HOLE LOCATORS
Page B8



STANDARD TWISFIT®
Page B6



TWISFIT® HANDLE BUSHINGS
Page B11

Bushing Problems?

Do You Have These Bushing Problems?

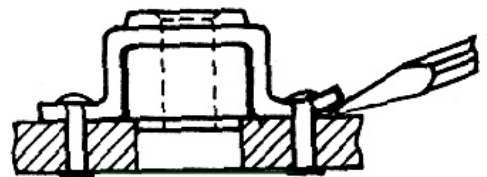
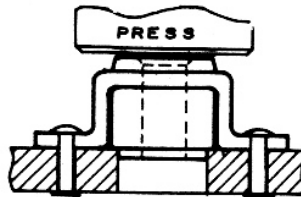
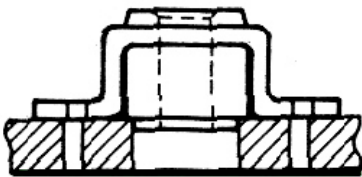
TYPE 'A' — RIVET IT?

Requires two or three drilled holes for mounting. Location must be accurate.

— WILL HOLD FOREVER!

Avoid Bushing cocking during pressing, riveting or welding operations.

If carefully removed, Bushing and Template are generally re-usable.

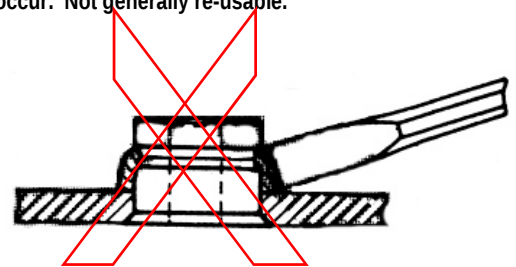


TYPE 'C' — CLINCH IT?

Expensive installation equipment may be required. Bushing may spin with inadequate clinching pressure.

Many Bushing configurations are required to accommodate varying plate thicknesses.

To remove Bushing, the cinching ring must be cut off. Damage to Bushing or Template may occur. Not generally re-usable.

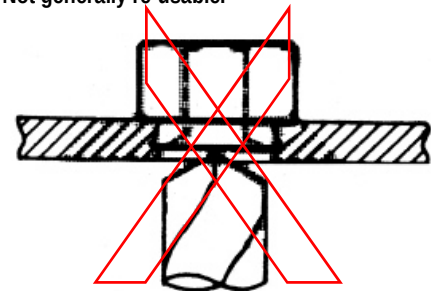
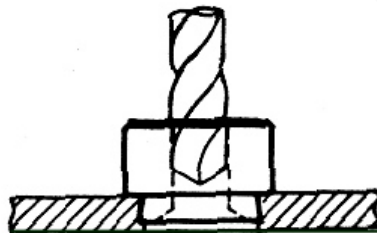
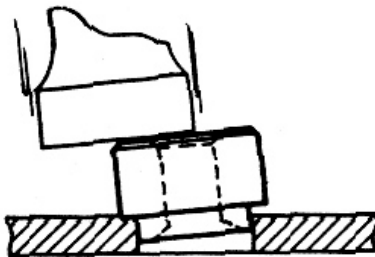


TYPE 'F' — FLARE IT?

Bushing can cock due to improper hammering.

Bushing may spin under the torque of the drill.

Bushing must be drilled out to be removed. Not generally re-usable.

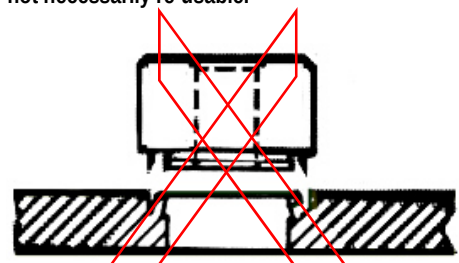


TYPE 'P' — PRESS IT?

Expensive installation equipment may be required.

Bushing may cock due to improper initial alignment. Bushing may be knocked out by drill deflection.

Template hole edge may distort. After Bushing and Template are separated, they are generally not necessarily re-usable.



Instant Solution

Twisfit® Instant Bushings

ALL ABOUT UNITED TWISFIT®

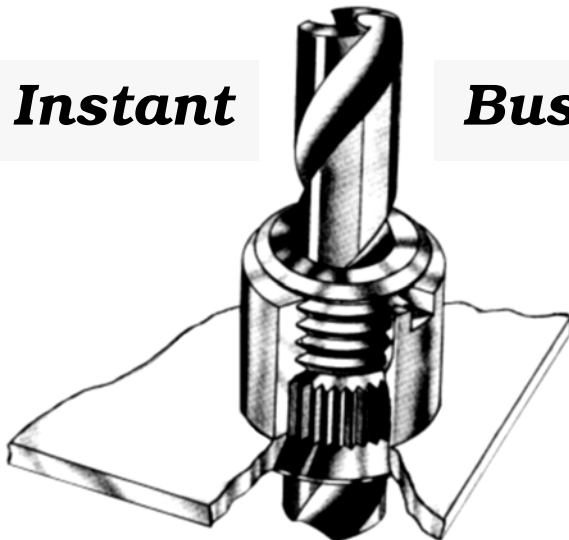
- ❶ **UNITED TWISFIT Bushings** are designed for simplified installation in drill plates made from thin gauge aluminum or cold rolled steel.
- ❷ **REUSABLE**—Fewer outside diameter configurations are required. Lock Rings are interchangeable. All Bushings and Rings can be removed and reused.
- ❸ **POSITIVE LOCKING**—Aluminum Lock Rings grip the Bushing and plate tightly. The left handed thread prevents the bushing from rotating while drilling. Guaranteed not to pull out. The lock rings will tighten when drilling. The 100° flange eliminates pull-out. Serrated O.D. prevents spin-out.
- ❹ **SELF ALIGNING**—The countersink in the plate aligns automatically with the bushing chamfer.
- ❺ **PRECISION**—UNITED's TWISFIT holds flush to the work piece. The drill is guided for the full length of the bushing. Chips won't accumulate between the work piece and the template. UNITED's TWISFIT Bushings are held within .002 T.I.R.
- ❻ **SIMPLIFIED INSTALLATION**—No tabs, straps, hammering, punching or spotwelding required. Cocked bushings are eliminated and there are no protrusions below the plate.
- ❼ **SPECIAL TOOLS NOT REQUIRED**—Pneumatic, hydraulic, clinching or hammering tools are not required. Simply insert the bushing and twist on the lock ring.
- ❽ **COST REDUCTION**—UNITED's EXCLUSIVE TWISFIT INSTANT BUSHING permits use of the thinnest fixture plate materials, reducing cost.
- ❾ **NO DISTORTION**—UNITED's TWISFIT Bushings will not buckle the plate or distort the hole. The fixture plates can be reused.
- ❿ **REDUCE INVENTORY**—UNITED's TWISFIT is available in all I.D. sizes from #55 thru 49/64 in only five O.D. configurations. Competitive O.D.s vary in number from 17 to 33 styles.

FREE!!!

If you have not enjoyed UNITED TWISFIT's simplicity and cost reduction, **try them at our expense!** Samples are always available upon your request. **Ask for UNITED's friendly engineering assistance.**

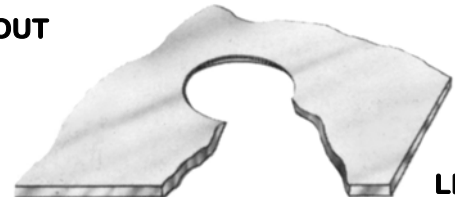
Instant

Bushings



ACCURATE
SECURE
REUSABLE
LOW COST
REMOVABLE
POSITIVE LOCKING
REPLACEABLE
PROMPT SERVICE
NO CHIP BUILDUP
NO DISTORTION
PERPENDICULAR DRILLING
SELF-ALIGNING
MINIMUM O.D.
NO HAMMERING
NO COCKING
NO SPIN OUT

COMPACT
LONG WEAR
EASILY STORED
MATERIAL SAVED
CLOSER TOLERANCES
SIMPLE INSTALLATION
INCREASED EFFICIENCY
LARGE INVENTORIES
REDUCED WORKER FATIGUE
UNIQUELY SUPERIOR



LIGHTER FIXTURES

REDUCED WEIGHT

NO SPECIAL TOOLS

FEWER CONFIGURATIONS

ADDED VALUE FROM UNITED!

Twisfit®

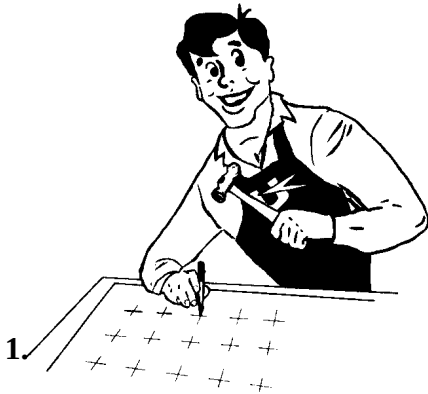
Twisfit® Installation

**IDEAL for METAL CABINETS,
TRAILERS, TRUCKS, AUTOS,
AIRCRAFT, BOATS, FURNITURE,
APPLIANCES and MANUFACTURING**

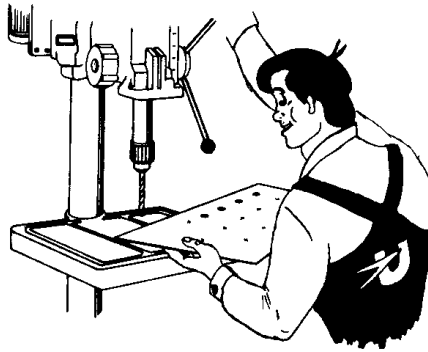
Instant Installations

Twisfit® is designed for optimum drilling accuracy in steel, aluminum or magnesium plate tooling in thicknesses from .080 to 3/8 inch. Flush contact of the Twisfit ring against the plate assures perpendicular drill hole alignment. Expensive equipment or highly skilled labor is not required to produce low cost drill plates. *UNITED's* low cost Twisfits provide interchangeability for volume or short run production. Lightweight, easily stored Twisfit plates replace heavy, expensive drill fixtures.

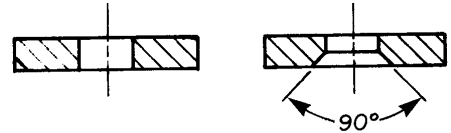
Easy Steps to Install Twisfits



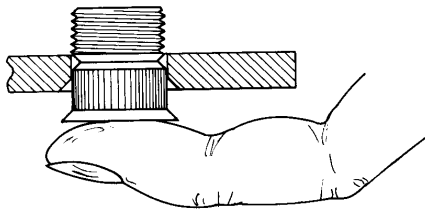
1.



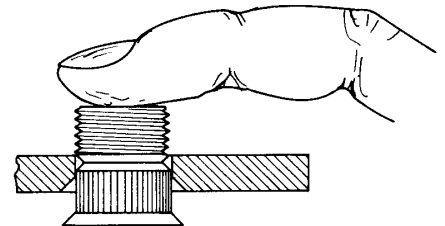
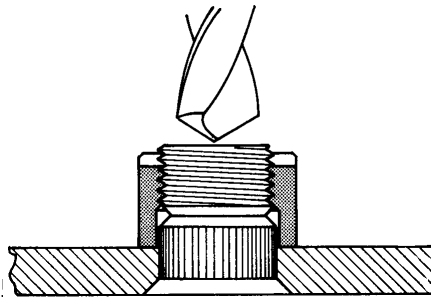
2. Punch or drill nominal holes 3/8, 1/2, 9/16, 5/8, 3/4 or 1" for correct Twisfit bushing. Only one drilled hole is required.



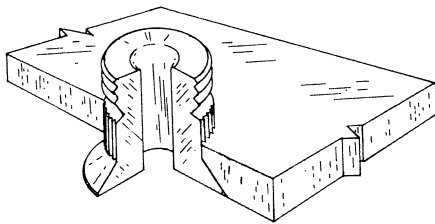
3. Dimple or countersink 90° to permit 100° flange to seat flush to .015 inside surface of plate.



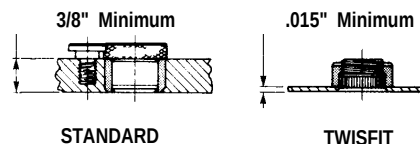
4. Slip Twisfit into drilled hole. No expensive installation equipment is required. Serrations prevent rotation.



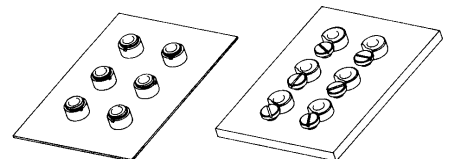
6. Easily removable, replaceable and reusable.



