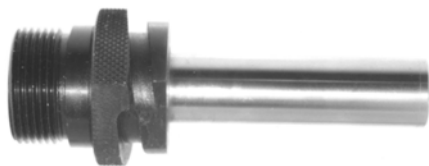


Nurlock Adapter and Extended Range Tips, Helical Lock Liners, Kits & Accessories

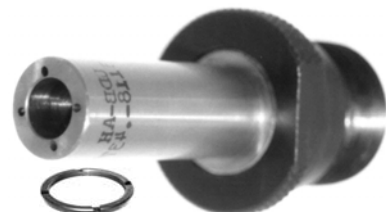
**UNITED Adapts
To Your Needs!**



**91000 SERIES TELESCOPING NURLOCK
ADAPTER TIPS Pg P28 - P29**



**51000 SERIES TELESCOPING
NURLOCK ADAPTER TIPS Pg P24 - P25**



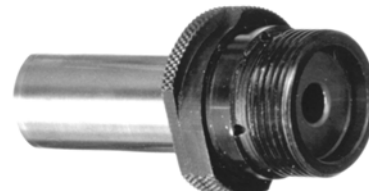
**HELICAL NURLOCK ADAPTER TIPS
COMPLETE ACCESSORY GUIDE Pg P30**



**26000 SERIES EXTENDED RANGE
ADAPTER TIPS Pg P12 - P15**



**41000 SERIES HELICAL NURLOCK
ADAPTER TIPS Pg P22 - P23**



**11000 SERIES HELICAL NURLOCK
ADAPTER TIPS Pg P4 - P9**



**31000 SERIES ADJUSTABLE NURLOCK
ADAPTER TIPS Pg P20 - P21**



**NURLOCK
CLAMPS
Pg P35**



**21000 SERIES HELICAL NURLOCK ADAPTER TIPS
Pg P10 - P11**



**21000 SERIES CARBIDE ADAPTER
TIPS Pg P16 - P17**



**UNIVERSAL LOCATING
JIGS Pg P39**



**61000 SERIES TELESCOPING NURLOCK
ADAPTER TIPS Pg P26 - P27**



**LOCK RING
TOOLS Pg P34**



**UNIVERSAL LOCATING
JIG KITS Pg P39**



**NURLOCK LINER MOD-
REPAIR KITS Pg P44**



**REDUCER
BUSHINGS Pg P35**



**EXT. RANGE INCREASER-
REDUCERS Pg P38**



**AT ADAPTER
TIPS
Pg P41**



**HNL-1
21000 - 25000 SERIES HELICAL NURLOCK
LINERS Pg P32 - P33**



HNL



**STANDARD
NURLOCK LINERS
Pg 35**



**STANDARD LOCK
LINERS Pg P36**

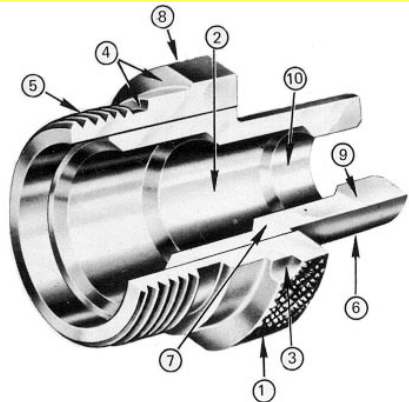


**EXTENDED RANGE
LOCK LINERS Pg P37**

Nurlock Bushing Tips

UNITED Nurlock Drill Bushing Tips & Accessories for Air Feed Drills, Tappers & Back Spotfacers

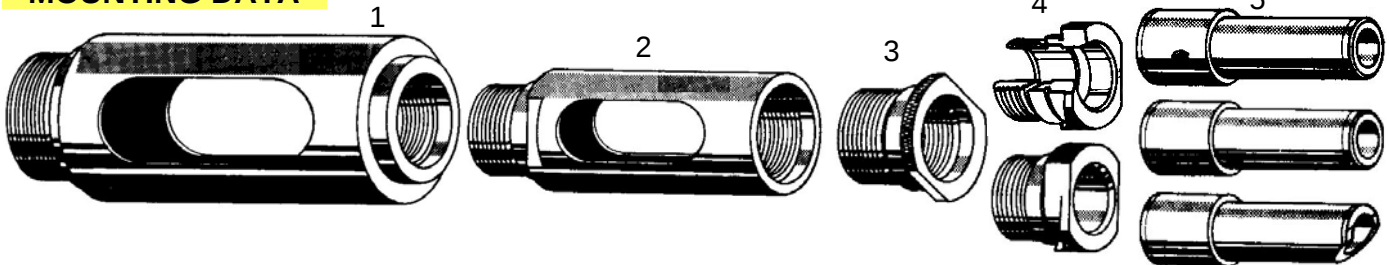
NURLOCK BUSHING TIPS



FEATURING UNITED DESIGNS

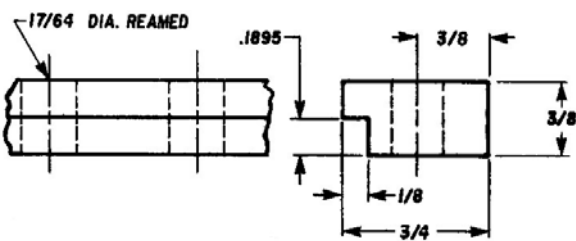
- 1 Outside diameter of collar is knurled to prevent slippage when gripping tool.
- 2 Counterbored Chip clearance hole prevents jam-up of chips. Chips work back into the nosepiece and out of slots in sides of nosepiece.
- 3 Milled slots give quick, positive lock of drill bushing tip under heads of lock screws. A 30° turn locks or unlocks the drill bushing tip.
- 4 Square shoulder and concentric alignment diameter accurately line up drill bushing tip with axis of tool.
- 5 Collar and threads heat treated to produce strength and provide wear resistance. Shank hardened for maximum wear resistance.
- 6 Marked with part number and drill size for easy identification and simplicity in reordering.
- 7 Precision ground shank, with entering bevel for easy insertion in lock liner bushing.
- 8 Black oxide rust preventative finish.
- 9 Concentric ground lead on shank.
- 10 Drill guide hole finished to A.N.S.I. Specifications or customer's exact dimensional requirements.

MOUNTING DATA

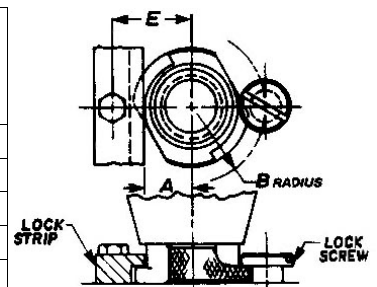


1 NOSEPIECES	2 EXTENSIONS	3 REDUCERS	4 COLLARS	5 SHANKS
Automatic mechanical or air-feed drills, tappers and back spot-facers are equipped with either short or long nosepieces depending on the length of the cutting tool, holding device—i.e., drill chuck, tap chuck, morse taper adapter, etc.	UNITED's nose piece extensions are offered in each collar thread size and are available in 2", 4", 6", 8", and 10" lengths.	Reducer bushings are used to reduce the thread size in a specific nosepiece to adapt it to accommodate smaller thread drill bushing tips.	Nurlock air fluid (top) and standard collars (bottom) are provided with helical milling of the locking shoulder to assure positive lock. Mating shanks are pressed into the collars.	UNITED offers Air Fluid Shanks (top—11101 - 15531 series), Standard Shanks (middle—21101 - 25531 series) and Angular Nose Shanks (bottom). Add suffix 'CS' to air-fluid or standard shanks when ordering.

LOCK STRIP CONSTRUCTION



Drill Bushing Tip Series	A	B	E
21000	.312	.625	.687
22000	.609	.922	.984
23000	.734	1.047	1.109
24000	.859	1.172	1.234
25000	—	1.562	—



SELECTION

UNITED provides five Nurlock drill bushing tip threaded sizes matching those of the standard nosepiece. The B dimension is the shank outside diameter. Dimension A is the drill bit guide hole. The shank is inserted into the lock liner bushing, jig hole or headless liner bushing. All ID dimensions (A) are finished to A.N.S.I. Standards specifications. Dimension C is the length of the shank from the face of the lock flange to the end of the shank.

UNITED Nurlock Drill Bushing Tips are furnished to order to the drill size specified by the user. They are available for applications from number 80 drill up through 1-5/8 diameter.

ORDERING INFORMATION

To order UNITED Nurlock Drill Bushing Tips:

Select the part required. Specify the part number and name. Add the drill size to the part number. The drill size should be specified as a decimal to four places.

Example: A-21101 (.2500) Nurlock Drill Bushing Tip.

There is an extra charge for all Nurlock Drill Bushing Tips specified to have smaller than the minimum drill size. Standard drill bushing tips are those with standard drill sizes falling between the minimum and maximum sizes shown. An extra charge will be added for each special dimension which may be specified.

UNITED Nurlock Drill

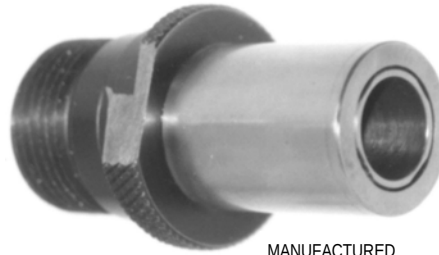
Bushing Tips & Accessories for

Air Feed Drills, Tappers & Back Spotfacers

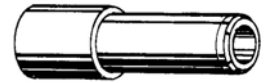
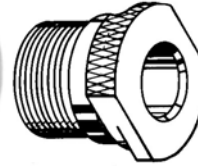
**Nurlock
Bushing Tips**

NURLOCK BUSHING TIPS

UNITED NURLOCK BUSHING TIPS and ACCESSORIES fit all standard automatic feed drill motors as manufactured by Gardner-Denver, Keller, Buckeye, Aro, Quackenbush, Ingersoll Rand & Zephyr.



MANUFACTURED
AS ORDERED FROM
SEMI FINISHED.



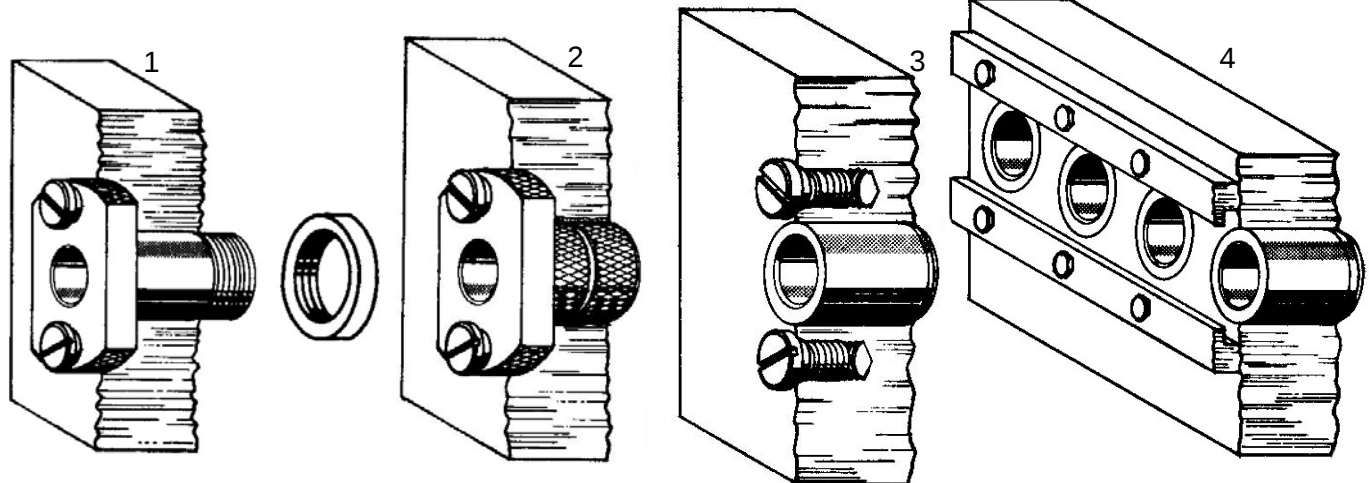
NURLOCK BUSHING TIPS provide a fast accurate method for portable or stationary mounting of drilling, tapping and other self-contained machining units on a jig or fixture.

The threaded end of the drill bushing tip screws into the nosepiece of the drilling unit. Locking flanges on the tip fit under the shoulders of lock screws or lockstrips on the jig, effectively holding the drilling unit in aligned position and absorbing both the thrust and torque of drilling.

NURLOCK BUSHING TIP CONSTRUCTION

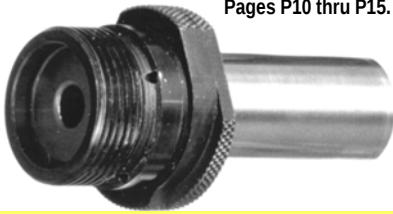
All Nurlock drill bushing tips are constructed with a two piece method consisting of a collar and a pressed in shank. Collars or shanks may be ordered separately for replacement purposes. See below.

The **COLLAR** contains the screw threads alignment diameter and lock flange. The **SHANK** contains the ID, OD and length dimensions as listed in the charts on the following pages. **MINIMUM** and **MAXIMUM DRILL SIZES** for Nurlock drill bushing tips are shown in the column headings of the charts.



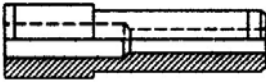
1 LOCK LINERS	2 NURLOCK LINERS	3 DIRECT MOUNTING	4 LOCK STRIPS
Conventional method for mounting automatic, mechanical or air-feed drills, tappers and back spotfacers to a jig or fixture. A hole is bored in the jig to accommodate the lock liner bushing. The lock ring holds the lock liner bushing in position in the jig.	The Nurlock Liner is used in potted or cast in place installations.	An alternate mounting method for holes so closely spaced that lock liner bushing cannot be used has lock screws mounted directly into the jig. The shank of the drill bushing tip fits directly into a bored hole in the jig. Hardened headless liner bushings are available to press into the bored hole to provide a wearing surface and prolong the useful life of the jig.	A second mounting method for closely spaced holes employs a lock strip along each side of the row of holes in the jig. The flanges on the drill bushing tip lock under the extended edges of the lock strip when the tip is turned 30° counter-clockwise. Headless liner bushings pressed into the bored holes in the jig are recommended to forestall wear in the bored hole.
TO ORDER A SHANK or COLLAR ONLY		ORDERING INFORMATION—DRILL GUIDE HOLE SIZES	
To order a Shank only: For all UNITED Nurlock Drill Bushing Tips with a prefix letter 'A', select the two piece drill bushing tip of the proper size and specify that part number. Omit the prefix 'A', and add your part name. Include drill size as a parenthetical suffix to the part number, specifying its decimal size to four places. Example: 21101 (.2500) Shank only. For Collar only, specify the part number shown in drawings at head of columns on the following pages. Add the drill size to the part number as a decimal to four places. Example: 21101 (.2500) UNITED Nurlock Collar only.		For UNITED Nurlock Drill Bushing Tips or Shanks with a special drill guide hole clearance: Select the part required. Specify the part number and name. Add the drill size to the part number as a minimum and maximum range for guide hole size. Specify the range parenthetically after the part number as decimals to four places, and add the part name. Example: A-21101 (.2505 - .2510) Nurlock Drill Bushing Tip. Special sizes are supplied only at extra cost. Drill guide hole tolerances closer than standard are supplied at special prices on special quotation. For all other items, specify part number and part name.	

See complete DIMENSIONAL TOLERANCES
Pages P10 thru P15.



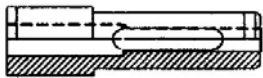
Helical Nurlock STANDARD Coolant Adapter Tip

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.004
OVER 1/4 TO 3/4	+0.001 TO +0.005
OVER 3/4 TO 1-1/2	+0.002 TO +0.006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



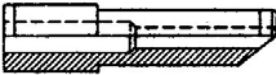
UDB-12531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR
SHANK ONLY, OMIT PREFIX A. Example: UDB-12531



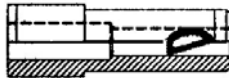
UDB-A-12531CS-
3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER
SHANKS, ADD SUFFIX CS. Ex: UDB-A-12531CS-3/16



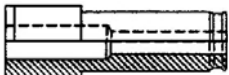
UDB-CTA-12531-
3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SUR-
FACES, USE OUR ANGULAR NOSE SHANK. ADDPREFIX
CT. Example: UDB-CTA-12531-3/16



UDB-A-12531CC-
3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PAT-
ENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO.
Example: UDB-A-12531CC-3/16



UDB-A-12531EZ-
3/16
ADD 'EZ'

EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D.
EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example:
UDB-A-12531EZ-3/16



UDB-AU-12531-3/16
Insert 'U' for ULTRA III
UDB-AC-12531-3/16
Insert 'C' for CARBIDE

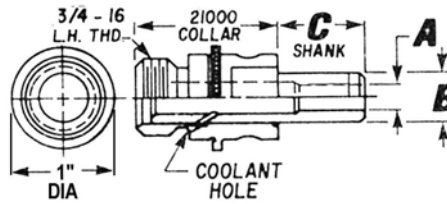
LONG WEARING INSERTS —TO ORDER LONG
WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY
PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES
WEAR, SPECIFY PREFIX AC FOR CARBIDE.

LOCKING ACCESSORIES — In this Section

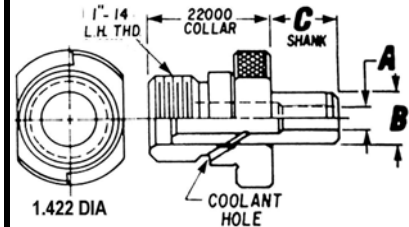


Helical Nurlock Coolant Series

A-11000 SERIES



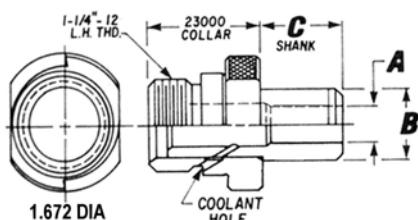
A-12000 SERIES



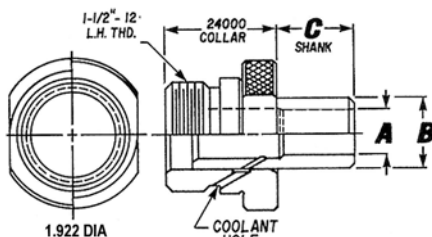
(DRILL) A	MAX A MIN	1/4 3/32	5/16 3/32	3/8 3/32	9/32 3/16	11/32 3/16	13/32 3/16	15/32 3/16	15/32 3/16
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	A-11101		A-11301	A-12101			A-12401	
	1/2	A-11102	A-11202	A-11302	A-12102	A-12202		A-12402	
L	5/8	A-11103	A-11203	A-11303	A-12103	A-12203	A-12303	A-12403	
E	3/4	A-11104	A-11204	A-11304	A-12104	A-12204	A-12304	A-12404	A-12504
N	7/8	A-11105	A-11205	A-11305	A-12105	A-12205	A-12305	A-12405	A-12505
G	1	A-11106	A-11206	A-11306	A-12106	A-12206	A-12306	A-12406	A-12506
T	1-1/16	A-11107		A-11307					
H	1-1/8	A-11108	A-11208	A-11308	A-12108	A-12208	A-12308	A-12408	A-12508
	1-3/16				A-12109	A-12209	A-12309	A-12409	
F	1-1/4	A-11110	A-11210	A-11310	A-12110	A-12210	A-12310	A-12410	A-12510
R	1-3/8	A-11111	A-11211	A-11311	A-12111	A-12211	A-12311	A-12411	A-12511
O	1-7/16								
M	1-1/2	A-11113	A-11213	A-11313	A-12113	A-12213	A-12313	A-12413	A-12513
	1-5/8	A-11114	A-11214	A-11314	A-12114	A-12214	A-12314	A-12414	A-12514
C	1-3/4	A-11115	A-11215	A-11315	A-12115	A-12215	A-12315	A-12415	A-12515
O	1-7/8	A-11116	A-11216	A-11316	A-12116	A-12216	A-12316	A-12416	A-12516
L	1-15/16								
L	2	A-11118	A-11218	A-11318	A-12118	A-12218	A-12318	A-12418	A-12518
A	2-1/8	A-11119	A-11219	A-11319	A-12119	A-12219	A-12319	A-12419	A-12519
R	2-1/4	A-11120	A-11220	A-11320	A-12120	A-12220	A-12320	A-12420	A-12520
	2-3/8	A-11121	A-11221	A-11321	A-12121	A-12221	A-12321	A-12421	A-12521
I	2-1/2	A-11122	A-11222	A-11322	A-12122	A-12222	A-12322	A-12422	A-12522
N	2-5/8								
	2-3/4	A-11124	A-11224	A-11324	A-12124	A-12224	A-12324	A-12424	A-12524
I	3	A-11125	A-11225	A-11325	A-12125	A-12225	A-12325	A-12425	A-12525
N	3-1/4	A-11126	A-11226	A-11326	A-12126	A-12226	A-12326	A-12426	A-12526
C	3-1/2				A-12127	A-12227	A-12327	A-12427	A-12527
H	3-3/4				A-12128	A-12228	A-12328	A-12428	A-12528
E	4				A-12129	A-12229	A-12329	A-12429	A-12529
S	5			A-11330	A-12130	A-12230	A-12330	A-12430	A-12530
	6	A-11131			A-12131	A-12231	A-12331	A-12431	A-12531
C LEN ABOVE		COLLAR A-11000 ADD I.D. SIZE TO LINERS			COLLAR A-12000 ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELIICAL NURLOCK LINERS	DOUBLE LOCK METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
FOR METAL TOOLING	SINGLE LOCK METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK METAL	NL-16520		NL-16521	WE RECOMMEND HNL and HNLP				NL-16522
STD NURLOCK LINERS	DOUBLE LOCK PLASTIC	NLP-375		NLP-500					NLP-750
LOCK LINERS	FOR METAL	LL-21100	LL-21200	LL-21300					LL-22400
LOCK LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400	
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELIICAL NURLOCK LINERS	DOUBLE LOCK PLASTIC	HNLP-213212	HNLP-214808	HNLP-214808	HNLP-224808	HNLP-224808	HNLP-225210	HNLP-225610	HNLP-226410
FOR PLASTIC TOOLING	SINGLE LOCK PLASTIC	HNLP-1-213212	HNLP-1-214808	HNLP-1-214808	HNLP-1-224808	HNLP-1-224808	HNLP-1-225210	HNLP-1-225610	HNLP-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532