7. The Twisfit's left handed thread is self tightening. It will not slip out.



8. Twisfit is a low cost tooling technique — less plate thickness is required. Twisfits are supported amply from stock .015 of an inch thick.

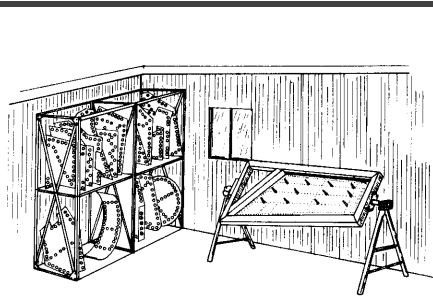


9. Weight reduced — material saved. A square Twisfit plate 3/16" thick is 2-1/2 lbs. A conventional 1/2" by 12" square fixture plate is 12 lbs. Plate drilling time is reduced 80%.

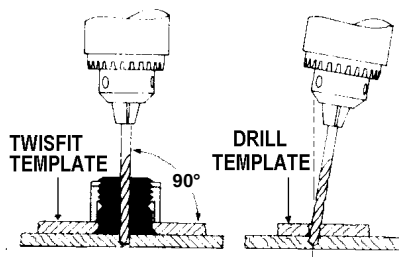
Instant Satisfaction

Twisfit® Application

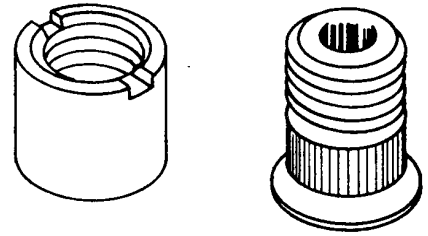
Reduce Fixture Weight and Material Costs Drastically



10. Lightweight Twisfit drill plates can be stored off the floor and overhead. Handling equipment is not required.

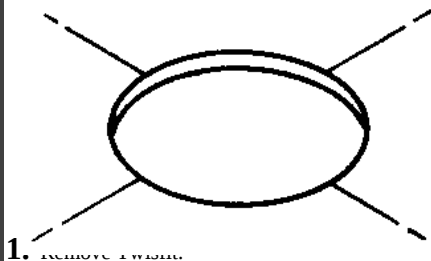


Angular or elongated holes result from unsupported drills. The Twisfit is a low cost insurance policy.

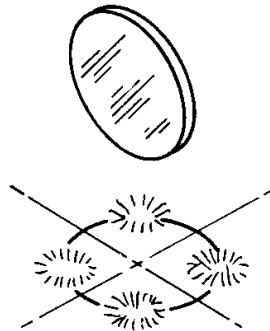


12. Remove the Twisfit and reuse both the Twisfit and the plate. Reduce cost and increase "smileage."

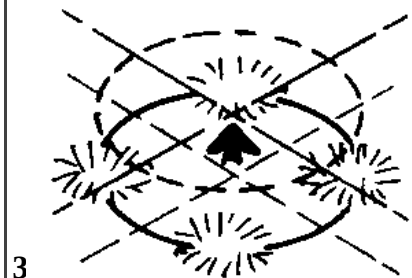
To rework Twisfit plate:



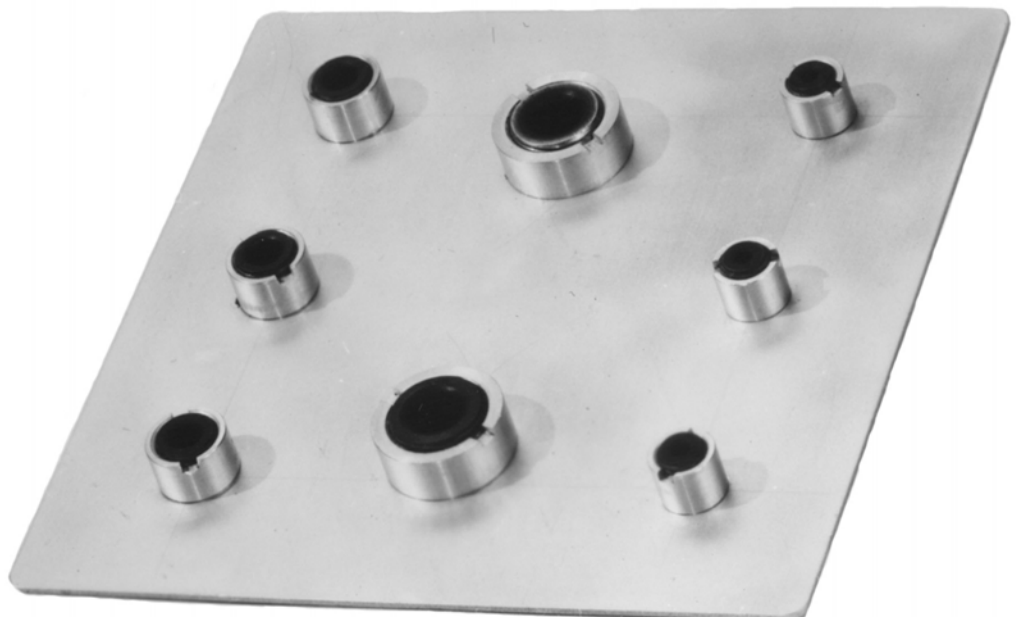
1. REMOVE TWISFIT



2. Spotweld punch slug in old hole location.



3



Twisfit® Bushings

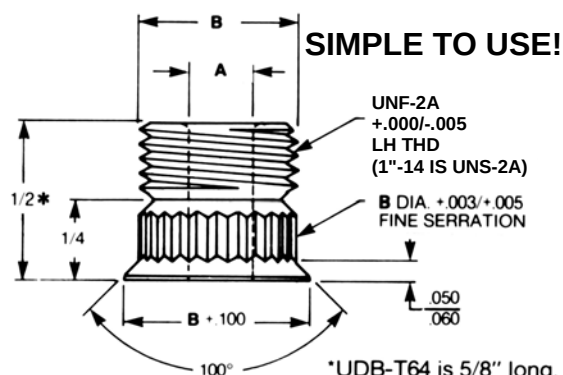
Instant Savings

Customers request over a million units annually!

**BEST BUSHING
BUY TODAY!**

STANDARD TWISFIT®

Exclusively UNITED!
PATENT 3,768,918



**TWISFIT®
TIGHTENS WHILE
DRILLING!**

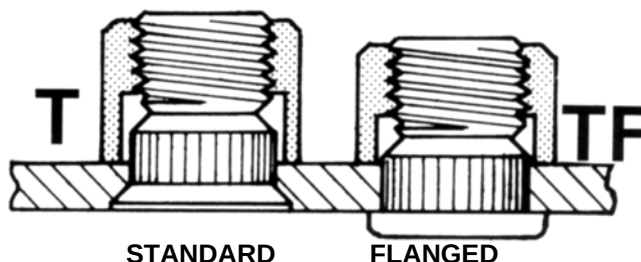
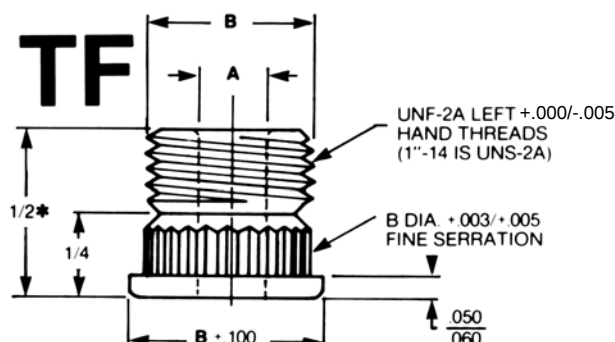
**TWISFIT® Used by
Leading AUTO,
AIRCRAFT, TRUCK,
TRAILER, CAMPER,
WINDOW, DOOR,
METAL FURNITURE
MANUFACTURERS!**

MATERIAL: STEEL
CASE HARDENED .015 DEEP
R/C 59 - 64
T.I.R. A to B = .002 MAX

TWISFIT BUSHING PART NO.	A I.D. RANGE +.0001 +.0015	B O.D. RANGE +.003 +.005	THD LH ALL TYPES	PLATE THICK-NESS	* USE LOCK RING	EACH ITEM PRICE	TWISFIT® QUANTITY PRICES					
							1 - 9	10 - 24	25 - 99	100 - 499	500 - 999	1000 UP
UDB-T-24	#55 - #43 .0520 - .0890	.375	3/8 - 24	1/64 - 1/8	T24-6	TWISFIT BUSHING	2.83	2.48	2.31	2.17	2.08	1.89
				9/64 - 3/16	T24-5	LOCK RING	1.04	1.00	0.94	0.90	0.87	0.85
				13/64 - 3/8	T24-3	TW LOCK RING	1.37	1.35	1.23	1.17	1.13	1.12
UDB-T-24	#42 - #10 .0935 - .1935	.375	3/8 - 24	1/64 - 1/8	T24-6	TWISFIT BUSHING	2.12	1.88	1.76	1.69	1.61	1.52
				9/64 - 3/16	T24-5	LOCK RING	1.04	1.00	0.94	0.90	0.87	0.85
				13/64 - 3/8	T24-3	TW LOCK RING	1.37	1.35	1.23	1.17	1.13	1.12
UDB-T-32	#9 - #0 .1960 - .3160	.500	1/2 - 20	1/64 - 1/8	T32-6	TWISFIT BUSHING	2.35	2.16	2.11	1.93	1.76	1.60
				9/64 - 3/16	T32-5	LOCK RING	1.14	1.07	0.94	0.93	0.87	0.85
				13/64 - 3/8	T32-3	TW LOCK RING	1.54	1.44	1.37	1.34	1.33	1.31
UDB-T-36	11/64 - 13/32 .1719 - .4062	.562	9/16 - 18	1/64 - 1/8	T36-6	TWISFIT BUSHING	3.05	2.93	2.50	2.42	2.31	2.18
				9/64 - 3/16	T36-5	LOCK RING	1.59	1.43	1.37	1.36	1.33	1.24
				13/64 - 3/8	T36-3	TW LOCK RING	1.89	1.82	1.77	1.73	1.72	1.64
UDB-T-40	5/16 - 7/16 .3125 - .4375	.625	5/8 - 18	1/64 - 1/8	T40-6	TWISFIT BUSHING	3.23	3.11	2.65	2.57	2.45	2.31
				9/64 - 3/16	T40-5	LOCK RING	1.59	1.43	1.37	1.36	1.33	1.24
				13/64 - 3/8	T40-3	TW LOCK RING	1.89	1.82	1.77	1.73	1.72	1.64
UDB-T-48	P - 1/2 .3230 - .5000	.750	3/4 - 16	1/64 - 1/8	T48-6	TWISFIT BUSHING	4.09	3.73	3.49	3.28	2.98	2.84
				9/64 - 3/16	T48-5	LOCK RING	1.70	1.60	1.55	1.48	1.44	1.43
				13/64 - 3/8	T48-3	TW LOCK RING	2.20	1.98	1.89	1.82	1.77	1.62
UDB-T-64	33/64 - 49/64 .5156 - .7656	1.000	1" - 14	1/64 - 1/8	T64-6	TWISFIT BUSHING	5.19	4.75	4.41	4.14	3.76	3.55
				9/64 - 3/16	T64-5	LOCK RING	1.91	1.82	1.74	1.64	1.55	1.47
				13/64 - 3/8	T64-3	TW LOCK RING	2.35	2.26	2.18	2.05	2.01	1.90

* For THINWALL LOCK RINGS, add suffix **TW** to Part No. Example: T24-6-**TW**. -6,-5,-3 LOCK RING STYLES ALL SAME PRICE.

FLANGED TWISFIT® — ALTERNATE STYLE FOR PLATE SUPPORT



The Flange Style is designed to support the Drill Plate above the work. Flange radius prevents scarring of work piece. Countersinking or dimpling is eliminated.

Flange Bushings are manufactured from semi-finished and are priced the same as Twisfits above.

Specify **T** for **Standard**.
EXAMPLE: UDB-T32 - 1/4"

Specify **TF** for **Flanged**.
EXAMPLE: UDB-TF40 - 3/8"

Instant Selections

For Lock Rings, Washers and Installation Tools

Lock Rings for
Twisfit® Bushings

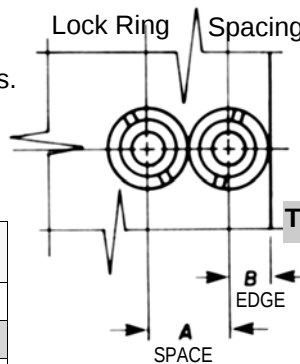
SELECT LOCK RING DIAMETER

STANDARD: For Normal Accommodations.
Use RTS type.

THINWALL: For Extremely Close Hole
Spacing Only. Use RT type.

UNF-2B INTERNAL LH THD +.005/- .000

STANDARD LOCK RING	A MINIMUM SPACING RT	A MINIMUM SPACING RTS	B MINIMUM EDGE SPACING
UDB-T-24 -(6,5 or 3)	33/64	9/16	1/4
UDB-T-32 -(6,5 or 3)	41/64	45/64	5/16
UDB-T-36 -(6,5 or 3)	45/64	3/4	11/32
UDB-T-40 -(6,5 or 3)	49/64	53/64	3/8
UDB-T-48 -(6,5 or 3)	1-1/64	1-3/32	1/2
UDB-T-64 -(6,5 or 3)	1-17/64	1-11/32	5/8
THINWALL LOCK RING	A MINIMUM SPACING RT	A MINIMUM SPACING RTS	B MINIMUM EDGE SPACING
UDB-T-24-(6,5 or 3)-TW	29/64	17/32	7/32
UDB-T-32-(6,5 or 3)-TW	37/64	43/64	9/32
UDB-T-36 -(6,5 or 3)-TW	41/64	23/32	5/16
UDB-T-40-(6,5 or 3)-TW	45/64	51/64	11/32
UDB-T-48 -(6,5 or 3)-TW	57/64	1-1/32	7/16
UDB-T-64-(6,5 or 3)-TW	1-9/64	1-9/32	9/16

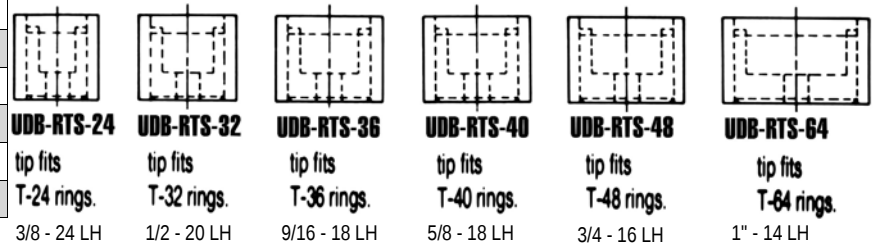


**REMOVAL and
INSTALLATION TOOL
UDB-RTS/RT-7 SET
contains
HANDLE and ALL SIX
SOCKETS.**



TWISFIT® REMOVAL / INSTALLATION TOOLS

SOCKET WITH SLEEVE	SOCKET ONLY	TIP FITS RING	PRICE
UDB-RTS-24	UDB-RT-24	T-24 (3/8 - 24 LH)	15.78
UDB-RTS-32	UDB-RT-32	T-32 (1/2 - 20 LH)	16.95
UDB-RTS-36	UDB-RT-36	T-36 (9/16 - 18)	18.49
UDB-RTS-40	UDB-RT-40	T-40 (5/8 - 18 LH)	18.49
UDB-RTS-48	UDB-RT-48	T-48 (3/4 - 16 LH)	20.14
UDB-RTS-64	UDB-RT-64	T-64 (1" - 14 LH)	20.14
UDB-RT-5 HANDLE ONLY			17.45
UDB-RTS-7 SET / UDB-RT-7 SET			120.90



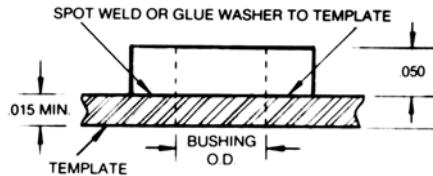
SEE BELOW FOR DETAILS.

.050 WASHERS
UDB-T24-W
UDB-T32-W
UDB-T36-W
UDB-T40-W
UDB-T48-W
UDB-T64-W

Twisfit® Bushings **Example:**

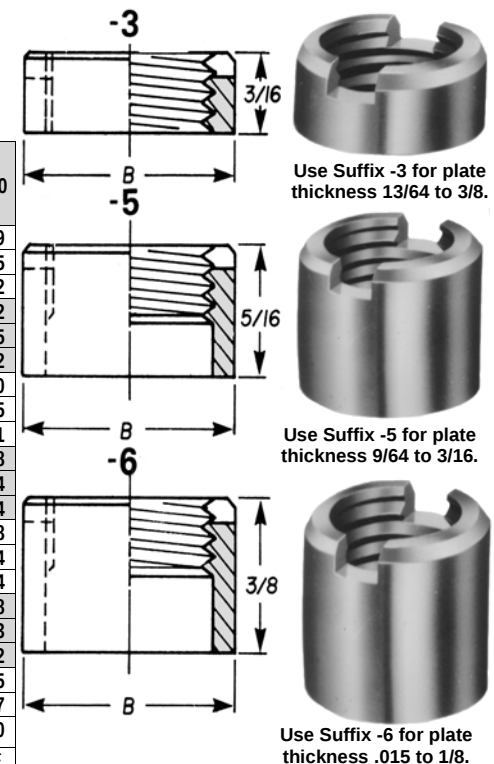
can be used on
templates as thin
as .015.

To add strength
or support, use
a .050 Washer.



TWISFIT® LOCK RINGS

THREE LENGTHS AVAILABLE
UNF-2B INTERNAL LH THD +.005/- .000



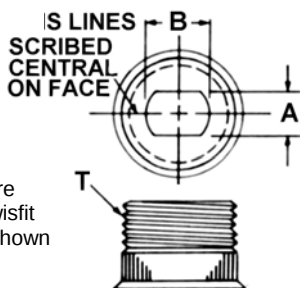
LOCK RING PART NO.	PLATE THICKNESS	THD	B O.D.	* THIN WALL	PRICE EACH ITEM	TWISFIT® QUANTITY PRICES					
						1 - 9	10 - 24	25 - 99	100 - 499	500 - 999	1000 UP
UDB-T-24-6	1/64 - 1/8	LH THD 3/8 - 24	1/2	* 7/16	TWISFIT BUSHING	2.83	2.48	2.31	2.17	2.08	1.89
UDB-T-24-5	9/64 - 3/16				LOCK RING	1.04	1.00	0.94	0.90	0.87	0.85
UDB-T-24-3	13/64 - 3/8				TW LOCK RING	1.37	1.35	1.23	1.17	1.13	1.12
UDB-T-24-6	1/64 - 1/8	LH THD 3/8 - 24	1/2	* 7/16	TWISFIT BUSHING	2.12	1.88	1.76	1.69	1.61	1.52
UDB-T-24-5	9/64 - 3/16				LOCK RING	1.04	1.00	0.94	0.90	0.87	0.85
UDB-T-24-3	13/64 - 3/8				TW LOCK RING	1.37	1.35	1.23	1.17	1.13	1.12
UDB-T-32-6	1/64 - 1/8	LH THD 1/2 - 20	5/8	* 9/16	TWISFIT BUSHING	2.35	2.16	2.11	1.93	1.76	1.60
UDB-T-32-5	9/64 - 3/16				LOCK RING	1.14	1.07	0.94	0.93	0.87	0.85
UDB-T-32-3	13/64 - 3/8				TW LOCK RING	1.54	1.44	1.37	1.34	1.33	1.31
UDB-T-36-6	1/64 - 1/8	LH THD 9/16 - 18	11/16	* 5/8	TWISFIT BUSHING	3.05	2.93	2.50	2.42	2.31	2.18
UDB-T-36-5	9/64 - 3/16				LOCK RING	1.59	1.43	1.37	1.36	1.33	1.24
UDB-T-36-3	13/64 - 3/8				TW LOCK RING	1.89	1.82	1.77	1.73	1.72	1.64
UDB-T-40-6	1/64 - 1/8	LH THD 5/8 - 18	3/4	* 11/16	TWISFIT BUSHING	3.05	2.93	2.50	2.42	2.31	2.18
UDB-T-40-5	9/64 - 3/16				LOCK RING	1.59	1.43	1.37	1.36	1.33	1.24
UDB-T-40-3	13/64 - 3/8				TW LOCK RING	1.89	1.82	1.77	1.73	1.72	1.64
UDB-T-48-6	1/64 - 1/8	LH THD 3/4 - 16	1"	* 7/8	TWISFIT BUSHING	3.38	3.04	2.89	2.79	2.68	2.58
UDB-T-48-5	9/64 - 3/16				LOCK RING	1.70	1.60	1.55	1.48	1.44	1.43
UDB-T-48-3	13/64 - 3/8				TW LOCK RING	2.20	1.98	1.89	1.82	1.77	1.62
UDB-T-64-6	1/64 - 1/8	LH THD 1" - 14	1-1/4	* 1-1/8	TWISFIT BUSHING	5.19	4.75	4.41	4.14	3.76	3.55
UDB-T-64-5	9/64 - 3/16				LOCK RING	1.91	1.82	1.74	1.64	1.55	1.47
UDB-T-64-3	13/64 - 3/8				TW LOCK RING	2.35	2.26	2.18	2.05	2.01	1.90

* ADD SUFFIX -TW TO ORDER THINWALLS. REGULAR LOCK RINGS -6, -5, -3 ARE PRICED THE SAME.

Twisfit® Locators - Twistops - TC-TS Tabs



LOCK RING
AVAILABLE
IN 3 SIZES,
3/16, 5/16 AND
3/8.
SEE PAGE B7.



Dimensions are
identical to Twisfit
Bushings as shown
on Page B6.

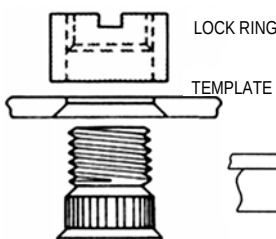
Install by scribing lines on the fixture
plate and align with site lines on the Slot
Locator Bushing.

TWISFIT® SLOTTED HOLE LOCATORS

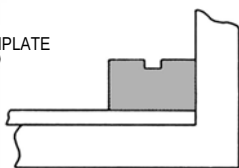


**TWISTOPS are
solid — without
holes—for Custom
Applications!**
Otherwise dimensions
are identical to Twisfit
Bushings as shown on
Page B6.

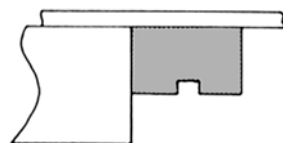
TWISTOPS



Installs same as
TWISFIT



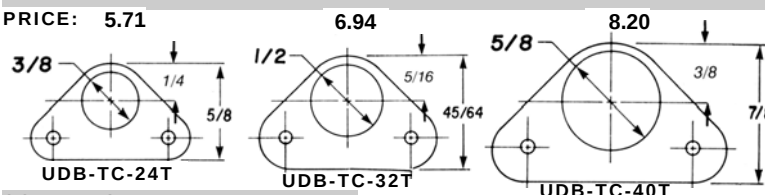
TWISTOP to Index Plates



TWISTOP to Position Edge

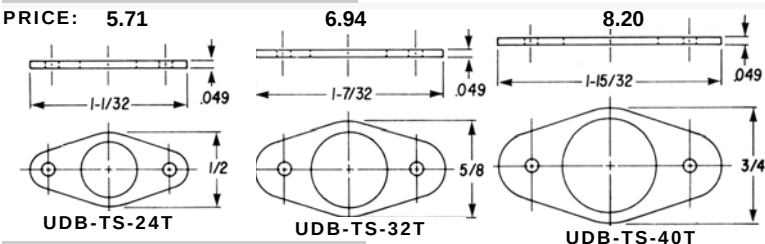
CORNER — TC and STANDARD STRAP TABS — TS

PRICE: 5.71



CORNER STRAP TAB

PRICE: 5.71



STANDARD STRAP TAB STYLES

Instant Success

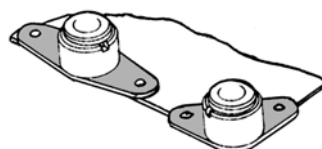
UNITED's Slot Locator Bushings provide precision part
location while only having to maintain a $\pm .050$ tooling
tolerance.

Dowels, L Pins, T Pins or Locating Pins may be used as a
master locating pin.