Shanks and Accessories—UNITED Helical Nurlock

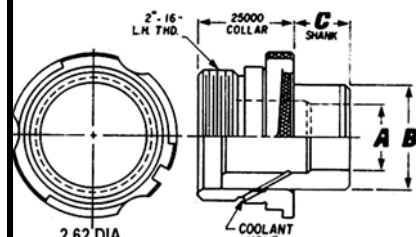
A-13000 SERIES



A-14000 SERIES



A-15000 SERIES



15/32	17/32	19/32	21/32	23/32	3/4	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-15/32	1-1/2	A MAX
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	A MIN
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B
NEW O.D.										NEW O.D.				NEW O.D.						3/8
BELOW										BELOW				BELOW						1/2
						A-14103														5/8
A-13004	A-13104	A-13204	A-13304			A-14104	A-14304	A-14204												3/4
A-13005	A-13105	A-13205	A-13305			A-14105	A-14305	A-14205	A-14405											7/8
A-13006	A-13106	A-13206	A-13306	A-13406	A-13506	A-14106	A-14306	A-14206	A-14406	A-14506	A-14606		A-14906	A-14806						1
																				1-1/16
A-13008	A-13108	A-13208	A-13308	A-13408	A-13508	A-14108	A-14308	A-14208	A-14408	A-14508	A-14608		A-14908							1-1/8
																				1-3/16
A-13010	A-13110	A-13210	A-13310	A-13410	A-13510	A-14110	A-14310	A-14210	A-14410	A-14510	A-14610	A-14710	A-14910		A-15110					1-1/4
A-13011	A-13111	A-13211	A-13311	A-13411	A-13511	A-14111	A-14311	A-14211	A-14411	A-14511	A-14611	A-14711	A-14911	A-14811	A-15111	A-15211				1-3/8
A-13012	A-13112	A-13212	A-13312																	1-7/16
A-13013	A-13113	A-13213	A-13313	A-13413	A-13513	A-14113	A-14313	A-14213	A-14413	A-14513	A-14613	A-14713	A-14913	A-14813	A-15113	A-15213	A-15313			1-1/2
A-13014	A-13114	A-13214	A-13314	A-13414	A-13514	A-14114	A-14314	A-14214	A-14414	A-14514	A-14614	A-14714	A-14914	A-14814	A-15114	A-15214	A-15314			1-5/8
A-13015	A-13115	A-13215	A-13315	A-13415	A-13515	A-14115	A-14315	A-14215	A-14415	A-14515	A-14615	A-14715	A-14915	A-14815	A-15115	A-15215	A-15315	A-15415		1-3/4
A-13016	A-13116	A-13216	A-13316	A-13416	A-13516	A-14116	A-14316	A-14216	A-14416	A-14516	A-14616	A-14716	A-14916	A-14816	A-15116	A-15216	A-15316	A-15416		1-7/8
			A-13317	A-13417	A-13517	A-14117	A-14317	A-14217	A-14417	A-14517	A-14617	A-14717	A-14917	A-14817						1-15/16
A-13018	A-13118	A-13218	A-13318	A-13418	A-13518	A-14118	A-14318	A-14218	A-14418	A-14518	A-14618	A-14718	A-14918	A-14818	A-15118	A-15218	A-15318	A-15418	A-15518	2
A-13019	A-13119	A-13219	A-13319	A-13419	A-13519	A-14119	A-14319	A-14219	A-14419	A-14519	A-14619	A-14719	A-14919	A-14819	A-15119	A-15219	A-15319	A-15419		2-1/8
A-13020	A-13120	A-13220	A-13320	A-13420	A-13520	A-14120	A-14320	A-14220	A-14420	A-14520	A-14620	A-14720	A-14920	A-14820	A-15120	A-15220	A-15320	A-15420		2-1/4
A-13021	A-13121	A-13221	A-13321	A-13421	A-13521	A-14121	A-14321	A-14221	A-14421	A-14521	A-14621	A-14721	A-14921	A-14821	A-15121	A-15221	A-15321	A-15421		2-3/8
A-13022	A-13122	A-13222	A-13322	A-13422	A-13522	A-14122	A-14322	A-14222	A-14422	A-14522	A-14622	A-14722	A-14922	A-14822	A-15122	A-15222	A-15322	A-15422		2-1/2
															A-15123	A-15223	A-15323	A-15423	A-15523	2-5/8
A-13024	A-13124	A-13224	A-13324	A-13424	A-13524	A-14124	A-14324	A-14224	A-14424	A-14524	A-14624	A-14724	A-14924	A-14824	A-15124	A-15224	A-15324	A-15424	A-15524	2-3/4
A-13025	A-13125	A-13225	A-13325	A-13425	A-13525	A-14125	A-14325	A-14225	A-14425	A-14525	A-14625	A-14725	A-14925	A-14825	A-15125	A-15225	A-15325	A-15425	A-15525	3
A-13026	A-13126	A-13226	A-13326	A-13426	A-13526	A-14126	A-14326	A-14226	A-14426	A-14526	A-14626	A-14726	A-14926	A-14826	A-15126	A-15226	A-15326	A-15426	A-15526	3-1/4
A-13027	A-13127	A-13227	A-13327	A-13427	A-13527	A-14127	A-14327	A-14227	A-14427	A-14527	A-14627	A-14727	A-14927	A-14827	A-15127	A-15227	A-15327	A-15427	A-15527	3-1/2
A-13028	A-13128	A-13228	A-13328	A-13428	A-13528	A-14128	A-14328	A-14228	A-14428	A-14528	A-14628	A-14728	A-14928	A-14828	A-15128	A-15228	A-15328	A-15428	A-15528	3-3/4
A-13029	A-13129	A-13229	A-13329	A-13429	A-13529	A-14129	A-14329	A-14229	A-14429	A-14529	A-14629	A-14729	A-14929	A-14829	A-15129	A-15229	A-15329	A-15429	A-15529	4
A-13030	A-13130	A-13230	A-13330	A-13430	A-13530	A-14130	A-14330	A-14230	A-14430	A-14530	A-14630	A-14730	A-14930	A-14830	A-15130	A-15230	A-15330	A-15430	A-15530	5
A-13031	A-13131	A-13231	A-13331	A-13431	A-13531	A-14131	A-14331	A-14231	A-14431	A-14531	A-14631	A-14731	A-14931	A-14831	A-15131	A-15231	A-15331	A-15431	A-15531	6
COLLAR A-13000 ADD I.D. SIZE TO LINERS						COLLAR A-14000 ADD I.D. SIZE TO LINERS						COLLAR A-15000 ADD I.D. SIZE TO LINERS						C LEN ABOVE		
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NURLOCK LINERS
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND HNL and HNLP					HELICAL NURLOCK SINGLE LINERS
			NL-16523		NL-16524						NL-16525			NL-16526						NL-16533 STD NURLOCK LINERS
			NLP-16523		NLP-16524						NLP-16525			NLP-16526						NLP-16533 STD NURLOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	HELICAL NURLOCK DOUBLE LINERS
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	LOCK LINERS
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	LOCK RINGS
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-239624	HNLP-245616	HNLP-246416	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HELICAL NURLOCK SINGLE LINERS
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-239624	HNLP-1-245616	HNLP-1-246416	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816						HELICAL NURLOCK SINGLE LINERS
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TAPERED CLAMPS
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	LINER BUSHINGS
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	LOCK SCREWS

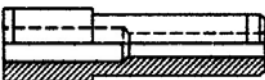
See complete DIMENSIONAL TOLERANCES
Pages P10 thru P15.



UP TO TEN
TIMES MORE
WEAR LIFE!

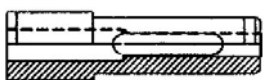
Helical Nurlock Carbide I.D. Coolant Adapter Tip

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.004
OVER 1/4 TO 3/4	+0.001 TO +0.005
OVER 3/4 TO 1-1/2	+0.002 TO +0.006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



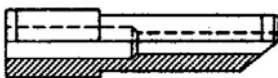
UDB-C-12531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR
SHANK ONLY, OMIT PREFIX A. Example: UDB-C-12531



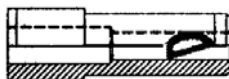
UDB-AC-12531CS-
3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER
SHANKS, ADD SUFFIX CS. Ex: UDB-AC-12531CS-3/16



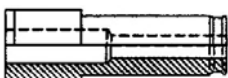
UDB-CTAC-12531-
3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SUR-
FACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX
CT. Example: UDB-CTAC-12531-3/16



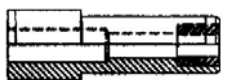
UDB-AC-12531CC-
3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PAT-
ENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO.
Example: UDB-AC-12531CC-3/16



UDB-AC-12531EZ-
3/16
ADD 'EZ'

EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D.
EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example:
UDB-AC-12531EZ-3/16



UDB-AU-12531-3/16
Insert 'U' for ULTRA III
UDB-AC-12531-3/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG
WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY
PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES
WEAR, SPECIFY PREFIX AC FOR CARBIDE.

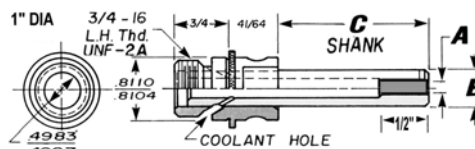
LOCKING ACCESSORIES — In this Section



WearEver Carbide Coolant Series

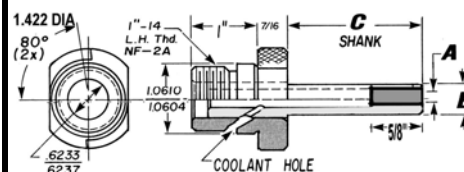
AC-11000 SERIES

WearEver Carbide I.D.



AC-12000 SERIES

WearEver Carbide I.D.

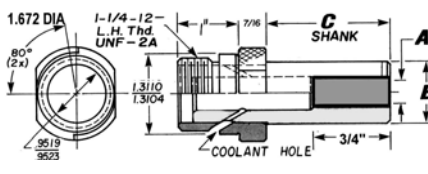


(DRILL) A	MAX	3/16	7/32	9/32	7/32	9/32	5/16	3/8	7/16
A	MIN	1/16	1/16	1/16	1/8	1/8	1/8	1/8	1/8
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	AC-11101		AC-11301	AC-12101			AC-12401	
	1/2	AC-11102	AC-11202	AC-11302	AC-12102	AC-12202		AC-12402	
L	5/8	AC-11103	AC-11203	AC-11303	AC-12103	AC-12203	AC-12303	AC-12403	
E	3/4	AC-11104	AC-11204	AC-11304	AC-12104	AC-12204	AC-12304	AC-12404	AC-12504
N	7/8	AC-11105	AC-11205	AC-11305	AC-12105	AC-12205	AC-12305	AC-12405	AC-12505
G	1	AC-11106	AC-11206	AC-11306	AC-12106	AC-12206	AC-12306	AC-12406	AC-12506
T	1-1/16	AC-11107	AC-11207	AC-11307					
H	1-1/8	AC-11108	AC-11208	AC-11308	AC-12108	AC-12208	AC-12308	AC-12408	AC-12508
	1-3/16				AC-12109	AC-12209	AC-12309	AC-12409	
F	1-1/4	AC-11110	AC-11210	AC-11310	AC-12110	AC-12210	AC-12310	AC-12410	AC-12510
R	1-3/8	AC-11111	AC-11211	AC-11311	AC-12111	AC-12211	AC-12311	AC-12411	AC-12511
O	1-7/16								
M	1-1/2	AC-11113	AC-11213	AC-11313	AC-12113	AC-12213	AC-12313	AC-12413	AC-12513
	1-5/8	AC-11114	AC-11214	AC-11314	AC-12114	AC-12214	AC-12314	AC-12414	AC-12514
C	1-3/4	AC-11115	AC-11215	AC-11315	AC-12115	AC-12215	AC-12315	AC-12415	AC-12515
O	1-7/8	AC-11116	AC-11216	AC-11316	AC-12116	AC-12216	AC-12316	AC-12416	AC-12516
L	1-15/16								
L	2	AC-11118	AC-11218	AC-11318	AC-12118	AC-12218	AC-12318	AC-12418	AC-12518
A	2-1/8	AC-11119	AC-11219	AC-11319	AC-12119	AC-12219	AC-12319	AC-12419	AC-12519
R	2-1/4	AC-11120	AC-11220	AC-11320	AC-12120	AC-12220	AC-12320	AC-12420	AC-12520
	2-3/8	AC-11121	AC-11221	AC-11321	AC-12121	AC-12221	AC-12321	AC-12421	AC-12521
I	2-1/2	AC-11122	AC-11222	AC-11322	AC-12122	AC-12222	AC-12322	AC-12422	AC-12522
N	2-5/8								
	2-3/4	AC-11124	AC-11224	AC-11324	AC-12124	AC-12224	AC-12324	AC-12424	AC-12524
I	3	AC-11125	AC-11225	AC-11325	AC-12125	AC-12225	AC-12325	AC-12425	AC-12525
N	3-1/4	AC-11126	AC-11226	AC-11326	AC-12126	AC-12226	AC-12326	AC-12426	AC-12526
C	3-1/2				AC-12127	AC-12227	AC-12327	AC-12427	AC-12527
H	3-3/4				AC-12128	AC-12228	AC-12328	AC-12428	AC-12528
E	4				AC-12129	AC-12229	AC-12329	AC-12429	AC-12529
S	5			AC-11330	AC-12130	AC-12230	AC-12330	AC-12430	AC-12530
	6	AC-11131			AC-12131	AC-12231	AC-12331	AC-12431	AC-12531
C LENGTH ABOVE		COLLAR AC-11000 ADD I.D. SIZE TO LINERS			COLLAR AC-12000 ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	DOUBLE LOCK METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
FOR METAL TOOLING	SINGLE LOCK METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK METAL	NL-16520		NL-16521				NL-16522	
STD NURLOCK LINERS	DOUBLE LOCK PLASTIC	NLP-375		NLP-500					NLP-750
LOCK LINERS	FOR METAL	LL-21100	LL-21200	LL-21300				LL-22400	
LOCK LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400	
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELICAL NURLOCK LINERS	DOUBLE LOCK PLASTIC	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
FOR PLASTIC TOOLING	SINGLE LOCK PLASTIC	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532

Shanks — UNITED WearEver Carbide I.D.s

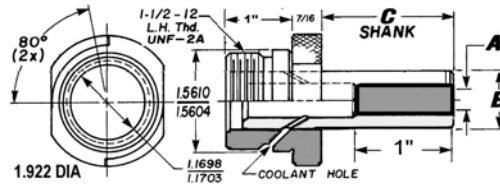
AC-13000 SERIES

WearEver Carbide I.D.



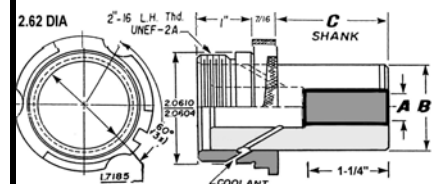
AC-14000 SERIES

WearEver Carbide I.D.



AC-15000 SERIES

WearEver Carbide I.D.