SLOTTED LOCATOR	A $+0.010$ -0.000	B	T LH THD	LOCK RING	PLATE THICKNESS	PRICE
5/8"				T-40-6	1/64 - 1/8	
UDB-TSL-40- 1/8	.1251	1/4	5/8 - 18	T-40-5	9/64 - 3/16	15.06
				T-40-3	13/64 - 3/8	
5/8"				T-40-6	1/64 - 1/8	
UDB-TSL-40- #30	.1286	1/4	5/8 - 18	T-40-5	9/64 - 3/16	15.06
				T-40-3	13/64 - 3/8	
5/8"				T-40-6	1/64 - 1/8	
UDB-TSL-40- #20	.1611	1/4	5/8 - 18	T-40-5	9/64 - 3/16	15.06
				T-40-3	13/64 - 3/8	
5/8"				T-40-6	1/64 - 1/8	
UDB-TSL-40- 3/16	.1876	3/8	5/8 - 18	T-40-5	9/64 - 3/16	15.06
				T-40-3	13/64 - 3/8	
5/8"				T-40-6	1/64 - 1/8	
UDB-TSL-40- #10	.1936	3/8	5/8 - 18	T-40-5	9/64 - 3/16	15.06
				T-40-3	13/64 - 3/8	
5/8"				T-40-6	1/64 - 1/8	
UDB-TSL-40- 1/4	.2501	3/8	5/8 - 18	T-40-5	9/64 - 3/16	15.06
				T-40-3	13/64 - 3/8	
3/4"				T-48-6	1/64 - 1/8	
UDB-TSL-48- 5/16	.3126	7/16	3/4 - 16	T-48-5	9/64 - 3/16	15.06
				T-48-3	13/64 - 3/8	
3/4"				T-48-6	1/64 - 1/8	
UDB-TSL-48- 3/8	.3751	1/2	3/4 - 16	T-48-5	9/64 - 3/16	15.06
				T-48-3	13/64 - 3/8	
3/4"				T-48-6	1/64 - 1/8	
UDB-TSL-48- 1/2	.5001	5/8	3/4 - 16	T-48-5	9/64 - 3/16	15.06
				T-48-3	13/64 - 3/8	
1"				T-64-6	1/64 - 1/8	
UDB-TSL-64- 5/8	.6251	3/4	1" - 14	T-64-5	9/64 - 3/16	47.91
UDB-TSL-64 is 5/8" LONG				T-64-3	13/64 - 3/8	
1"				T-64-6	1/64 - 1/8	
UDB-TSL-64- 3/4	.7501	13/16	1" - 14	T-64-5	9/64 - 3/16	57.88
UDB-TSL-64 is 5/8" LONG				T-64-3	13/64 - 3/8	

TWISTOP PART NO.	B $-.003$ $-.005$	T LH THD	LOCK RING	PLATE THICKNESS	PRICE
UDB-TS-24	3/8	3/8 - 24	T-24-6	1/64 - 1/8	1.59
			T-24-5	9/64 - 3/16	
			T-24-3	13/64 - 3/8	
UDB-TS-32	1/2	1/2 - 20	T-32-6	1/64 - 1/8	1.80
			T-32-5	9/64 - 3/16	
			T-32-3	13/64 - 3/8	
UDB-TS-36	9/16	9/16 - 18	T-36-6	1/64 - 1/8	2.05
			T-36-5	9/64 - 3/16	
			T-36-3	13/64 - 3/8	
UDB-TS-40	5/8	5/8 - 18	T-40-6	1/64 - 1/8	2.26
			T-40-5	9/64 - 3/16	
			T-40-3	13/64 - 3/8	
UDB-TS-48	3/4	3/4 - 16	T-48-6	1/64 - 1/8	2.53
			T-48-5	9/64 - 3/16	
			T-48-3	13/64 - 3/8	
UDB-TS-64	1"	1" - 14	T-64-6	1/64 - 1/8	3.70
			T-64-5	9/64 - 3/16	
			T-64-3	13/64 - 3/8	

Strengthens Corner and Template Edges



Use Template Twisfit
Tabs when a TWISFIT
Bushing is placed
very close to an edge
or corner.

Drill and/or countersink normally. Then locate a
Tab over the hole and rivet or spot weld into place.

UNITED TABS sized to fit 3/8, 1/2 and 5/8
Twisfit® Bushings.

Instant Inventory In Twispik Cases

T-1 POPULAR FRACTIONAL Service Set

Instant
Replacement!



24
DRAWERS

81 TWISFIT® Bushings and Lock Rings. The Popular Set contains 3 each of 15 I.D. sizes from 1/16" thru 1/2" in 1/32" increments. 45 Bushings and assorted Lock Rings. Selection is easy from the 24 drawers Twispik case containing 81 TWISFIT parts.

T-2 GENERAL FRACTIONAL Service Set

Instant
Fixturing!



24
DRAWERS

176 TWISFIT® Bushings and Lock Rings. Ideal for the shop using most small fractional sizes. Four each in all ID sizes from 1/16" thru 1/2" in 64th increments. Has 60 assorted Lock Rings and a complete set of removal tools. The 24 Drawers Twispik Case offers fast and easy selection of the 176 TWISFIT pieces.

T-3 LETTER Service Set

Instant
Access!



24
DRAWERS

144 TWISFITs and Lock Rings. Ideal for 'In-Between' Letter Sizes. Contains 4 each of all 26 Letter sizes from 'A' thru 'Z' along with 40 Lock Rings in the 24 Drawers Twispik Case. 144 TWISFIT pieces.

T-4 NUMBER Service Set

Instant
Satisfaction!



36
DRAWERS

260 TWISFIT® Bushings and Lock Rings. For essential 'In-Between' number sizes. The Number Service Set contains 4 each of all wire gauge sizes from #1 thru #55 in addition to 40 assorted Lock Rings in the 36 Drawers Twispik Case. 260 TWISFIT pieces.

T-5 TOOL MAKERS Service Set

Instant
Inventory!



36
DRAWERS

285 TWISFITs and Lock Rings. Tool Makers Larger Hole Service Set completes your sizes with all fractional IDs from 1/16" thru 49/64" in 64th increments. Has 96 assorted Lock Rings and a 6-piece set of removal tools. 285 TWISFIT pieces in the 36 Drawers Twispik Case.

T-345 SHOP MASTER Service Multi-Set

Instant Use!

108
DRAWERS



690 TWISFIT® Bushings, Lock Rings and all Installation and Removal Tools. The Shop Master TWISFIT Service Multi-Set is a complete template fixture building service inventory. The Multi-Set contains every letter, number, and fractional sizes from #55 (.0520) small thru 49/64" (.7656) large. Has 4 each of 127 sizes for a total of 508 TWISFIT Bushings, 176 Lock Rings, and a 6-piece set of Installation and Removal tools in a Multi-Set of three 36 Drawers Twispik Cases with 108 drawers.

Handle Bushing and Drill Stand Kit

Twisfit® Handle and Drill Stand SF Bushing Kit

Ideal For Use in Hole Transfer!

This UTK-649 Kit is representative of *UNITED* Kits available for these tools when drilling or reaming cannot be reached with stationary or permanent tools. This Hole Transfer Kit was designed at *UNITED* and is specified for Lockheed's latest F-16 Aircraft. Send us your specifications.

Twisfit Bushings are reusable and replaceable. The handle has a comfortable plastic grip. A large variety of Slip Fixed Handle Bushings are available to satisfy your specific requirements.

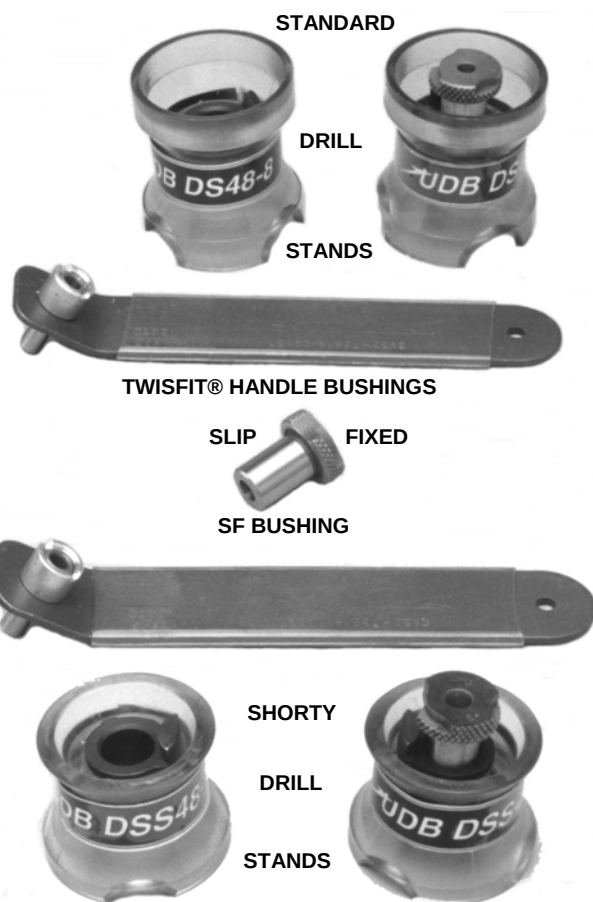
Our light transparent and tough Drill Stand is designed to use with irregular or contoured surfaces. Does not crack and seats firmly to irregular surfaces. Assures 90° drill alignment.



UTK-649 Twisfit® Handle Bushing and Drill Stand Kit

UTK-649 KIT CONTENTS

1	UTK-649 KIT ASSEMBLY			
QTY	PART NO.	I.D.	O.D.	LENGTH
HANDLE BUSHINGS				
2	UDB-752417	.1562 (5/32)	.266	1/2
2	UDB-752417	.1562 (5/32)	.261	1/2
2	UDB-752417	.1562 (5/32)	.257	1/2
2	UDB-752416	.1562 (5/32)	.250	1/2
2	UDB-752413	.1285 (#30)	.204	1/2
2	UDB-752413	.1285 (#30)	.199	1/2
2	UDB-752413	.1285 (#30)	.191	1/2
2	UDB-752412	.1285 (#30)	.166	1/2
2	UDB-752412	.1285 (#30)	.161	1/2
2	UDB-752410	.0980 (#40)	.156	1/2
SLIP-FIXED RENEWABLE BUSHINGS				
2	UDB-SF-32-12	.2660 (H)	1/2	3/4
2	UDB-SF-32-12	.2610 (G)	1/2	3/4
2	UDB-SF-32-12	.2570 (F)	1/2	3/4
2	UDB-SF-32-12	.2500 (E)	1/2	3/4
2	UDB-SF-32-12	.2040 (#6)	1/2	3/4
2	UDB-SF-32-12	.1990 (#8)	1/2	3/4
2	UDB-SF-32-12	.1910 (#11)	1/2	3/4
2	UDB-SF-32-12	.1660 (#19)	1/2	3/4
2	UDB-SF-32-12	.1610 (#20)	1/2	3/4
2	UDB-SF-32-12	.1562 (5/32)	1/2	3/4
2	UDB-SF-32-12	.1285 (#30)	1/2	3/4
2	UDB-SF-32-12	.0980 (#40)	1/2	3/4
2	UDB-DSS-48-12	DRILL STAND SHORTY 1/2" I.D.		
2	UDB-DS-48-8	STANDARD DRILL STAND 1/2" I.D.		



Send us your requirements and we will design your Special Kit to get your job finished on time!

Instant Fixture

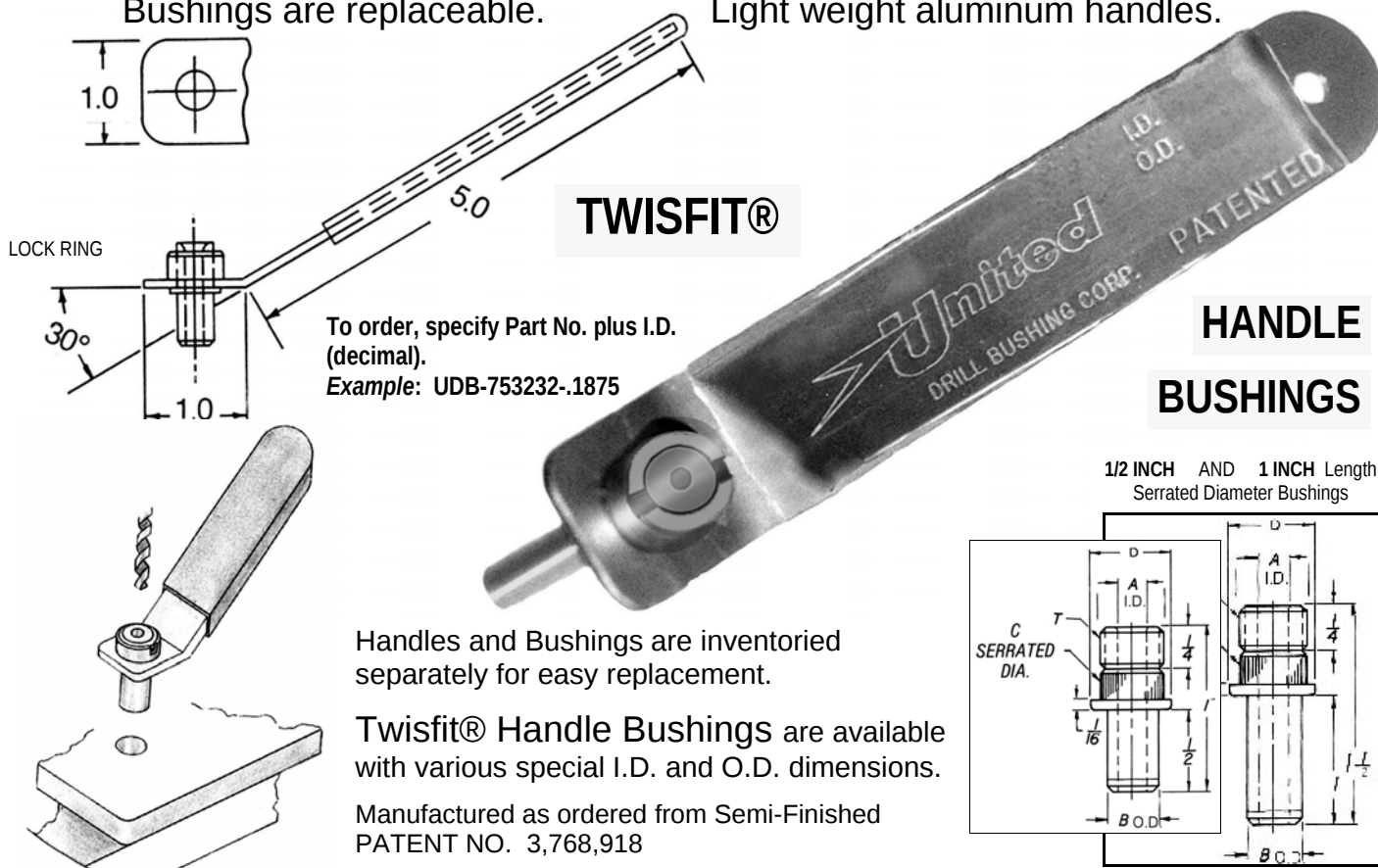
**Twisfit®
Handle Bushings**

WE WANT TO HANDLE YOUR BUSHINGS!

Twisfit® is ideal for drilling or reaming holes which cannot be reached with stationary or permanent tooling. Handle has comfortable grip with clear identification.

Bushings are replaceable.

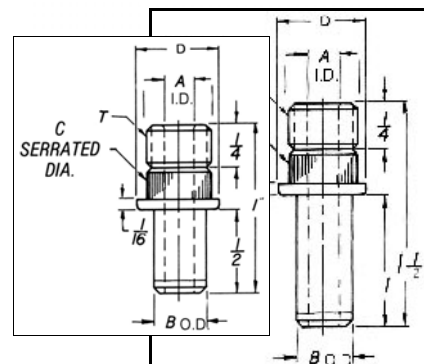
Light weight aluminum handles.



TWISFIT®

**HANDLE
BUSHINGS**

1/2 INCH AND 1 INCH Length
Serrated Diameter Bushings



Handles and Bushings are inventoried separately for easy replacement.

Twisfit® Handle Bushings are available with various special I.D. and O.D. dimensions.

Manufactured as ordered from Semi-Finished
PATENT NO. 3,768,918

Specify 1/2" or 1" on Bushing length.
Add '-1L' to Bushing P/N for 1".

For Discount Quantity Pricing, see below.

Specify 1/2" or 1" on Bushing length.
Add '-1L' to Bushing P/N for 1".

UNITED PART NO.	A I.D. RANGE* STANDARD DRILL SIZES		B O.D. SIZE		C O.D.	D	T UNF-2A LH +.000 /- .005 BUSHING	UNF-2A LH +.005/- .000 LOCK RING	PRICE with Lock Rings	
	NOMINAL	DECIMAL	NOM.	ACTUAL					1/2 length	1" length
UDB-752410	#55-1/16	.0520-.0625	5/32	.1552-.1542	3/8	15/32	3/8-24	T-24-6	28.37	35.69
UDB-752412	#55-#39	.0520-.0995	3/16	.1865-.1855	3/8	15/32	3/8-24	T-24-6	22.02	27.53
UDB-752413	#55-#39	.0520-.0995	13/64	.2021-.2011	3/8	15/32	3/8-24	T-24-6	22.02	27.53
UDB-752416	#40-#28	.0980-.1405	1/4	.2490-.2480	3/8	15/32	3/8-24	T-24-6	22.33	27.93
UDB-752420	1/8-#10	.1250-.1935	5/16	.3115-.3105	3/8	15/32	3/8-24	T-24-6	18.18	22.85
UDB-752424	1/8-#10	.1250-.1935	3/8	.3740-.3730	3/8	15/32	3/8-24	T-24-6	18.18	22.85
UDB-753220	#10-#1	.1935-.2280	5/16	.3115-.3105	1/2	19/32	1/2-20	T-32-6	18.18	22.85
UDB-753224	#10-#1	.1935-.2280	3/8	.3740-.3730	1/2	19/32	1/2-20	T-32-6	17.33	21.83
UDB-753226	3/16-F	.1875-.2570	13/32	.4052-.4042	1/2	19/32	1/2-20	T-32-6	17.76	22.23
UDB-753228	A-L	.2340-.2900	7/16	.4365-.4355	1/2	19/32	1/2-20	T-32-6	17.76	22.23
UDB-753232	3/16-O	.1875-.3160	1/2	.4990-.4980	1/2	19/32	1/2-20	T-32-6	17.76	22.23
UDB-754036	M-11/32	.2950-.3437	9/16	.5615-.5605	5/8	23/32	5/8-18	T-40-6	16.64	20.99
UDB-754040	5/16-7/16	.3125-.4375	5/8	.6240-.6230	5/8	23/32	5/8-18	T-40-6	16.64	20.99
UDB-754848	5/16-17/32	.3125-.5312	3/4	.7490-.7480	3/4	27/32	3/4-16	T-48-6	16.64	20.99
UDB-756464	1/2-49/64	.5000-.7656	1	.9990-.9980	1	1-3/32	1-14	T-64-6	27.63	34.73

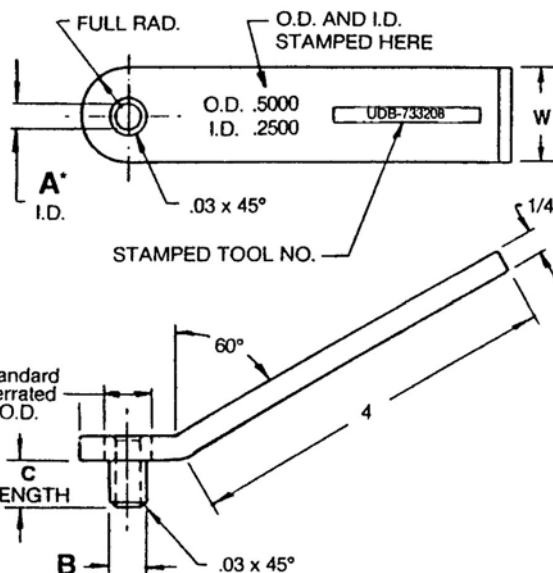
* Tolerances on 'A' dimension can be
found on page A2.

QTY	1-2	3-5	6-11	12-23	24-49	50-99	100 & UP
DISCOUNT	LIST	-6%	-23%	-30%	-35%	-42%	-50%

Handle Bushings

UNITED Handle Bushings for Quick Fixturing

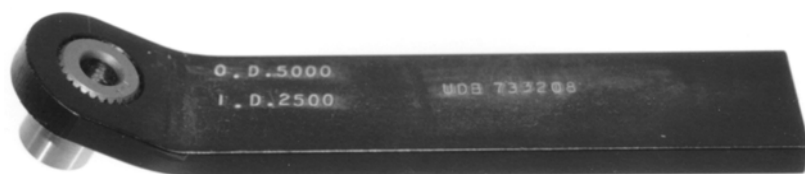
DRILL BUSHINGS — HANDLE TYPE



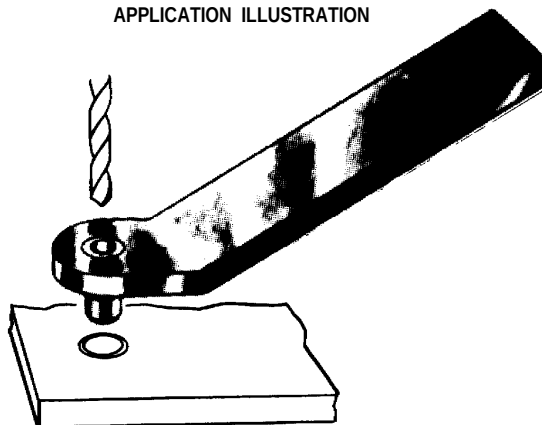
These Handle Bushings are instant reactions to fixturing.

'Fix-Up' costs and down-time are reduced.

UNITED has extensive inventories so call today.



HANDLE BUSHING
APPLICATION ILLUSTRATION



To order, specify P/N plus I.D.
Example: UDB-733208 .2500

A I.D. RANGE		B O.D. +.000 / -.001		ANSI	C STANDARD LENGTHS						W
					5/16	3/8	1/2	5/8	3/4	1	
NOMINAL	DECIMAL	NOMINAL	DECIMAL	SYMBOL	-05	-06	-08	-10	-12	-16	
#55 - 1/16	.0520 - .0625	5/32	.1552	10	UDB-731005	UDB-731006					3/4
#55 - #39	.0635 - .0995	3/16	.1865	12	UDB-731205	UDB-731206	UDB-731208				3/4
#40 - 9/64	.0980 - .1406	1/4	.2490	16	UDB-731605	UDB-731606	UDB-731608	UDB-731610	UDB-731612	UDB-731616	3/4
1/8 - #10	.1250 - .1935	5/16	.3115	20		UDB-732006	UDB-732008	UDB-732010	UDB-732012	UDB-732016	3/4
#10 - #1	.1935 - .2280	3/8	.3740	24		UDB-732406	UDB-732408	UDB-732410	UDB-732412	UDB-732416	3/4
3/16 - F	.1875 - .2570	13/32	.4052	26		UDB-732606	UDB-732608	UDB-732610	UDB-732612	UDB-732616	3/4
A - L	.2340 - .2900	7/16	.4365	28		UDB-732806	UDB-732808	UDB-732810	UDB-732812	UDB-732816	3/4
3/16 - O	.1875 - .3160	1/2	.4990	32		UDB-733206	UDB-733208	UDB-733210	UDB-733212	UDB-733216	1
M - 11/32	.2950 - .3437	9/16	.5615	36			UDB-733608	UDB-733610	UDB-733612	UDB-733616	1
5/16 - 7/16	.3125 - .4375	5/8	.6240	40			UDB-734008	UDB-734010	UDB-734012	UDB-734016	1
5/16 - 17/32	.3125 - .5312	3/4	.7490	48			UDB-734808	UDB-734810	UDB-734812	UDB-734816	1

UNITED Anchor® Knurled Template Bushings for Plastic Laminate Templates

United Anchor Template
Bushings for Plastic

SER-CAST UABSC

United Anchor Bushing SER-CAST (UABSC)



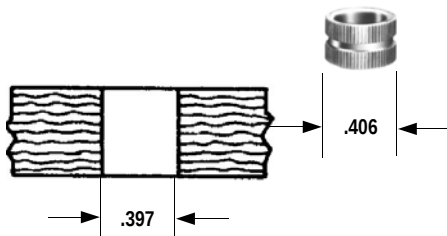
Relieved Knurled UNITED Anchor Bushings are quickly installed with simple hole preparation.
Five body sizes. Small body allows use in close hole patterns.
Drill range: #55 (.0520) thru 7/16 (.4375).

Add I.D. size to P/N. Order Example: 1/4" I.D. x 13/32 O.D. x 1/2 Long = UABSC-26-8 1/4

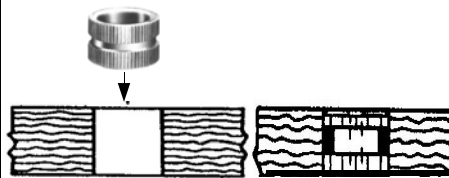
I.D. RANGE		O.D. SIZE Symbol by 64ths			LENGTH ANSI by 1/16			
NOMINAL	DECIMAL	NOMINAL	DECIMAL	SYMBOL	-4 or 1/4	-5 or 5/16	-6 or 3/8	-8 or 1/2
#55 - 9/64	.0980 - .1406	1/4	.265	UABSC-16				
1/8 - #10	.1250 - .1935	5/16	.327	UABSC-20				
5/32 - F	.1562 - .2570	13/32	.421	UABSC-26				
5/32 - O	.1562 - .3160	1/2	.515	UABSC-32				
5/16 - 7/16	.3125 - .4375	5/8	.640	UABSC-40				

To Laminate Plastic UNITED Anchor Type Bushing Templates:

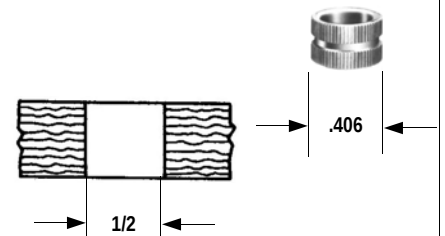
1. Drill a slightly undersize hole into template for a slight press fit.