15/32	17/32	19/32	21/32	23/32	3/4	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-15/32	1-1/2	A MAX
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	A MIN
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B
NEW O.D.								NEW O.D.					NEW O.D.							3/8
BELOW								BELOW					BELOW							1/2
						AC-14103														5/8
AC-13004	AC-13104	AC-13204	AC-13304			AC-14104	AC-14304	AC-14204												3/4
AC-13005	AC-13105	AC-13205	AC-13305			AC-14105	AC-14305	AC-14205	AC-14405											7/8
AC-13006	AC-13106	AC-13206	AC-13306	AC-13406	AC-13506	AC-14106	AC-14306	AC-14206	AC-14406	AC-14506	AC-14606		AC-14906	AC-14806						1
																				1-1/16
AC-13008	AC-13108	AC-13208	AC-13308	AC-13408	AC-13508	AC-14108	AC-14308	AC-14208	AC-14408	AC-14508	AC-14608		AC-14908							1-1/8
																				1-3/16
AC-13010	AC-13110	AC-13210	AC-13310	AC-13410	AC-13510	AC-14110	AC-14310	AC-14210	AC-14410	AC-14510	AC-14610	AC-14710	AC-14910		AC-15110					1-1/4
AC-13011	AC-13111	AC-13211	AC-13311	AC-13411	AC-13511	AC-14111	AC-14311	AC-14211	AC-14411	AC-14511	AC-14611	AC-14711	AC-14911	AC-14811	AC-15111	AC-15211				1-3/8
AC-13012	AC-13112	AC-13212	AC-13312																	1-7/16
AC-13013	AC-13113	AC-13213	AC-13313	AC-13413	AC-13513	AC-14113	AC-14313	AC-14213	AC-14413	AC-14513	AC-14613	AC-14713	AC-14913	AC-14813	AC-15113	AC-15213	AC-15313			1-1/2
AC-13014	AC-13114	AC-13214	AC-13314	AC-13414	AC-13514	AC-14114	AC-14314	AC-14214	AC-14414	AC-14514	AC-14614	AC-14714	AC-14914	AC-14814	AC-15114	AC-15214	AC-15314			1-5/8
AC-13015	AC-13115	AC-13215	AC-13315	AC-13415	AC-13515	AC-14115	AC-14315	AC-14215	AC-14415	AC-14515	AC-14615	AC-14715	AC-14915	AC-14815	AC-15115	AC-15215	AC-15315	AC-15415		1-3/4
AC-13016	AC-13116	AC-13216	AC-13316	AC-13416	AC-13516	AC-14116	AC-14316	AC-14216	AC-14416	AC-14516	AC-14616	AC-14716	AC-14916	AC-14816	AC-15116	AC-15216	AC-15316	AC-15416		1-7/8
			AC-13317	AC-13417	AC-13517	AC-14117	AC-14317	AC-14217	AC-14417	AC-14517	AC-14617	AC-14717	AC-14917	AC-14817						1-15/16
AC-13018	AC-13118	AC-13218	AC-13318	AC-13418	AC-13518	AC-14118	AC-14318	AC-14218	AC-14418	AC-14518	AC-14618	AC-14718	AC-14918	AC-14818	AC-15118	AC-15218	AC-15318	AC-15418	AC-15518	2
AC-13019	AC-13119	AC-13219	AC-13319	AC-13419	AC-13519	AC-14119	AC-14319	AC-14219	AC-14419	AC-14519	AC-14619	AC-14719	AC-14919	AC-14819	AC-15119	AC-15219	AC-15319	AC-15419		2-1/8
AC-13020	AC-13120	AC-13220	AC-13320	AC-13420	AC-13520	AC-14120	AC-14320	AC-14220	AC-14420	AC-14520	AC-14620	AC-14720	AC-14920	AC-14820	AC-15120	AC-15220	AC-15320	AC-15420		2-1/4
AC-13021	AC-13121	AC-13221	AC-13321	AC-13421	AC-13521	AC-14121	AC-14321	AC-14221	AC-14421	AC-14521	AC-14621	AC-14721	AC-14921	AC-14821	AC-15121	AC-15221	AC-15321	AC-15421		2-3/8
AC-13022	AC-13122	AC-13222	AC-13322	AC-13422	AC-13522	AC-14122	AC-14322	AC-14222	AC-14422	AC-14522	AC-14622	AC-14722	AC-14922	AC-14822	AC-15122	AC-15222	AC-15322	AC-15422		2-1/2
															AC-15123	AC-15223	AC-15323	AC-15423	AC-15523	2-5/8
AC-13024	AC-13124	AC-13224	AC-13324	AC-13424	AC-13524	AC-14124	AC-14324	AC-14224	AC-14424	AC-14524	AC-14624	AC-14724	AC-14924	AC-14824	AC-15124	AC-15224	AC-15324	AC-15424	AC-15524	2-3/4
AC-13025	AC-13125	AC-13225	AC-13325	AC-13425	AC-13525	AC-14125	AC-14325	AC-14225	AC-14425	AC-14525	AC-14625	AC-14725	AC-14925	AC-14825	AC-15125	AC-15225	AC-15325	AC-15425	AC-15525	3
AC-13026	AC-13126	AC-13226	AC-13326	AC-13426	AC-13526	AC-14126	AC-14326	AC-14226	AC-14426	AC-14526	AC-14626	AC-14726	AC-14926	AC-14826	AC-15126	AC-15226	AC-15326	AC-15426	AC-15526	3-1/4
AC-13027	AC-13127	AC-13227	AC-13327	AC-13427	AC-13527	AC-14127	AC-14327	AC-14227	AC-14427	AC-14527	AC-14627	AC-14727	AC-14927	AC-14827	AC-15127	AC-15227	AC-15327	AC-15427	AC-15527	3-1/2
AC-13028	AC-13128	AC-13228	AC-13328	AC-13428	AC-13528	AC-14128	AC-14328	AC-14228	AC-14428	AC-14528	AC-14628	AC-14728	AC-14928	AC-14828	AC-15128	AC-15228	AC-15328	AC-15428	AC-15528	3-3/4
AC-13029	AC-13129	AC-13229	AC-13329	AC-13429	AC-13529	AC-14129	AC-14329	AC-14229	AC-14429	AC-14529	AC-14629	AC-14729	AC-14929	AC-14829	AC-15129	AC-15229	AC-15329	AC-15429	AC-15529	4
AC-13030	AC-13130	AC-13230	AC-13330	AC-13430	AC-13530	AC-14130	AC-14330	AC-14230	AC-14430	AC-14530	AC-14630	AC-14730	AC-14930	AC-14830	AC-15130	AC-15230	AC-15330	AC-15430	AC-15530	5
AC-13031	AC-13131	AC-13231	AC-13331	AC-13431	AC-13531	AC-14131	AC-14331	AC-14231	AC-14431	AC-14531	AC-14631	AC-14731	AC-14931	AC-14831	AC-15131	AC-15231	AC-15331	AC-15431	AC-15531	6
COLLAR AC-13000 ADD I.D. SIZE TO LINERS						COLLAR AC-14000 ADD I.D. SIZE TO LINERS						COLLAR AC-15000 ADD I.D. SIZE TO LINERS						C LEN ABOVE		LINER I.D.
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NURLOCK LINERS
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND HNL and HNLP					HELICAL NURLOCK LINERS
			NL-16523		NL-16524						NL-16525			NL-16526						STD NURLOCK LINERS
			NLP-16523		NLP-16524						NLP-16525			NLP-16526						STD NURLOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LOCK LINERS
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	LOCK LINERS
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	LOCK RINGS
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-239624	HNLP-245616	HNLP-246416	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HELICAL NURLOCK LINERS DOUBLE
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-239624	HNLP-1-245616	HNLP-1-246416	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816						HELICAL NURLOCK LINERS SINGLE
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TAPERED CLAMPS
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	LINER BUSHINGS
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	LOCK SCREWS

12200 WOODRUFF AVE. • DOWNEY, CA 90241-5608 • TELEPHONE (562) 803-1521 / (800) 421-3466 IN CA / 800-486-3466 • FAX (562) 803-6898 / (800) 486-3465

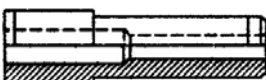


RC-63-65 HIGH SPEED STEEL WITH COBALT

UP TO FIVE TIMES
MORE WEAR LIFE!

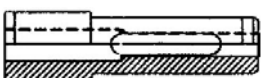
Helical Nurlock ULTRA III Coolant Adapter Tip

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.004
OVER 1/4 TO 3/4	+0.001 TO +0.005
OVER 3/4 TO 1-1/2	+0.002 TO +0.006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



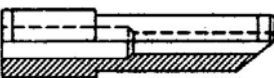
UDB-U-12531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR
SHANK ONLY, OMIT PREFIX A. Example: UDB-U-12531



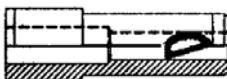
UDB-AU-12531CS-
3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER
SHANKS, ADD SUFFIX CS. Ex: UDB-AU-12531CS-3/16



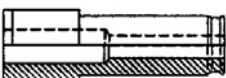
UDB-CTAU-12531-
3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SUR-
FACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX
CT. Example: UDB-CTAU-12531-3/16



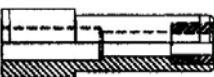
UDB-AU-12531CC-
3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PAT-
ENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO.
Example: UDB-AU-12531CC-3/16



UDB-AU-12531EZ-
3/16
ADD 'EZ'

EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D.
EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example:
UDB-AU-12531EZ-3/16



UDB-AU-12531-3/16
Insert 'U' for ULTRA III
UDB-AC-12531-3/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG
WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY
PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES
WEAR, SPECIFY PREFIX AC FOR CARBIDE.

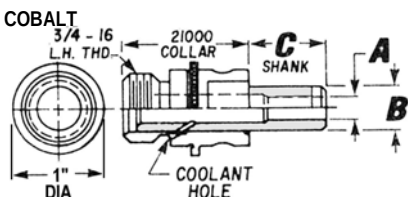
LOCKING ACCESSORIES — In this Section



Stronger Ultra III Coolant Series

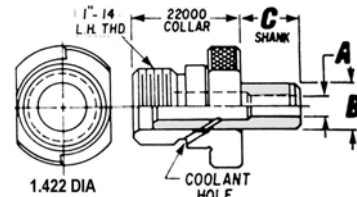
AU-11000 SERIES

Stronger ULTRA III



AU-12000 SERIES

Stronger ULTRA III

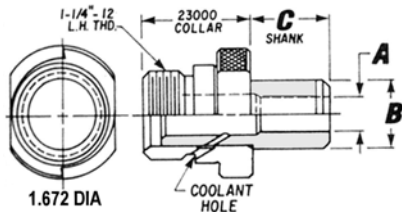


(DRILL) A	MAX	1/4	5/16	3/8	9/32	11/32	13/32	15/32	15/32
A	MIN	3/32	3/32	3/32	3/16	3/16	3/16	3/16	3/16
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	AU-11101		AU-11301	AU-12101			AU-12401	
	1/2	AU-11102	AU-11202	AU-11302	AU-12102	AU-12202		AU-12402	
L	5/8	AU-11103	AU-11203	AU-11303	AU-12103	AU-12203	AU-12303	AU-12403	
E	3/4	AU-11104	AU-11204	AU-11304	AU-12104	AU-12204	AU-12304	AU-12404	AU-12504
N	7/8	AU-11105	AU-11205	AU-11305	AU-12105	AU-12205	AU-12305	AU-12405	AU-12505
G	1	AU-11106	AU-11206	AU-11306	AU-12106	AU-12206	AU-12306	AU-12406	AU-12506
T	1-1/16	AU-11107	AU-11207	AU-11307					
H	1-1/8	AU-11108	AU-11208	AU-11308	AU-12108	AU-12208	AU-12308	AU-12408	AU-12508
	1-3/16				AU-12109	AU-12209	AU-12309	AU-12409	
F	1-1/4	AU-11110	AU-11210	AU-11310	AU-12110	AU-12210	AU-12310	AU-12410	AU-12510
R	1-3/8	AU-11111	AU-11211	AU-11311	AU-12111	AU-12211	AU-12311	AU-12411	AU-12511
O	1-7/16								
M	1-1/2	AU-11113	AU-11213	AU-11313	AU-12113	AU-12213	AU-12313	AU-12413	AU-12513
	1-5/8	AU-11114	AU-11214	AU-11314	AU-12114	AU-12214	AU-12314	AU-12414	AU-12514
C	1-3/4	AU-11115	AU-11215	AU-11315	AU-12115	AU-12215	AU-12315	AU-12415	AU-12515
O	1-7/8	AU-11116	AU-11216	AU-11316	AU-12116	AU-12216	AU-12316	AU-12416	AU-12516
L	1-15/16								
L	2	AU-11118	AU-11218	AU-11318	AU-12118	AU-12218	AU-12318	AU-12418	AU-12518
A	2-1/8	AU-11119	AU-11219	AU-11319	AU-12119	AU-12219	AU-12319	AU-12419	AU-12519
R	2-1/4	AU-11120	AU-11220	AU-11320	AU-12120	AU-12220	AU-12320	AU-12420	AU-12520
	2-3/8	AU-11121	AU-11221	AU-11321	AU-12121	AU-12221	AU-12321	AU-12421	AU-12521
I	2-1/2	AU-11122	AU-11222	AU-11322	AU-12122	AU-12222	AU-12322	AU-12422	AU-12522
N	2-5/8								
	2-3/4	AU-11124	AU-11224	AU-11324	AU-12124	AU-12224	AU-12324	AU-12424	AU-12524
I	3	AU-11125	AU-11225	AU-11325	AU-12125	AU-12225	AU-12325	AU-12425	AU-12525
N	3-1/4	AU-11126	AU-11226	AU-11326	AU-12126	AU-12226	AU-12326	AU-12426	AU-12526
C	3-1/2				AU-12127	AU-12227	AU-12327	AU-12427	AU-12527
H	3-3/4				AU-12128	AU-12228	AU-12328	AU-12428	AU-12528
E	4				AU-12129	AU-12229	AU-12329	AU-12429	AU-12529
S	5			AU-11330	AU-12130	AU-12230	AU-12330	AU-12430	AU-12530
	6	AU-11131			AU-12131	AU-12231	AU-12331	AU-12431	AU-12531
C LENGTH ABOVE		COLLAR AU-11000 ADD I.D. SIZE TO LINERS			COLLAR AU-12000 ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	DOUBLE LOCK METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
HELICAL NURLOCK LINERS	SINGLE LOCK METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK METAL	NL-16520		NL-16521	WE RECOMMEND HNL and HNLP			NL-16522	
STD NURLOCK LINERS	DOUBLE LOCK PLASTIC	NLP-375		NLP-500					NLP-750
LOCK LINERS FOR METAL		LL-21100	LL-21200	LL-21300				LL-22400	
LOCK LINERS FOR PLASTIC		NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400	
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELICAL NURLOCK LINERS	DOUBLE LOCK PLASTIC	HNLP-213212	HNLP-214808	HNLP-214808	HNLP-224808	HNLP-224808	HNLP-225210	HNLP-225610	HNLP-226410
HELICAL NURLOCK LINERS	SINGLE LOCK PLASTIC	HNLP-1-213212	HNLP-1-214808	HNLP-1-214808	HNLP-1-224808	HNLP-1-224808	HNLP-1-225210	HNLP-1-225610	HNLP-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532