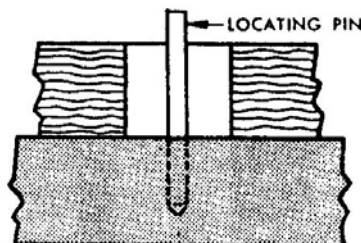
2. Coat sides of Knurled Anchor Bushing with resin and press into hole.



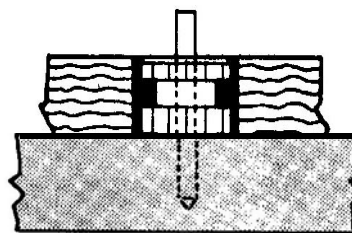
3. When Template Hole locations are critical, drill hole about 1/16" size larger than diameter of Anchor Bushing.



4. Place Template over plastic shell or matrix. Insert locating pin into hole.



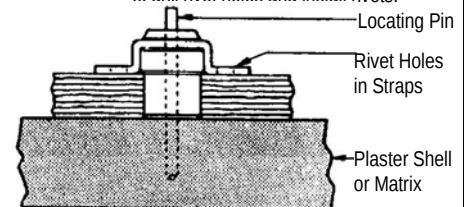
5. Apply resin to hole, slip UNITED Anchor Bushing into place and fill remainder of hole with resin. Bushing may be color-coated.



6. Allow resin to cure (about 2 hours).

To Use Piloted Anchor Bushing:

1. Drill hole.
2. Locate pin plaster matrix.
3. Place laminate template over plaster matrix and insert pin.
4. Position Anchor Bushing onto locating pin to drill rivet holes and install rivets.



UNITED
Anchor Bushings

UNITED Anchors® are Back!

**POPULAR DEMAND BRINGS BACK UNITED
TEMPLATE AND LAMINATE BUSHINGS.**

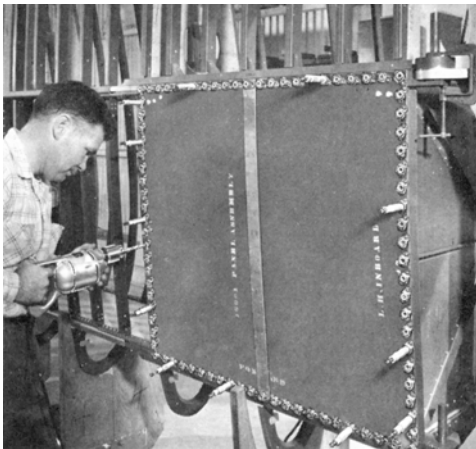


**NORTH AMERICAN
COLUMBUS F-14**

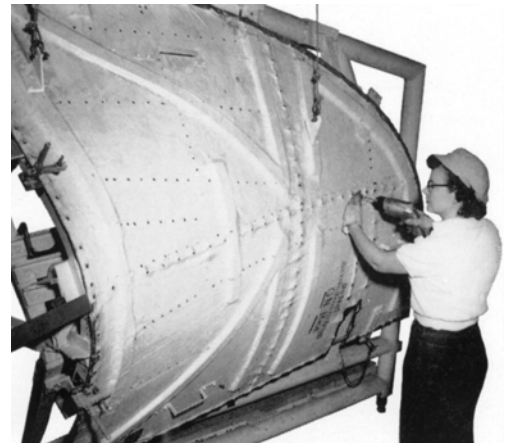
Rosie the Riveter is Back!

***ALOHA...The popular, practical
cost- effective Anchor Template
and Laminate Bushings are back!***

“Anchors have been away since 1986 when the *UNITED Drill Bushing Corporation* of Downey, California purchased tooling, inventories and all rights to the Anchor Bushing Products and Trade Marks from the Hi-Shear Corporation of Torrance, California. Over 800,000 Anchors are available from inventory.”

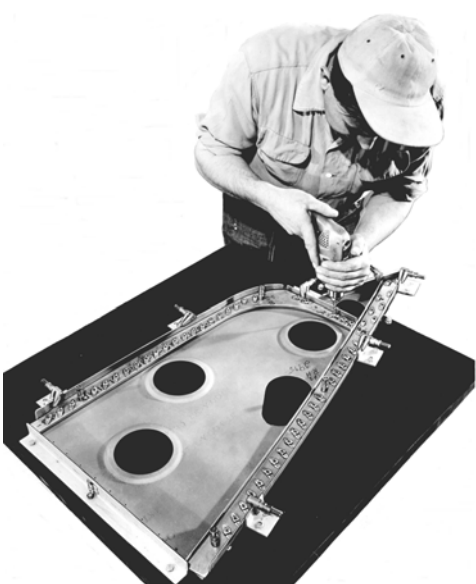


TRANSLAND AVIATION TORRANCE



GLOBE MASTER

**All photos
on the Anchor Bushing
pages were made
in 1942 and 1943
during World War II.**



NORTHROP



SOLAR

Fab Sheet Metal Thin Templates & Edges to Laminate with Anchors

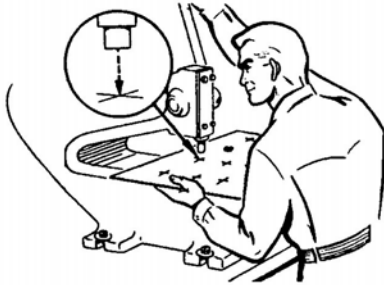
Fabricate with
Anchors®

Typical Inexpensive Sheet
Metal Templates

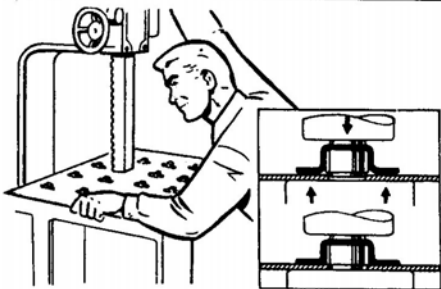
How to Make Sheet Metal Templates
with **UNITED** Anchor Bushings



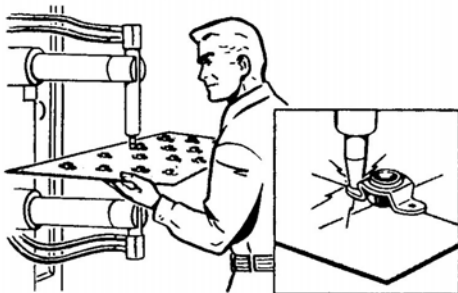
1. Layout and center punch.



2. Punch holes using piloted type punch — 1/4" (.250) diameter for small, 3/8" (.375) diameter for medium, or 9/16" (.5625) diameter for large Anchor Bushings.

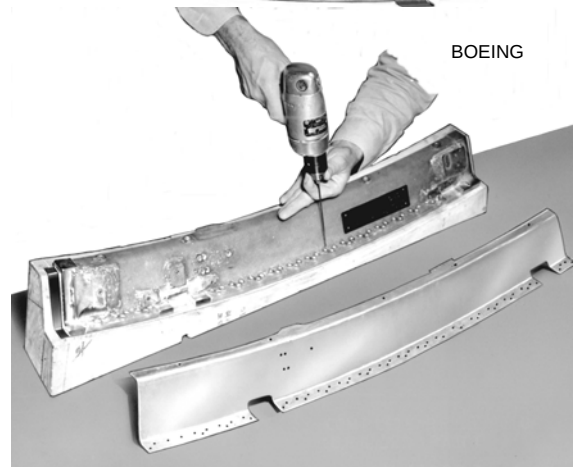
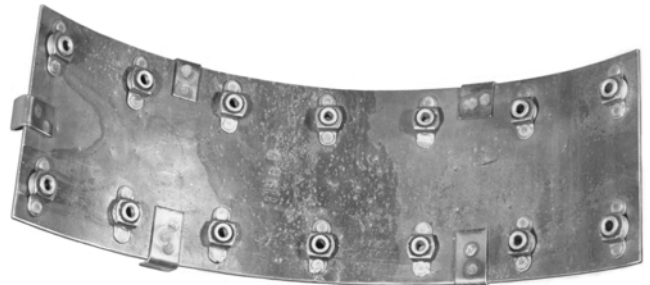


3. Press tapered pilot of Anchor Bushing into punched hole.



4. Spotweld or rivet Anchor Bushing to template. Note: Anchor straps have holes for rivets. These holes will not interfere with the spotwelding process. Rivets are soft steel or aluminum, flush head, 3/32" diameter, 1/4" long.

Use Riveted Anchors or Spotweld Anchors



To Rework is as Simple as A - B - C!

A
Remove Anchor Strap by breaking spotwelds or drilling out rivets.



B
Spotweld slug (punching) in obsolete hole position.



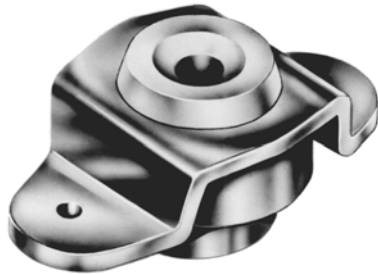
C
Relocate new hole position and proceed with installation of new Anchor Bushing.