Shanks — UNITED Stronger ULTRA III Material

AU-13000 SERIES

Stronger ULTRA III

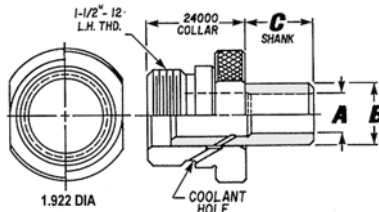


HIGH
SPEED
STEEL

TOUGH

AU-14000 SERIES

Stronger ULTRA III

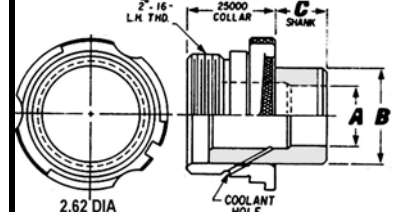


RC-63-65

LONG
WEAR

AU-15000 SERIES

Stronger ULTRA III



15/32	17/32	19/32	21/32	23/32	3/4	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-15/32	1-1/2	A MAX		
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	A MIN		
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B		
NEW O.D								NEW O.D.	Stronger ULTRA III A Stronger Relationship!				NEW O.D	AU Means UNITED Stronger ULTRA III Material						3/8		
BELOW								BELOW					BELOW							1/2		
						AU-14103									All AU-15000 series Nurlock Drill Bushing Tips have three milled locking slats. Three lock screws are provided in Lock Liner Bushing A-16533. For direct jig mounting (without lock liner bushing) three lock screws must be provided. Use new HNL and HNLP Liners.						5/8	
AU-13004	AU-13104	AU-13204	AU-13304			AU-14104	AU-14304	AU-14204														3/4
AU-13005	AU-13105	AU-13205	AU-13305			AU-14105	AU-14305	AU-14205	AU-14405													7/8
AU-13006	AU-13106	AU-13206	AU-13306	AU-13406	AU-13506	AU-14106	AU-14306	AU-14206	AU-14406	AU-14506	AU-14606		AU-14906	AU-14806								1
																						1-1/16
AU-13008	AU-13108	AU-13208	AU-13308	AU-13408	AU-13508	AU-14108	AU-14308	AU-14208	AU-14408	AU-14508	AU-14608		AU-14908							1-1/8		
																				1-3/16		
AU-13010	AU-13110	AU-13210	AU-13310	AU-13410	AU-13510	AU-14110	AU-14310	AU-14210	AU-14410	AU-14510	AU-14610	AU-14710	AU-14910		AU-15110					1-1/4		
AU-13011	AU-13111	AU-13211	AU-13311	AU-13411	AU-13511	AU-14111	AU-14311	AU-14211	AU-14411	AU-14511	AU-14611	AU-14711	AU-14911	AU-14811	AU-15111	AU-15211				1-3/8		
AU-13012	AU-13112	AU-13212	AU-13312																	1-7/16		
AU-13013	AU-13113	AU-13213	AU-13313	AU-13413	AU-13513	AU-14113	AU-14313	AU-14213	AU-14413	AU-14513	AU-14613	AU-14713	AU-14913	AU-14813	AU-15113	AU-15213	AU-15313			1-1/2		
AU-13014	AU-13114	AU-13214	AU-13314	AU-13414	AU-13514	AU-14114	AU-14314	AU-14214	AU-14414	AU-14514	AU-14614	AU-14714	AU-14914	AU-14814	AU-15114	AU-15214	AU-15314			1-5/8		
AU-13015	AU-13115	AU-13215	AU-13315	AU-13415	AU-13515	AU-14115	AU-14315	AU-14215	AU-14415	AU-14515	AU-14615	AU-14715	AU-14915	AU-14815	AU-15115	AU-15215	AU-15315	AU-15415		1-3/4		
AU-13016	AU-13116	AU-13216	AU-13316	AU-13416	AU-13516	AU-14116	AU-14316	AU-14216	AU-14416	AU-14516	AU-14616	AU-14716	AU-14916	AU-14816	AU-15116	AU-15216	AU-15316	AU-15416		1-7/8		
			AU-13317	AU-13417	AU-13517	AU-14117	AU-14317	AU-14217	AU-14417	AU-14517	AU-14617	AU-14717	AU-14917	AU-14817						1-15/16		
AU-13018	AU-13118	AU-13218	AU-13318	AU-13418	AU-13518	AU-14118	AU-14318	AU-14218	AU-14418	AU-14518	AU-14618	AU-14718	AU-14918	AU-14818	AU-15118	AU-15218	AU-15318	AU-15418	AU-15518	2		
AU-13019	AU-13119	AU-13219	AU-13319	AU-13419	AU-13519	AU-14119	AU-14319	AU-14219	AU-14419	AU-14519	AU-14619	AU-14719	AU-14919	AU-14819	AU-15119	AU-15219	AU-15319	AU-15419		2-1/8		
AU-13020	AU-13120	AU-13220	AU-13320	AU-13420	AU-13520	AU-14120	AU-14320	AU-14220	AU-14420	AU-14520	AU-14620	AU-14720	AU-14920	AU-14820	AU-15120	AU-15220	AU-15320	AU-15420		2-1/4		
AU-13021	AU-13121	AU-13221	AU-13321	AU-13421	AU-13521	AU-14121	AU-14321	AU-14221	AU-14421	AU-14521	AU-14621	AU-14721	AU-14921	AU-14821	AU-15121	AU-15221	AU-15321	AU-15421		2-3/8		
AU-13022	AU-13122	AU-13222	AU-13322	AU-13422	AU-13522	AU-14122	AU-14322	AU-14222	AU-14422	AU-14522	AU-14622	AU-14722	AU-14922	AU-14822	AU-15122	AU-15222	AU-15322	AU-15422		2-1/2		
															AU-15123	AU-15223	AU-15323	AU-15423	AU-15523	2-5/8		
AU-13024	AU-13124	AU-13224	AU-13324	AU-13424	AU-13524	AU-14124	AU-14324	AU-14224	AU-14424	AU-14524	AU-14624	AU-14724	AU-14924	AU-14824	AU-15124	AU-15224	AU-15324	AU-15424	AU-15524	2-3/4		
AU-13025	AU-13125	AU-13225	AU-13325	AU-13425	AU-13525	AU-14125	AU-14325	AU-14225	AU-14425	AU-14525	AU-14625	AU-14725	AU-14925	AU-14825	AU-15125	AU-15225	AU-15325	AU-15425	AU-15525	3		
AU-13026	AU-13126	AU-13226	AU-13326	AU-13426	AU-13526	AU-14126	AU-14326	AU-14226	AU-14426	AU-14526	AU-14626	AU-14726	AU-14926	AU-14826	AU-15126	AU-15226	AU-15326	AU-15426	AU-15526	3-1/4		
AU-13027	AU-13127	AU-13227	AU-13327	AU-13427	AU-13527	AU-14127	AU-14327	AU-14227	AU-14427	AU-14527	AU-14627	AU-14727	AU-14927	AU-14827	AU-15127	AU-15227	AU-15327	AU-15427	AU-15527	3-1/2		
AU-13028	AU-13128	AU-13228	AU-13328	AU-13428	AU-13528	AU-14128	AU-14328	AU-14228	AU-14428	AU-14528	AU-14628	AU-14728	AU-14928	AU-14828	AU-15128	AU-15228	AU-15328	AU-15428	AU-15528	3-3/4		
AU-13029	AU-13129	AU-13229	AU-13329	AU-13429	AU-13529	AU-14129	AU-14329	AU-14229	AU-14429	AU-14529	AU-14629	AU-14729	AU-14929	AU-14829	AU-15129	AU-15229	AU-15329	AU-15429	AU-15529	4		
AU-13030	AU-13130	AU-13230	AU-13330	AU-13430	AU-13530	AU-14130	AU-14330	AU-14230	AU-14430	AU-14530	AU-14630	AU-14730	AU-14930	AU-14830	AU-15130	AU-15230	AU-15330	AU-15430	AU-15530	5		
AU-13031	AU-13131	AU-13231	AU-13331	AU-13431	AU-13531	AU-14131	AU-14331	AU-14231	AU-14431	AU-14531	AU-14631	AU-14731	AU-14931	AU-14831	AU-15131	AU-15231	AU-15331	AU-15431	AU-15531	6		
COLLAR AU-13000 ADD I.D. SIZE TO LINERS						COLLAR AU-14000 ADD I.D. SIZE TO LINERS						COLLAR AU-15000 ADD I.D. SIZE TO LINERS						C LEN ABOVE				
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.		
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NURLOCK LINERS		
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND HNL and HNLP					HELICAL NURLOCK SINGLE		
			NL-16523		NL-16524						NL-16525			NL-16526					NL-16533	STD NURLOCK LINERS		
			NLP-16523		NLP-16524						NLP-16525			NLP-16526					NLP-16533	STD NURLOCK LINERS		
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LOCK LINERS		
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	LOCK LINERS		
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	LOCK RINGS		
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-239624	HNLP-245616	HNLP-246416	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HELICAL NURLOCK DOUBLE		
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-239624	HNLP-1-245616	HNLP-1-246416	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816						HELICAL NURLOCK LINERS SINGLE		
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TAPERED CLAMPS		
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	LINER BUSHINGS		
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	LOCK SCREWS		

AU Means UNITED Stronger ULTRA III Material

All AU-15000 series Nurlock Drill Bushing Tips have three milled locking slots. Three lock screws are provided in Lock Liner Bushing A-16533. For direct jig mounting (without lock liner bushing) three lock screws must be provided. Use new HNL and HNLP Liners.

WE RECOMMEND HNL and HNLP

Nurlock Adapter Tips and Accessories

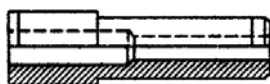
A-21000 SERIES

A-22000 SERIES



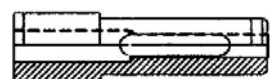
Nurlock Adapter Tip

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.004
OVER 1/4 TO 3/4	+0.001 TO +0.005
OVER 3/4 TO 1-1/2	+0.002 TO +0.006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



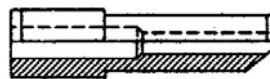
UDB-22531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR SHANK ONLY, OMIT PREFIX A. Example: UDB-22531



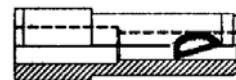
UDB-A-22531CS-3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER SHANKS, ADD SUFFIX CS. Ex: UDB-A-22531CS-3/16



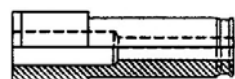
UDB-CTA-22531-3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SURFACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX CT. Example: UDB-CTA-22531-3/16



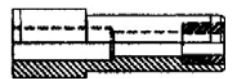
UDB-A-22531CC-3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PATENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO. Example: UDB-A-22531CC-3/16



UDB-A-22531EZ-3/16
ADD 'EZ'

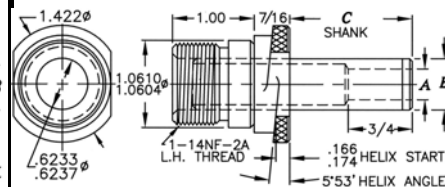
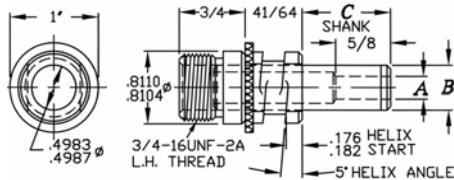
EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D. EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example: UDB-A-22531EZ-3/16



UDB-AU-22531-3/16
Insert 'U' for ULTRA III
UDB-AC-22531-3/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES WEAR, SPECIFY PREFIX AC FOR CARBIDE.

LOCKING ACCESSORIES — In this Section



(DRILL) A	MAX	1/4	5/16	3/8	9/32	11/32	13/32	15/32	15/32
A	MIN	3/32	3/32	3/32	3/16	3/16	3/16	3/16	3/16
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	A-21101		A-21301	A-22101			A-22401	
	1/2	A-21102	A-21202	A-21302	A-22102	A-22202		A-22402	
L	5/8	A-21103	A-21203	A-21303	A-22103	A-22203	A-22303	A-22403	
	3/4	A-21104	A-21204	A-21304	A-22104	A-22204	A-22304	A-22404	A-22504
N	7/8	A-21105	A-21205	A-21305	A-22105	A-22205	A-22305	A-22405	A-22505
	1	A-21106	A-21206	A-21306	A-22106	A-22206	A-22306	A-22406	A-22506
G	1-1/16	A-21107		A-21307					
	1-1/8	A-21108	A-21208	A-21308	A-22108	A-22208	A-22308	A-22408	A-22508
T	1-3/16							A-22409	
	1-1/4	A-21110	A-21210	A-21310	A-22110	A-22210	A-22310	A-22410	A-22510
R	1-3/8	A-21111	A-21211	A-21311	A-22111	A-22211	A-22311	A-22411	A-22511
	1-7/16								
O	1-1/2	A-21113	A-21213	A-21313	A-22113	A-22213	A-22313	A-22413	A-22513
	1-5/8	A-21114	A-21214	A-21314	A-22114	A-22214	A-22314	A-22414	A-22514
C	1-3/4	A-21115	A-21215	A-21315	A-22115	A-22215	A-22315	A-22415	A-22515
	1-7/8	A-21116	A-21216	A-21316	A-22116	A-22216	A-22316	A-22416	A-22516
L	1-15/16								
	2	A-21118	A-21218	A-21318	A-22118	A-22218	A-22318	A-22418	A-22518
A	2-1/8	A-21119	A-21219	A-21319	A-22119	A-22219	A-22319	A-22419	A-22519
	2-1/4	A-21120	A-21220	A-21320	A-22120	A-22220	A-22320	A-22420	A-22520
I	2-3/8	A-21121	A-21221	A-21321	A-22121	A-22221	A-22321	A-22421	A-22521
	2-1/2	A-21122	A-21222	A-21322	A-22122	A-22222	A-22322	A-22422	A-22522
N	2-5/8								
	2-3/4	A-21124	A-21224	A-21324	A-22124	A-22224	A-22324	A-22424	A-22524
I	3	A-21125	A-21225	A-21325	A-22125	A-22225	A-22325	A-22425	A-22525
	3-1/4	A-21126	A-21226	A-21326	A-22126	A-22226	A-22326	A-22426	A-22526
C	3-1/2				A-22127	A-22227	A-22327	A-22427	A-22527
	3-3/4				A-22128	A-22228	A-22328	A-22428	A-22528
H	4				A-22129	A-22229	A-22329	A-22429	A-22529
	5			A-21330	A-22130	A-22230	A-22330	A-22430	A-22530
S	6	A-21131			A-22131	A-22231	A-22331	A-22431	A-22531
C LENGTH ABOVE		COLLAR A-21000 ADD I.D. SIZE TO LINERS			COLLAR A-22000 ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
FOR METAL TOOLING	SINGLE LOCK FOR METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK FOR METAL	NL-16520		NL-16521				NL-16522	
STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	NLP-375		NLP-500					NLP-750
LOCK LINERS	FOR METAL	LL-21100	LL-21200	LL-21300				LL-22400	
LOCK LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400	
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	HNL-P-213212	HNL-P-214808	HNL-P-214808	HNL-P-224808	HNL-P-224808	HNL-P-225210	HNL-P-225610	HNL-P-226410
FOR PLASTIC TOOLING	SINGLE LOCK FOR PLASTIC	HNL-P-1-213212	HNL-P-1-214808	HNL-P-1-214808	HNL-P-1-224808	HNL-P-1-224808	HNL-P-1-225210	HNL-P-1-225610	HNL-P-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532

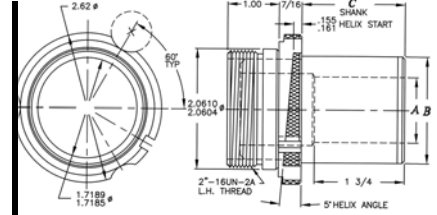
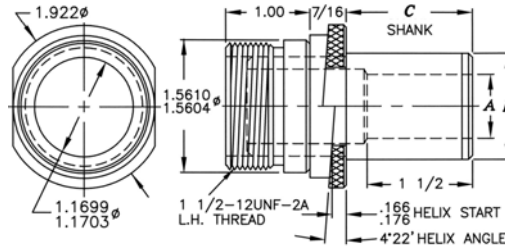
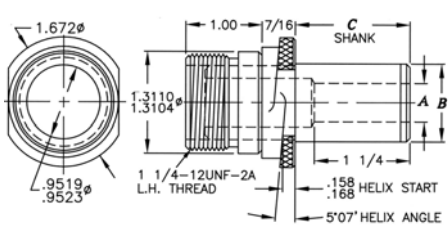
**WE RECOMMEND
HNL and HNL-P**

Shanks and Accessories — UNITED Nurlock

A-23000 SERIES

A-24000 SERIES

A-25000 SERIES



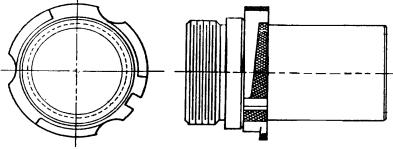
15/32	17/32	19/32	21/32	23/32	3/4	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-15/32	1-1/2	A MAX		
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	A MIN		
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B		
NEW O.D.								NEW O.D.					NEW O.D.		USE UNITED NURLOCK for QUALITY and LOWER COST! All A-25000 series and 16513 Drill Bushing Tips have three milled locking slats. Three Lock Screws are provided in Lock Liner Bushing A-16533. For direct jig mounting (without lock liner bushing) three Lock Screws must be provided. Use new HNL and HNL P Liners.					3/8		
BELOW								BELOW					BELOW							1/2		
						A-24103														5/8		
A-23004	A-23104	A-23204	A-23304			A-24104	A-24304	A-24204												3/4		
A-23005	A-23105	A-23205	A-23305			A-24105	A-24305	A-24205	A-24405											7/8		
A-23006	A-23106	A-23206	A-23306	A-23406	A-23506	A-24106	A-24306	A-24206	A-24406	A-24506	A-24606		A-24906	A-24806						1		
																				1-1/16		
A-23008	A-23108	A-23208	A-23308	A-23408	A-23508	A-24108	A-24308	A-24208	A-24408	A-24508	A-24608		A-24908		1-1/8							
															1-3/16							
A-23010	A-23110	A-23210	A-23310	A-23410	A-23510	A-24110	A-24310	A-24210	A-24410	A-24510	A-24610	A-24710			A-25110					1-1/4		
A-23011	A-23111	A-23211	A-23311	A-23411	A-23511	A-24111	A-24311	A-24211	A-24411	A-24511	A-24611	A-24711	A-24911	A-24811	A-25111	A-25211				1-3/8		
			A-23312																	1-7/16		
A-23013	A-23113	A-23213	A-23313	A-23413	A-23513	A-24113	A-24313	A-24213	A-24413	A-24513	A-24613	A-24713	A-24913	A-24813	A-25113	A-25213	A-25313			1-1/2		
A-23014	A-23114	A-23214	A-23314	A-23414	A-23514	A-24114	A-24314	A-24214	A-24414	A-24514	A-24614	A-24714	A-24914	A-24814	A-25114	A-25214	A-25314			1-5/8		
A-23015	A-23115	A-23215	A-23315	A-23415	A-23515	A-24115	A-24315	A-24215	A-24415	A-24515	A-24615	A-24715	A-24915	A-24815	A-25115	A-25215	A-25315	A-25415		1-3/4		
A-23016	A-23116	A-23216	A-23316	A-23416	A-23516	A-24116	A-24316	A-24216	A-24416	A-24516	A-24616	A-24716	A-24916	A-24816	A-25116	A-25216	A-25316	A-25416		1-7/8		
					A-23517						A-24617			A-24817						1-15/16		
A-23018	A-23118	A-23218	A-23318	A-23418	A-23518	A-24118	A-24318	A-24218	A-24418	A-24518	A-24618	A-24718	A-24918	A-24818	A-25118	A-25218	A-25318	A-25418	A-25518	2		
A-23019	A-23119	A-23219	A-23319	A-23419	A-23519	A-24119	A-24319	A-24219	A-24419	A-24519	A-24619	A-24719	A-24919	A-24819	A-25119	A-25219	A-25319	A-25419		2-1/8		
A-23020	A-23120	A-23220	A-23320	A-23420	A-23520	A-24120	A-24320	A-24220	A-24420	A-24520	A-24620	A-24720	A-24920	A-24820	A-25120	A-25220	A-25320	A-25420		2-1/4		
A-23021	A-23121	A-23221	A-23321	A-23421	A-23521	A-24121	A-24321	A-24221	A-24421	A-24521	A-24621	A-24721	A-24921	A-24821	A-25121	A-25221	A-25321	A-25421		2-3/8		
A-23022	A-23122	A-23222	A-23322	A-23422	A-23522	A-24122	A-24322	A-24222	A-24422	A-24522	A-24622	A-24722	A-24922	A-24822	A-25122	A-25222	A-25322	A-25422		2-1/2		
																			A-25523	2-5/8		
A-23024	A-23124	A-23224	A-23324	A-23424	A-23524	A-24124	A-24324	A-24224	A-24424	A-24524	A-24624	A-24724	A-24924	A-24824	A-25124	A-25224	A-25324	A-25424	A-25524	2-3/4		
A-23025	A-23125	A-23225	A-23325	A-23425	A-23525	A-24125	A-24325	A-24225	A-24425	A-24525	A-24625	A-24725	A-24925	A-24825	A-25125	A-25225	A-25325	A-25425	A-25525	3		
A-23026	A-23126	A-23226	A-23326	A-23426	A-23526	A-24126	A-24326	A-24226	A-24426	A-24526	A-24626	A-24726	A-24926	A-24826	A-25126	A-25226	A-25326	A-25426	A-25526	3-1/4		
A-23027	A-23127	A-23227	A-23327	A-23427	A-23527	A-24127	A-24327	A-24227	A-24427	A-24527	A-24627	A-24727	A-24927	A-24827	A-25127	A-25227	A-25327	A-25427	A-25527	3-1/2		
A-23028	A-23128	A-23228	A-23328	A-23428	A-23528	A-24128	A-24328	A-24228	A-24428	A-24528	A-24628	A-24728	A-24928	A-24828	A-25128	A-25228	A-25328	A-25428	A-25528	3-3/4		
A-23029	A-23129	A-23229	A-23329	A-23429	A-23529	A-24129	A-24329	A-24229	A-24429	A-24529	A-24629	A-24729	A-24929	A-24829	A-25129	A-25229	A-25329	A-25429	A-25529	4		
A-23030	A-23130	A-23230	A-23330	A-23430	A-23530	A-24130	A-24330	A-24230	A-24430	A-24530	A-24630	A-24730	A-24930	A-24830	A-25130	A-25230	A-25330	A-25430	A-25530	5		
A-23031	A-23131	A-23231	A-23331	A-23431	A-23531	A-24131	A-24331	A-24231	A-24431	A-24531	A-24631	A-24731	A-24931	A-24831	A-25131	A-25231	A-25331	A-25431	A-25531	6		
COLLAR A-23000 ADD I.D. SIZE TO LINERS						COLLAR A-24000 ADD I.D. SIZE TO LINERS									COLLAR A-25000 ADD I.D. SIZE TO LINERS					C		
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.		
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NURLOCK LINERS		
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND HNL and HNL P						HELICAL NURLOCK SINGLE	
			NL-16523		NL-16524						NL-16525			NL-16526							NL-16533	STD NURLOCK LINERS
			NLP-16523		NLP-16524						NLP-16525			NLP-16526							NLP-16533	STD NURLOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LOOK LINERS		
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	LOOK LINERS		
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456A	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A		
HNL P-235610	HNL P-236410	HNL P-236410	HNL P-238016	HNL P-239616	HNL P-239624	HNL P-245616	HNL P-246416	HNL P-246416	HNL P-248016	HNL P-248016	HNL P-248816	HNL P-249616	HNL P-2411216	HNL P-2412816	HNL P-25100	HNL P-25200	HNL P-25300	HNL P-25400	HNL P-25500	HELICAL NURLOCK LINERS DOUBLE		
HNL P-1-235610	HNL P-1-236410	HNL P-1-236410	HNL P-1-238016	HNL P-1-239616	HNL P-1-239624	HNL P-1-245616	HNL P-1-246416	HNL P-1-246416	HNL P-1-248016	HNL P-1-248016	HNL P-1-248816	HNL P-1-249616	HNL P-1-2411216	HNL P-1-2412816						HELICAL NURLOCK SINGLE		
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TAPERED CLAMPS		
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	LINER BUSHINGS		
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	LOCK SCREWS		

United s E-X-T-E-N-D-E-D Range Helical Nurlock

Note: LENGTHS 1/2" to 6" (6-1/4" to 15" on pgs P14-P15) A-26000 SERIES

A-27000 SERIES

EXTENDED RANGE ACCEPTS DRILLS AS LARGE AS 3-9/16, WITH INSIDE SHANKS AS LONG AS 15"

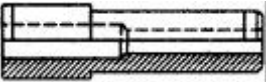


TOLERANCES ON 'A' DIMENSION

1/2 to 3/4 +.0001 to .0006 1-3/8 to 1-3/4 +.0006 to .0010
3/4 to 1-1/4 +.0003 to .0009 1-3/4 to 2-1/4 +.0008 to .0012
1-1/4 to 1-3/4 +.0005 to .0009 2-1/4 to 3-9/16 +.0010 to .0015

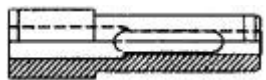
TOLERANCES ON 'B' DIMENSION

1-1/2 to 2" +.0002 to .0005 3" to 3-3/8 +.0004 to .0008
8 to 2-3/8 +.0003 to .0006 3-1/2 to 4" +.0005 to .0009



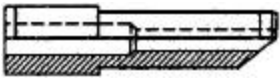
UDB-27531-7/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR SHANK ONLY, OMIT PREFIX A. Example: UDB-27531



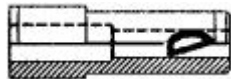
UDB-A-27531CS-7/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER SHANKS, ADD SUFFIX CS. Ex: UDB-A-27531CS-7/16



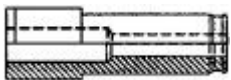
UDB-CTA-27531-7/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SURFACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX CT. Example: UDB-CTA-27531-7/16



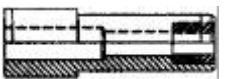
UDB-A-27531CC-7/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PROPRIETARY CHIP CUTTER, ADD SUFFIX CC TO PART NO. Example: UDB-A-27531CC-7/16



UDB-A27531EZ-7/16
ADD 'EZ'

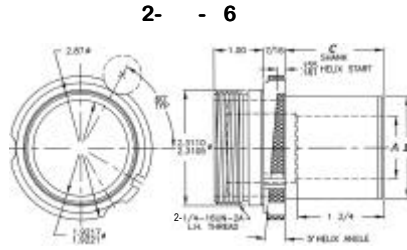
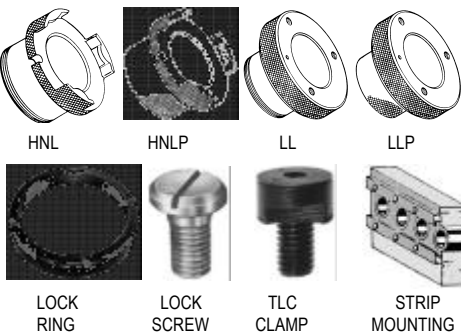
EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D. EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example: UDB-A-27531EZ-7/16



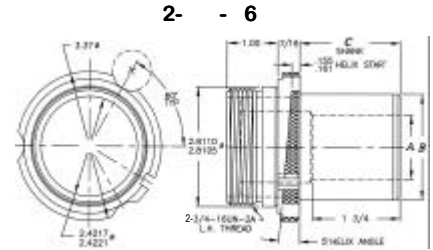
UDB-AU-27531-7/16
Insert 'U' for ULTRA III
UDB-AC-27531-7/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES WEAR, SPECIFY PREFIX AC FOR CARBIDE.