Standard Anchors

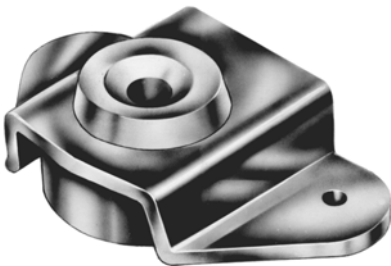
STANDARD ANCHOR® BUSHINGS

REGULAR CROSS STRAP



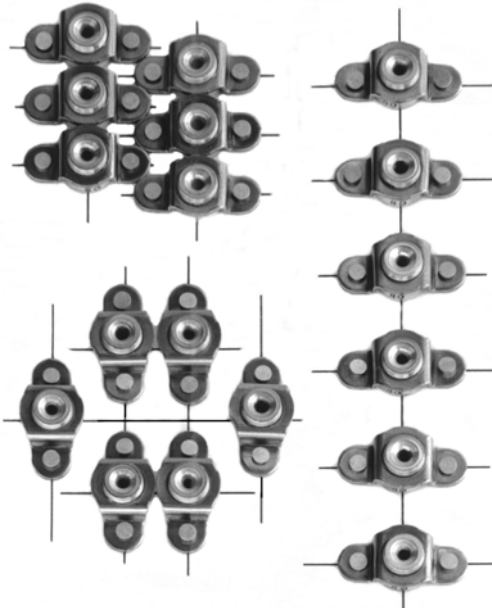
UAB-2
UAB-4
UAB-6

CORNER STRAP



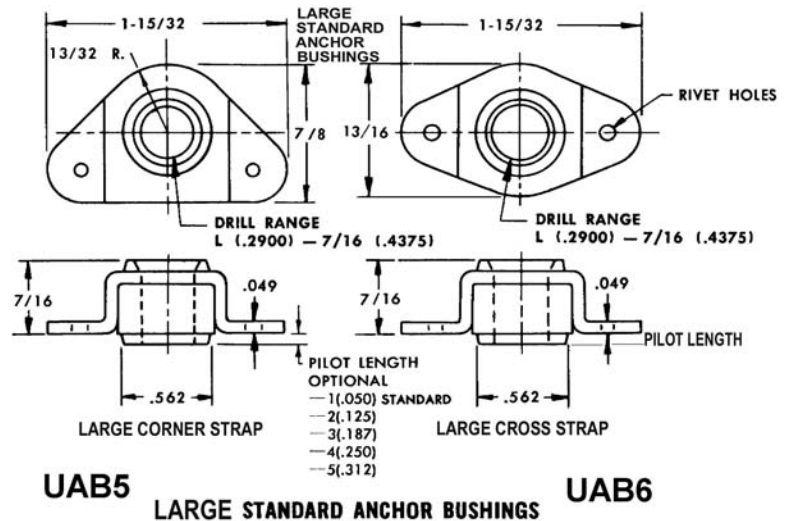
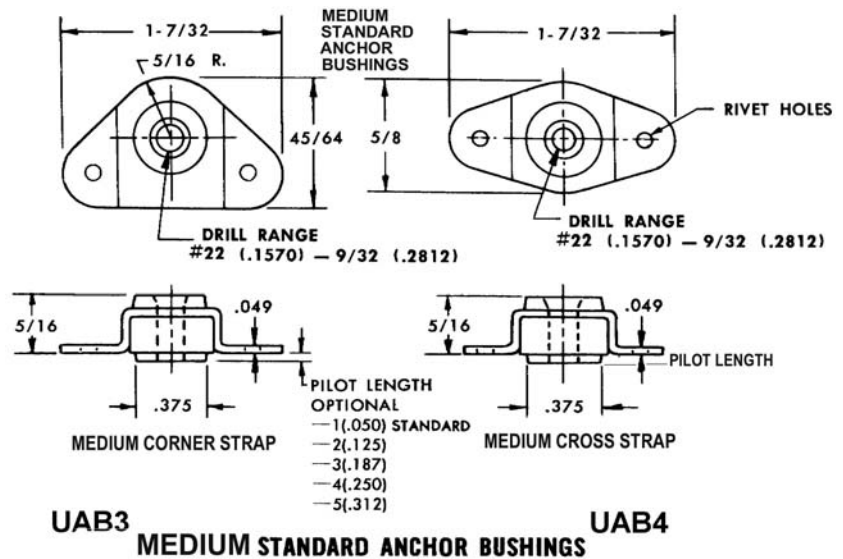
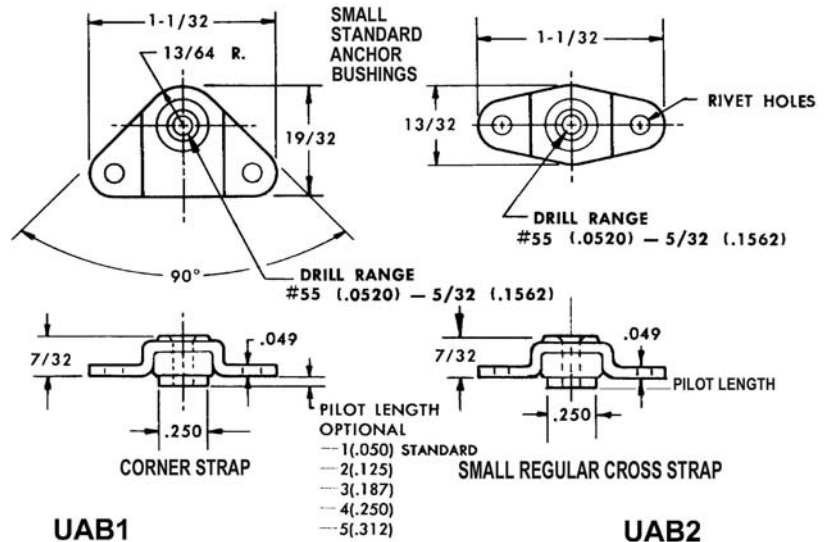
UAB-1
UAB-3
UAB-5

Layout Dimensions Minimum Patterns



Standard UNITED Anchor Bushings on Drill Template . . . Ryan Aeronautical Co.

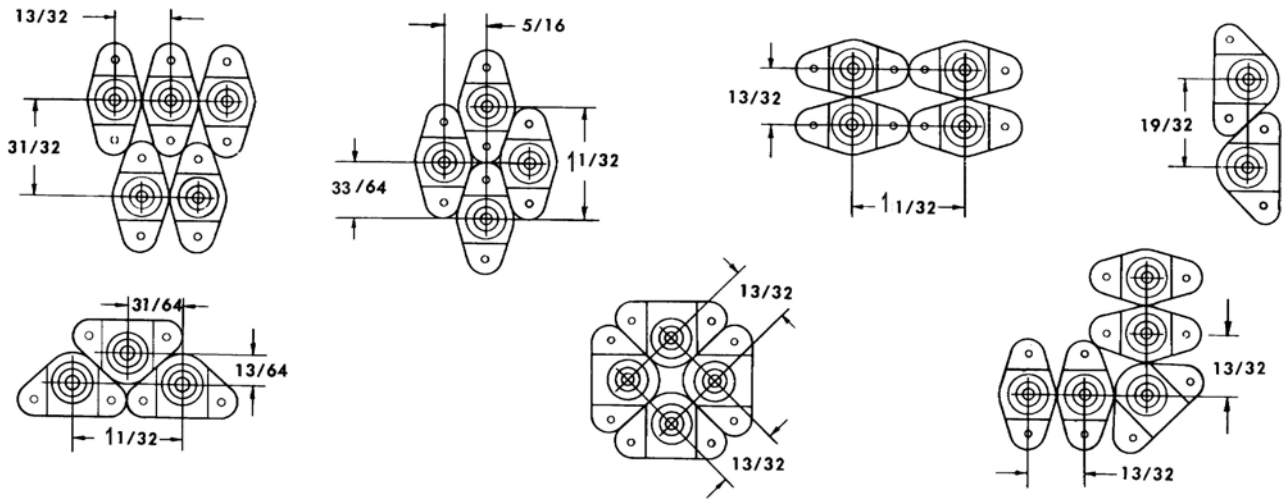
Standard Anchor® Bushings



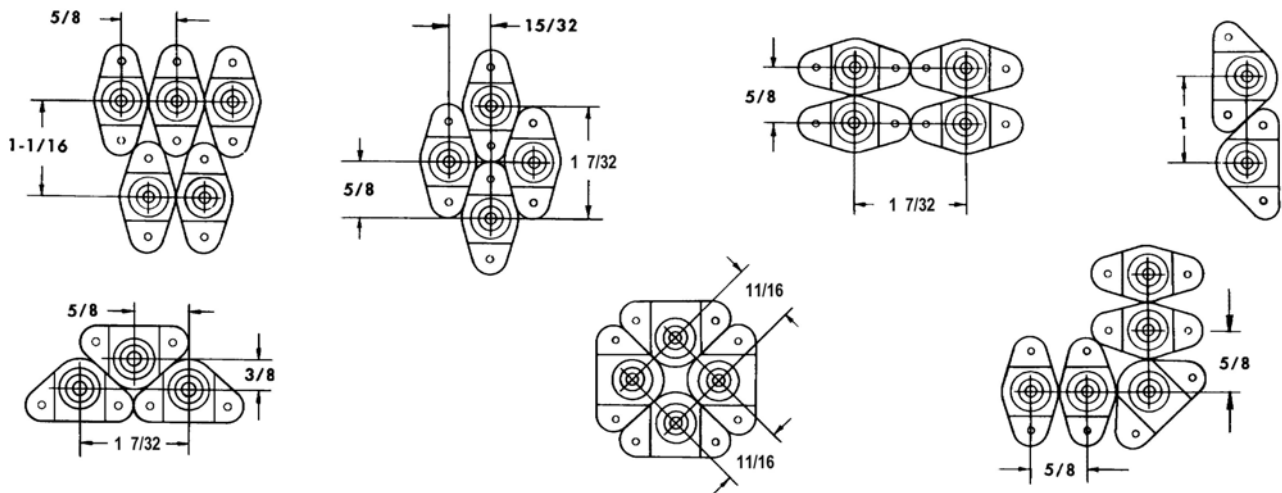
Minimum Anchor[®] Layout Dimensions

Standard Anchors

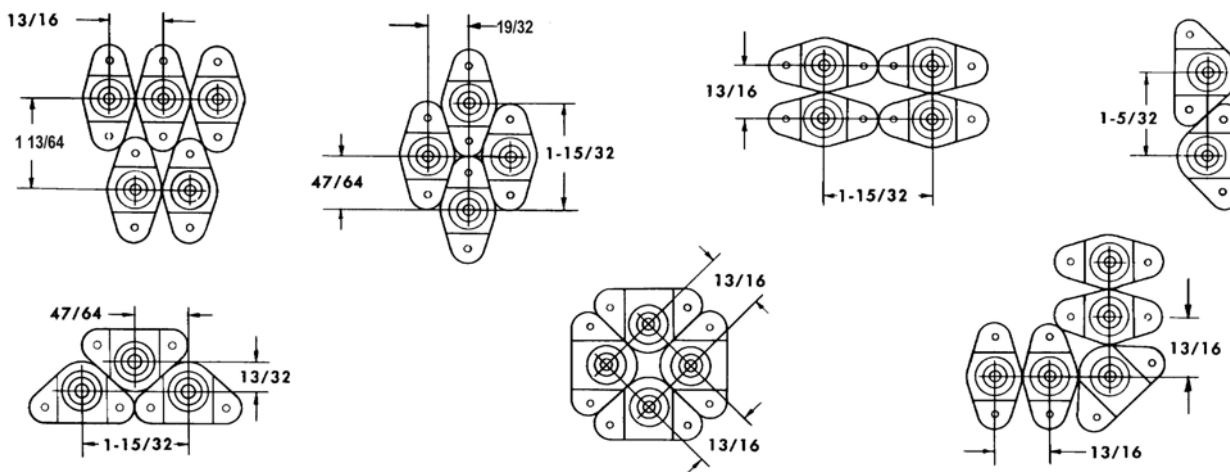
MINIMUM LAYOUT DIMENSIONS—STANDARD ANCHORS



UAB1 MINIMUM LAYOUT DIMENSIONS UAB2



UAB3 MINIMUM LAYOUT DIMENSIONS UAB4



UAB5 MINIMUM LAYOUT DIMENSIONS UAB6

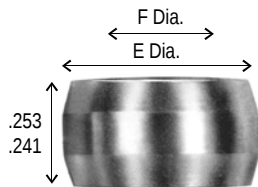
Multi-Groove Pins For Sheet Metal

Multi-Groove Pin Anchor® Bushings

MULTI-GROOVE PIN ANCHOR® BUSHINGS — For Sheet Metal Drill Templates

SEE NEXT PAGE for driving tools, ordering and usage.

REFERENCE UT-7009A

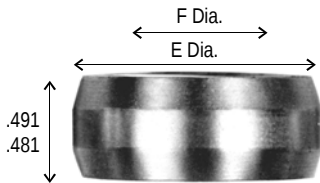


**UAB83 Retainer for
SMALL 1/4 O.D.
Multi-Groove Pin**

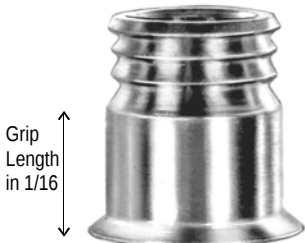


**UAB80 SMALL
Multi-Groove Pin
1/4 O.D.
For Drill Range:
#55 (.052) thru #40 (.098)**

**Reduce cost in preparation
of complex drill templates.**

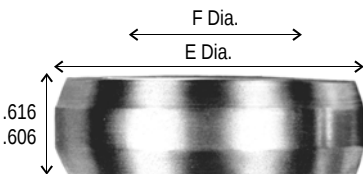


**UAB84 Retainer for
MEDIUM 3/8 O.D.
Multi-Groove Pin**



**UAB81 MEDIUM
Multi-Groove Pin
3/8 O.D.
For Drill Range:
#39 (.099) thru #10 (.193)**

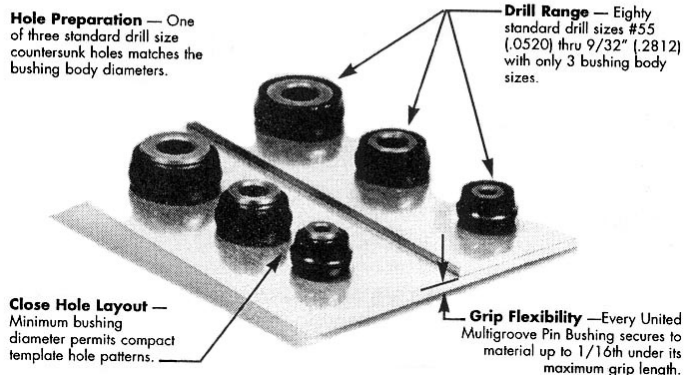
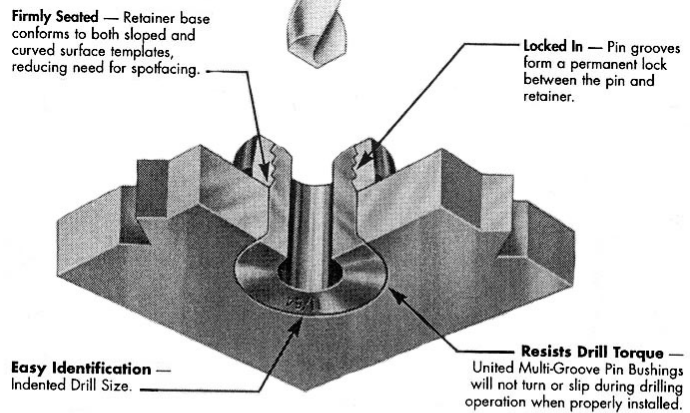
**One style drill bushing for metal
and laminate plastic drill templates.**



**UAB85 Retainer for
LARGE 1/2 O.D.
Multi-Groove Pin**



**UAB82 LARGE
Multi-Groove Pin
1/2 O.D.
For Drill Range:
#9 (.196) thru 9/32 (.2812)**

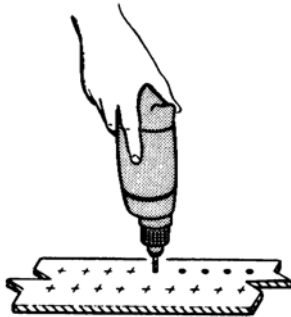


- The compact two-piece *UNITED* MULTI-GROOVE PIN ANCHOR BUSHING can be installed in close layout patterns.
- A single rivet type *UNITED* Multi-Groove set, UAB200 Series, inserted in a standard rivet gun or a hand set used with a hammer, UAB201 Series, installs *UNITED* Multi-Groove Pins and Retainers at a fraction of the cost and time of conventional drill guide fixtures.
- Eighty drill sizes are accommodated by only three bushing pin diameters.
- *UNITED* Multi-Groove Pin Anchor Bushing's flush head assures a secure flush fit to the template surface.
- Primarily intended for thin template materials, the *UNITED* Multi-Groove Pin can be ordered in a variety of grip lengths. *UNITED* Multi-Groove Pin lengths are graduated in 1/16" increments (maximum grip). Template material can vary 1/16" without changing pin lengths.
- Manufactured from wear-resistant case-hardened steels, *UNITED* Multi-Groove Pin Anchor Bushings retain their accuracy during long production runs.
- The pins are also re-usable after being removed from a template. The Retainer is used only once and replaced when the Pin is re-used.