LOCK LINERS In this section



2- - 6



2- - 6

(DRILL) A MAX	1-5/16 = 1.312	1-9/16 = 1.562	1-23/32 = 1.7187	1-13/16 = 1.812	2 = 2.00	2-1/16 = 2.062
A MIN	3/8 = .375	3/8 = .75	3/8 = .375	7/16 = .437	7/16 = .437	7/16 = .437
(SHANK OD) B	1-1/2 = 1.50	1-3/4 = 1.75	2 = 2.00	2 = 2.00	2-3/8 = 2.37	2-1/2 = 2.50
C	1/2 0.50 A-26102	A-26302	A-26502	A-27102	A-27302	A-27502
L	5/8 0.62 A-26103	A-26303	A-26503	A-27103	A-27303	A-27503
E	3/4 0.75 A-26104	A-26304	A-26504	A-27104	A-27304	A-27504
N	7/8 0.87 A-26105	A-26305	A-26505	A-27105	A-27305	A-27505
G	1 1.00 A-26106	A-26306	A-26506	A-27106	A-27306	A-27506
T	1-1/16 1.06 A-26107	A-26307	A-26507	A-27107	A-27307	A-27507
H	1-1/8 1.12 A-26108	A-26308	A-26508	A-27108	A-27308	A-27508
E	1-3/16 1.18 A-26109	A-26309	A-26509	A-27109	A-27309	A-27509
X	1-1/4 1.25 A-26110	A-26310	A-26510	A-27110	A-27310	A-27510
T	1-3/8 1.37 A-26111	A-26311	A-26511	A-27111	A-27311	A-27511
E	1-7/16 1.44 A-26112	A-26312	A-26512	A-27112	A-27312	A-27512
N	1-1/2 1.50 A-26113	A-26313	A-26513	A-27113	A-27313	A-27513
D	1-5/8 1.62 A-26114	A-26314	A-26514	A-27114	A-27314	A-27514
S	1-3/4 1.75 A-26115	A-26315	A-26515	A-27115	A-27315	A-27515
F	1-7/8 1.87 A-26116	A-26316	A-26516	A-27116	A-27316	A-27516
R	2 2.00 A-26117	A-26317	A-26517	A-27117	A-27317	A-27517
O	2 2.00 A-26118	A-26318	A-26518	A-27118	A-27318	A-27518
M	2-1/8 2.12 A-26119	A-26319	A-26519	A-27119	A-27319	A-27519
C	2-1/4 2.25 A-26120	A-26320	A-26520	A-27120	A-27320	A-27520
L	2-3/8 2.37 A-26121	A-26321	A-26521	A-27121	A-27321	A-27521
A	2-1/2 2.50 A-26122	A-26322	A-26522	A-27122	A-27322	A-27522
R	2-5/8 2.62 A-26123	A-26323	A-26523	A-27123	A-27323	A-27523
I	2-3/4 2.75 A-26124	A-26324	A-26524	A-27124	A-27324	A-27524
N	3 3.00 A-26125	A-26325	A-26525	A-27125	A-27325	A-27525
C	3-1/4 3.25 A-26126	A-26326	A-26526	A-27126	A-27326	A-27526
L	3-1/2 3.50 A-26127	A-26327	A-26527	A-27127	A-27327	A-27527
A	3-3/4 3.75 A-26128	A-26328	A-26528	A-27128	A-27328	A-27528
R	4 4.00 A-26129	A-26329	A-26529	A-27129	A-27329	A-27529
I	4-1/4 4.25 A-26129-A	A-26329-A	A-26529-A	A-27129-A	A-27329-A	A-27529-A
N	4-1/2 4.50 A-26129-B	A-26329-B	A-26529-B	A-27129-B	A-27329-B	A-27529-B
C	4-3/4 4.75 A-26129-C	A-26329-C	A-26529-C	A-27129-C	A-27329-C	A-27529-C
H	5 5.00 A-26130	A-26330	A-26530	A-27130	A-27330	A-27530
E	5-1/4 5.25 A-26130-A	A-26330-A	A-26530-A	A-27130-A	A-27330-A	A-27530-A
S	5-1/2 5.50 A-26130-B	A-26330-B	A-26530-B	A-27130-B	A-27330-B	A-27530-B
	5-3/4 5.75 A-26130-C	A-26330-C	A-26530-C	A-27130-C	A-27330-C	A-27530-C
	6 6.00 A-26131	A-26331	A-26531	A-27131	A-27331	A-27531

TO SELECT LARGER 6-1/4" TO 15" LENGTHS, SEE NEXT TWO PAGES.

ACCESSORIES BELOW	COLLAR A-26000 2-1/4 - 16 LH ADD I.D. SIZE TO LINERS			COLLAR A-27000 2-3/4 - 16 LH ADD I.D. SIZE TO LINERS		
LINER I.D.	1-1/2	1-3/4	2	2	2-3/8	2-1/2
HELICAL LOCK LINERS	UCC-HNL-26160	UCC-HNL-26360	UCC-HNL-26560	UCC-HNL-27160	UCC-HNL-27360	UCC-HNL-27560
LOCK RINGS	UCC-521458A	UCC-521458A	UCC-521458A	UCC-521470	UCC-521470	UCC-521470
HELICAL LOCK LINERS	UCC-HNLP-26160	UCC-HNLP-26360	UCC-HNLP-26560	UCC-HNLP-27160	UCC-HNLP-27360	UCC-HNLP-27560
LOCK LINERS	UCC-LL-26160	UCC-LL-26360	UCC-LL-26560	UCC-LL-27160	UCC-LL-27360	UCC-LL-27560
LOCK LINERS	UCC-LLP-26160	UCC-LLP-26360	UCC-LLP-26560	UCC-LLP-27160	UCC-LLP-27360	UCC-LLP-27560
LOCK SCREWS	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16
TAPER LOCK CLAMPS	TLC-3	TLC-3	TLC-3	TLC-6	TLC-6	TLC-6
STRIP MOUNTINGS	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX

FOR REDUCERS AND SIZE INCREASING BUSHINGS, PLEASE REFER TO THIS SECTION.

LENGTHS
1/2" to 6"

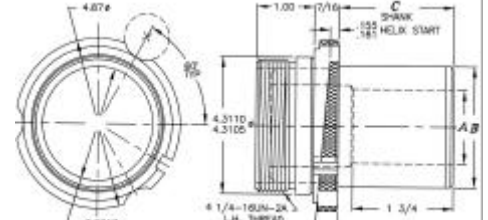
3-1/4 - 16 LH



3-3/4 - 16 LH



4-1/4 - 16 LH



TO SELECT LARGER 6-1/4" TO 15" LENGTHS, SEE NEXT TWO PAGES.

COLLAR A-A-28000 3-1/4 - 16 LH ADD I.D. SIZE TO LINERS			COLLAR A-A-29000 3-3/4 - 16 LH ADD I.D. SIZE TO LINERS			COLLAR A-30000 4-1/4 - 16 LH ADD I.D. SIZE TO LINERS			See This Section
2-1/2	2-3/4	3	3	3-1/4	3-1/2	3-1/2	3-3/4	4	LINER
UCC-HNL-28160	UCC-HNL-28360	UCC-HNL-28560	UCC-HNL-29160	UCC-HNL-29360	UCC-HNL-29560	UCC-HNL-30160	UCC-HNL-30360	UCC-HNL-30560	HELICAL LOCK LINERS
UCC-521472	UCC-521472	UCC-521472	UCC-521474	UCC-521474	UCC-521474	UCC-521480	UCC-521480	UCC-521480	LOCK RINGS
UCC-HNLP-28160	UCC-HNLP-28360	UCC-HNLP-28560	UCC-HNLP-29160	UCC-HNLP-29360	UCC-HNLP-29560	UCC-HNLP-30160	UCC-HNLP-30360	UCC-HNLP-30560	HELICAL LOCK LINERS
UCC-LL-28160	UCC-LL-28360	UCC-LL-28560	UCC-LL-29160	UCC-LL-29360	UCC-LL-29560	UCC-LL-30160	UCC-LL-30360	UCC-LL-30560	LOCK LINERS
UCC-LLP-28160	UCC-LLP-28360	UCC-LLP-28560	UCC-LLP-29160	UCC-LLP-29360	UCC-LLP-29560	UCC-LLP-30160	UCC-LLP-30360	UCC-LLP-30560	LOCK LINERS
UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	LOCK SCREWS
TLC-6	TLC-6	TLC-6	TLC-7	TLC-7	TLC-7	TLC-7	TLC-7	TLC-7	TAPER LOCK CLAMPS
UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	STRIP MOUNTINGS

FOR REDUCERS AND SIZE INCREASING BUSHINGS, PLEASE REFER TO THIS SECTION.

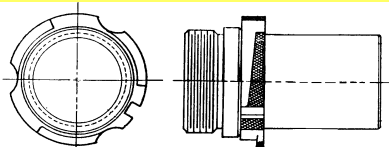
United's E-X-T-E-N-D-E-D Range Helical Nurlock

Note: LENGTHS 6-1/4" to 15" (1/2" to 6" pgs P12-P13)

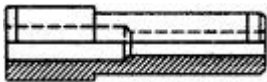
A-26000 SERIES

A-27000 SERIES

EXTENDED RANGE ACCEPTS DRILLS AS LARGE AS 3-9/16", WITH INSIDE SHANKS AS LONG AS 15"



TOLERANCES ON 'A' DIMENSION			
1/2 to 3/4	+ .0001 to .0006	1-3/8 to 1-3/4	+ .0006 to .0010
3/4 to 1-1/4	+ .0003 to .0009	1-3/4 to 2-1/4	+ .0008 to .0012
1-1/4 to 1-3/4	+ .0005 to .0009	2-1/4 to 3-9/16	+ .0010 to .0015
TOLERANCES ON 'B' DIMENSION			
1-1/2 to 2"	+ .0002 to .0005	3" to 3-3/8	+ .0004 to .0008
2-1/8 to 2-3/8	+ .0003 to .0006	3-1/2 to 4"	+ .0005 to .0009



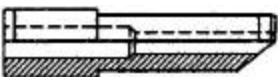
UDB-27567-7/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR SHANK ONLY, OMIT PREFIX A. Example: UDB-27567



UDB-A-27567CS-7/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER SHANKS, ADD SUFFIX CS. Ex: UDB-A-27567CS-7/16



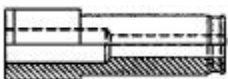
UDB-CTA-27567-7/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SURFACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX CT. Example: UDB-CTA-27567-7/16



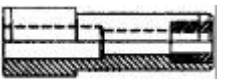
UDB-A-27567CC-7/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PROPRIETARY CHIP CUTTER, ADD SUFFIX CC TO PART NO. Example: UDB-A-27567CC-7/16



UDB-A27567EZ-7/16
ADD 'EZ'

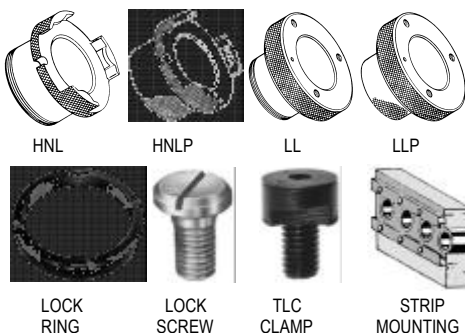
EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D. EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example: UDB-A-27567EZ-7/16



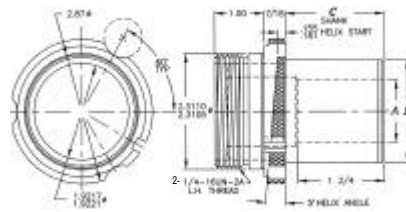
UDB-AU-27567-7/16
Insert 'U' for ULTRA III
UDB-AC-27567-7/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES WEAR, SPECIFY PREFIX AC FOR CARBIDE.