Multi-Groove Pin Sheet Metal Drill Template Construction

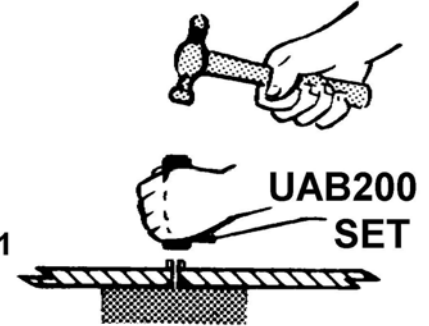
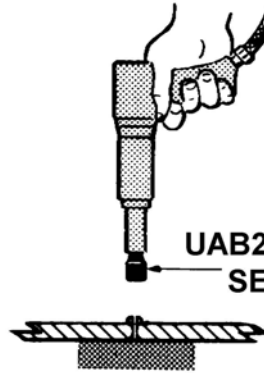
**Multi-Groove Pins
For Sheet Metal**

Select Dash Number based on Pin Diameter.

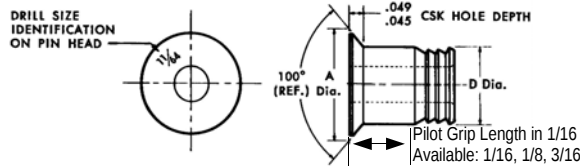


TWO EASY STEPS:

1. After layout and center punch, drill and countersink a hole in the template to match bushing diameters specified.
2. With template firmly supported on a work bench, swage the retainer to the bushing with an air-gun set (style UAB201) or hand tool and hammer (style UAB200). See below.

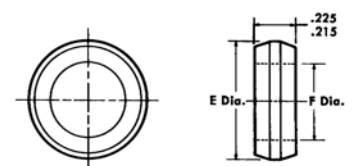


MULTI-GROOVE PINS



MULTI-GROOVE PIN PART NO.	PIN NOM. DIA.	DRILL SIZE	A DIA	D DIA
UAB80	1/4	#55 (.052) thru #40 (.098)	.366 / .356	.249 / .246
UAB81	3/8	#39 (.099) thru #10 (.193)	.491 / .481	.374 / .371
UAB82	1/2	#9 (.196) thru 9/32 (.2812)	.616 / .606	.499 / .496

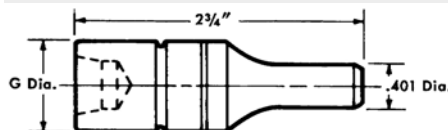
MULTI-GROOVE RETAINERS



SEE PAGE B20.

RETAINER PART NO.	PIN NOMINAL DIA.	E DIA	F DIA
UAB83	1/4	.410 / .400	.253 / .249
UAB84	3/8	.535 / .525	.378 / .374
UAB85	1/2	.662 / .652	.505 / .500
UAB-40-14R	5/8	.780	.6275 / .6255

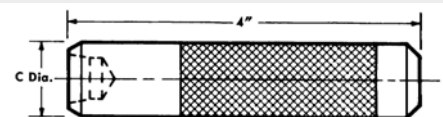
DRIVING TOOLS — GUN TYPE



GUN TYPE	PIN NOMINAL	C
UAB201-4	1/4	3/4
UAB201-6	3/8	7/8
UAB201-8	1/2	1
UAB201-10	5/8	1-1/4

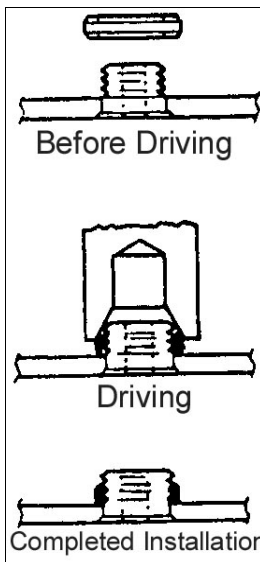
DRIVING TOOLS — HAMMER TYPE

SEE PAGE B20.



HAMMER TYPE PART NO.	PIN NOMINAL DIA.	C DIA
UAB200-4	1/4	3/4
UAB200-6	3/8	7/8
UAB200-8	1/2	1
UAB200-10	5/8	1-1/4

Select Dash Number based on Pin Diameter.



EASY ORDERING STEPS:

1. MULTI-GROOVE PIN ANCHOR BUSHINGS
Specify Bushing by its P/N, maximum grip in 1/16" and drill size.
2. MULTI-GROOVE RETAINERS
Specify companion Retainers by P/N.
3. MULTI-GROOVE DRIVING TOOL
Indicate appropriate Driving Tool by UAB number.

EXAMPLE: **UAB80 - 3 - 47**

Multi-Groove Pin Anchor Bushing with 1/4" nominal diameter.
3/16" Maximum Plate thickness
Drill Size in drill number, fraction or letter

UAB83
Pin Retainer with 1/4" nominal diameter

UAB201 - 4
Rivet Gun 1/4" nominal type Set diameter Driving Tool

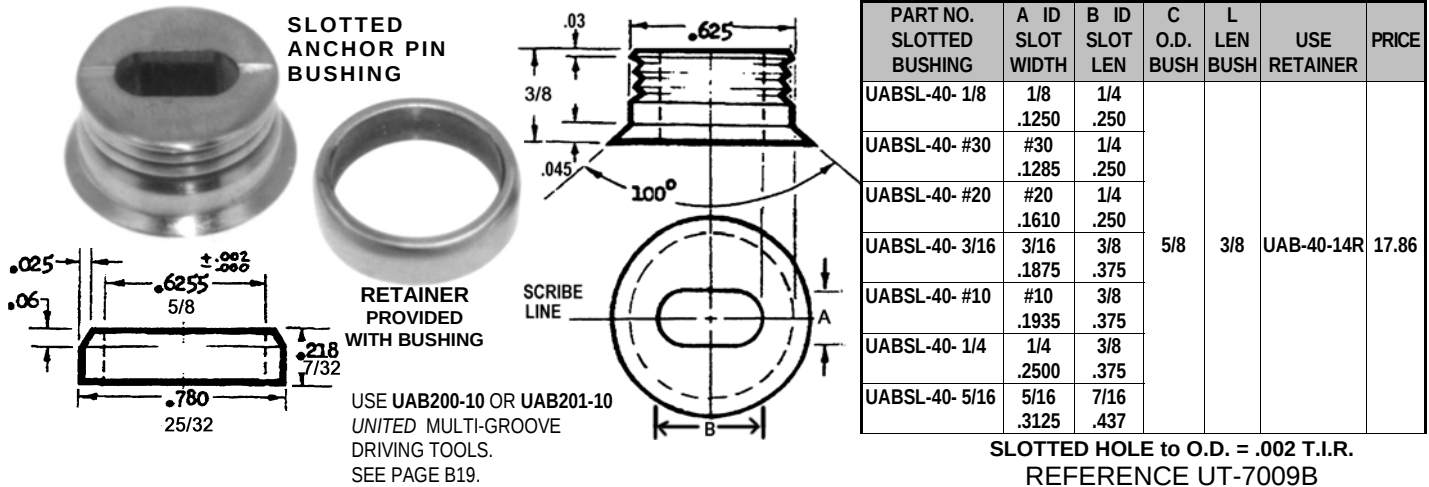
Slotted Anchor Pin Type Bushing

UNITED Multi-Grooved Anchor Pin Type Slotted Locator Bushings

UNITED Multi-Grooved Anchor Pin Type Slotted Locators provide part location and maintain $\pm .050$ tooling tolerances.

- Use "L" and "T" Pins, Dowel Pins or Locating Pins for master locations.
- Install by scribing lines on the fixture and align with the site lines on the UNITED Slotted Anchor Pin Bushing.

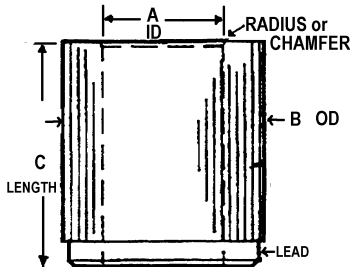
SLOTTED ANCHOR PIN BUSHINGS — ALL PURPOSE PART LOCATING BUSHINGS



SERRATED PRESS — ALL PURPOSE NON-CRITICAL BUSHINGS



SERRATED PRESS



KNURLED EXTERNAL O.D.

- AIDS IN PRESSING
- PREVENTS SPIN-OUT
- SERRATIONS ARE NOMINAL $\pm .004$ $\pm .008$.



A Serrated hardened Bushing used for non-critical applications such as:

- Drilling holes for conventional rivets
- Pilots for high shear rivets
- Templates
- Hinge Bushings
- Sash, Door, Window, Trailer, Appliances
- Manufacturing and Woodworking fixtures

Used in Aluminum, Magnesium and Wood.
Concentricity within .005 T.I.R. maximum.

Conforms to UT-7000

QUANTITY DISCOUNT PRICING BELOW

SERRATED PRESS I.D.	
UP TO 1/4	+ .001 + .003
1/4 TO 3/4	+ .001 + .004
3/4 AND UP	+ .002 + .005

'SER'

A I.D. RANGE		B O.D. SIZE - ANSI BY 64ths			C LENGTH (OVERALL) -- ANSI BY 16ths									
		NOM.	DECIMAL	ANSI	1/4	5/16	3/8	1/2	3/4	1	1-3/8	1-1/2	1-3/4	2-1/8
					-4	-5	-6	-8	-12	-16	-22	-24	-28	-34
#55 - #16	.0520 - .0625	13/64	.207 - .211	SER-13	7.92	8.43	8.90	9.12						
#52 - #39	.0635 - .0995	13/64	.207 - .211	SER-13	7.92	8.43	8.90	9.12						
#40 - 9/64	.0980 - .1406	1/4	.254 - .258	SER-16	5.68	5.98	6.26	6.55	8.13					
1/8 - #10	.1250 - .1935	5/16	.316 - .320	SER-20	4.23	4.23	4.41	5.39	6.26	7.52				
5/32 - F	.1562 - .2570	13/32	.410 - .414	SER-26	4.23	4.23	4.41	4.90	5.39	6.26				
5/32 - O	.1562 - .3160	1/2	.504 - .508	SER-32		4.23	4.41	4.90	5.39	6.26				
5/16 - 7/16	.3125 - .4375	5/8	.629 - .633	SER-40			4.23	4.23	4.90	5.20				
5/16 - 17/32	.3125 - .5312	3/4	.754 - .758	SER-48			4.23	4.23	4.90	5.20	7.16			
1/2 - 21/32	.5000 - .6532	7/8	.879 - .883	SER-56			6.57	6.07	6.26	6.55	7.16			
1/2 - 49/64	.5000 - .7656	1	1.04 - 1.08	SER-64				6.26	6.26	6.87	7.16			
1/2 - 1-1/32	.5000 - 1.0312	1-3/8	1.379 - 1.383	SER-88				8.43	8.71	9.01	9.42	9.89		
1" - 1-25/64	1.000 - 1.3906	1-3/4	1.754 - 1.758	SER-112				9.11	9.69	10.10	10.38	10.88	11.39	

Specify SER for Serrated Press.

Example: 1/4 x 13/32 x 1/2 = SER - 26 - 8 - 1/4

QTY	1-2	3-5	6-11	12-23	24-49	50-99	100-199	200-499	500-999	1000 & UP
DISCOUNT	LIST	-6%	-23%	-30%	-35%	-42%	-47%	-51%	-53%	-56%