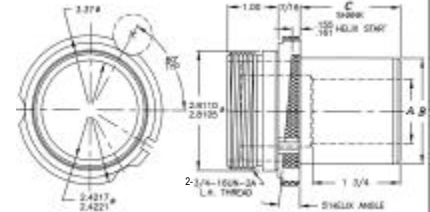
LOCK LINERS In This Section



2-1/4 - 16 LH



2-3/4 - 16 LH



(DRILL) A		MAX	1-5/16 = 1.312	1-9/16 = 1.562	1-23/32 = 1.7187	1-13/16 = 1.812	2 = 2.00	2-1/16 = 2.062
A		MIN	3/8 = .375	3/8 = .75	3/8 = .375	7/16 = .437	7/16 = .437	7/16 = .437
(SHANK OD) B			1-1/2 = 1.50	1-3/4 = 1.75	2 = 2.00	2 = 2.00	2-3/8 = 2.37	2-1/2 = 2.50
C L E N G T H E X T E N D S F R O M C O L L A R I N C H E S E	6-1/4	6.25	A-26132	A-26332	A-26532	A-27132	A-27332	A-27532
	6-1/2	6.50	A-26133	A-26333	A-26533	A-27133	A-27333	A-27533
	6-3/4	6.75	A-26134	A-26334	A-26534	A-27134	A-27334	A-27534
	7	7.00	A-26135	A-26335	A-26535	A-27135	A-27335	A-27535
	7-1/4	7.25	A-26136	A-26336	A-26536	A-27136	A-27336	A-27536
	7-1/2	7.50	A-26137	A-26337	A-26537	A-27137	A-27337	A-27537
	7-3/4	7.75	A-26138	A-26338	A-26538	A-27138	A-27338	A-27538
	8	8.00	A-26139	A-26339	A-26539	A-27139	A-27339	A-27539
	8-1/4	8.25	A-26140	A-26340	A-26540	A-27140	A-27340	A-27540
	8-1/2	8.50	A-26141	A-26341	A-26541	A-27141	A-27341	A-27541
	8-3/4	8.75	A-26142	A-26342	A-26542	A-27142	A-27342	A-27542
	9	9.00	A-26143	A-26343	A-26543	A-27143	A-27343	A-27543
	9-1/4	9.25	A-26144	A-26344	A-26544	A-27144	A-27344	A-27544
	9-1/2	9.50	A-26145	A-26345	A-26545	A-27145	A-27345	A-27545
	9-3/4	9.75	A-26146	A-26346	A-26546	A-27146	A-27346	A-27546
	10	10.00	A-26147	A-26347	A-26547	A-27147	A-27347	A-27547
	10-1/4	10.25	A-26148	A-26348	A-26548	A-27148	A-27348	A-27548
	10-1/2	10.50	A-26149	A-26349	A-26549	A-27149	A-27349	A-27549
	10-3/4	10.75	A-26150	A-26350	A-26550	A-27150	A-27350	A-27550
	11	11.00	A-26151	A-26351	A-26551	A-27151	A-27351	A-27551
11-1/4	11.25	A-26152	A-26352	A-26552	A-27152	A-27352	A-27552	
11-1/2	11.50	A-26153	A-26353	A-26553	A-27153	A-27353	A-27553	
11-3/4	11.75	A-26154	A-26354	A-26554	A-27154	A-27354	A-27554	
12	12.00	A-26155	A-26355	A-26555	A-27155	A-27355	A-27555	
12-1/4	12.25	A-26156	A-26356	A-26556	A-27156	A-27356	A-27556	
12-1/2	12.50	A-26157	A-26357	A-26557	A-27157	A-27357	A-27557	
12-3/4	12.75	A-26158	A-26358	A-26558	A-27158	A-27358	A-27558	
13	13.00	A-26159	A-26359	A-26559	A-27159	A-27359	A-27559	
13-1/4	13.25	A-26160	A-26360	A-26560	A-27160	A-27360	A-27560	
13-1/2	13.50	A-26161	A-26361	A-26561	A-27161	A-27361	A-27561	
13-3/4	13.75	A-26162	A-26362	A-26562	A-27162	A-27362	A-27562	
14	14.00	A-26163	A-26363	A-26563	A-27163	A-27363	A-27563	
14-1/4	14.25	A-26164	A-26364	A-26564	A-27164	A-27364	A-27564	
14-1/2	14.50	A-26165	A-26365	A-26565	A-27165	A-27365	A-27565	
14-3/4	14.75	A-26166	A-26366	A-26566	A-27166	A-27366	A-27566	
15	15.00	A-26167	A-26367	A-26567	A-27167	A-27367	A-27567	

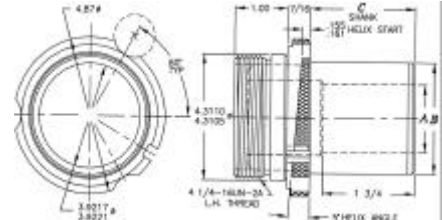
TO SELECT SMALLER 1/2" TO 6" LENGTHS, SEE PREVIOUS TWO PAGES.

ACCESSORIES BELOW	COLLAR A-26000 2-1/4 - 16 LH			COLLAR A-27000 2-3/4 - 16 LH		
	ADD I.D. SIZE TO LINERS			ADD I.D. SIZE TO LINERS		
LINER I.D.	1-1/2	1-3/4	2	2	2-3/8	2-1/2
HELICAL LOCK LINERS	UCC-HNL-26160	UCC-HNL-26360	UCC-HNL-26560	UCC-HNL-27160	UCC-HNL-27360	UCC-HNL-27560
LOCK RINGS	UCC-521458A	UCC-521458A	UCC-521458A	UCC-521470	UCC-521470	UCC-521470
HELICAL LOCK LINERS	UCC-HNLP-26160	UCC-HNLP-26360	UCC-HNLP-26560	UCC-HNLP-27160	UCC-HNLP-27360	UCC-HNLP-27560
LOCK LINERS	UCC-LL-26160	UCC-LL-26360	UCC-LL-26560	UCC-LL-27160	UCC-LL-27360	UCC-LL-27560
LOCK LINERS	UCC-LLP-26160	UCC-LLP-26360	UCC-LLP-26560	UCC-LLP-27160	UCC-LLP-27360	UCC-LLP-27560
LOCK SCREWS	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16	UCC-16530-3/8-16
TAPER LOCK CLAMPS	TLC-3	TLC-3	TLC-3	TLC-6	TLC-6	TLC-6
STRIP MOUNTINGS	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX	UDB-LSM-XXX

FOR REDUCERS AND SIZE INCREASING BUSHINGS, PLEASE REFER TO THIS SECTION.

LENGTHS
6-1/4" to 15"

4-1/4 - 16 LH



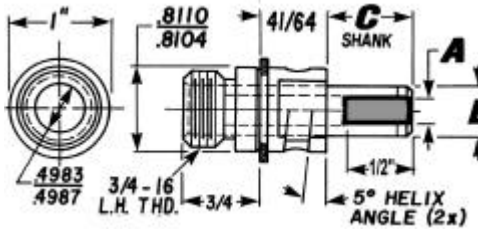
TO SELECT SMALLER 1/2" TO 6" LENGTHS, SEE PREVIOUS TWO PAGES.

FOR REDUCERS AND SIZE INCREASING BUSHINGS, PLEASE REFER TO THIS SECTION

Nurlock WearEver Carbide I.D.s

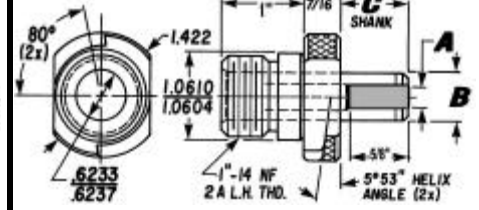
AC-21000 SERIES

WearEver Carbide I.D.



AC-22000 SERIES

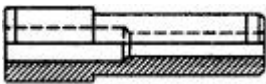
WearEver Carbide I.D.



UP TO TEN
TIMES MORE
WEAR LIFE!

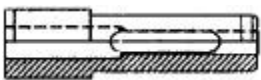


TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+ .0001 TO + .0004
OVER 1/4 TO 3/4	+ .0001 TO + .0005
OVER 3/4 TO 1-1/2	+ .0002 TO + .0006
TOLERANCE ON 'B' DIM. — .0002 TO — .0005	



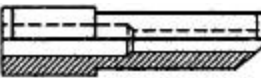
UDB-C-22531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR
SHANK ONLY, OMIT PREFIX A. Example: UDB-C-22531



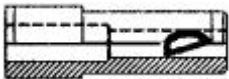
UDB-AC-22531CS-
3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER
SHANKS, ADD SUFFIX CS. Ex: UDB-AC-22531CS-3/16



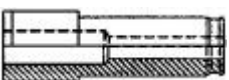
UDB-CTAC-22531-
3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SUR-
FACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX
CT. Example: UDB-CTAC-22531-3/16



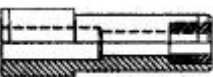
UDB-AC-22531CC-
3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PAT-
ENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO.
Example: UDB-AC-22531CC-3/16



UDB-AC-22531EZ-
3/16
ADD 'EZ'

EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D.
EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example:
UDB-AC-22531EZ-3/16



UDB-AU-22531-3/16
Insert 'U' for ULTRA III
UDB-AC-22531-3/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG
WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY
PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES
WEAR, SPECIFY PREFIX AC FOR CARBIDE.

LOCKING ACCESSORIES In This Section

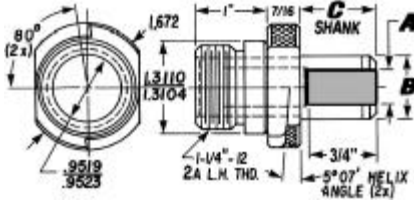


(DRILL) A	MAX	3/16	9/32	9/32	7/32	9/32	5/16	3/8	7/16
A	MIN	1/16	1/16	1/16	1/8	1/8	1/8	1/8	1/8
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	AC-21101		AC-21301	AC-22101			AC-22401	
	1/2	AC-21102	AC-21202	AC-21302	AC-22102	AC-22202		AC-22402	
L	5/8	AC-21103	AC-21203	AC-21303	AC-22103	AC-22203	AC-22303	AC-22403	
E	3/4	AC-21104	AC-21204	AC-21304	AC-22104	AC-22204	AC-22304	AC-22404	AC-22504
N	7/8	AC-21105	AC-21205	AC-21305	AC-22105	AC-22205	AC-22305	AC-22405	AC-22505
G	1	AC-21106	AC-21206	AC-21306	AC-22106	AC-22206	AC-22306	AC-22406	AC-22506
T	1-1/16	AC-21107		AC-21307					
H	1-1/8	AC-21108	AC-21208	AC-21308	AC-22108	AC-22208	AC-22308	AC-22408	AC-22508
	1-3/16							AC-22409	
F	1-1/4	AC-21110	AC-21210	AC-21310	AC-22110	AC-22210	AC-22310	AC-22410	AC-22510
R	1-3/8	AC-21111	AC-21211	AC-21311	AC-22111	AC-22211	AC-22311	AC-22411	AC-22511
O	1-7/16								
M	1-1/2	AC-21113	AC-21213	AC-21313	AC-22113	AC-22213	AC-22313	AC-22413	AC-22513
	1-5/8	AC-21114	AC-21214	AC-21314	AC-22114	AC-22214	AC-22314	AC-22414	AC-22514
C	1-3/4	AC-21115	AC-21215	AC-21315	AC-22115	AC-22215	AC-22315	AC-22415	AC-22515
O	1-7/8	AC-21116	AC-21216	AC-21316	AC-22116	AC-22216	AC-22316	AC-22416	AC-22516
L	1-15/16								
L	2	AC-21118	AC-21218	AC-21318	AC-22118	AC-22218	AC-22318	AC-22418	AC-22518
A	2-1/8	AC-21119	AC-21219	AC-21319	AC-22119	AC-22219	AC-22319	AC-22419	AC-22519
R	2-1/4	AC-21120	AC-21220	AC-21320	AC-22120	AC-22220	AC-22320	AC-22420	AC-22520
	2-3/8	AC-21121	AC-21221	AC-21321	AC-22121	AC-22221	AC-22321	AC-22421	AC-22521
I	2-1/2	AC-21122	AC-21222	AC-21322	AC-22122	AC-22222	AC-22322	AC-22422	AC-22522
N	2-5/8								
	2-3/4	AC-21124	AC-21224	AC-21324	AC-22124	AC-22224	AC-22324	AC-22424	AC-22524
I	3	AC-21125	AC-21225	AC-21325	AC-22125	AC-22225	AC-22325	AC-22425	AC-22525
N	3-1/4	AC-21126	AC-21226	AC-21326	AC-22126	AC-22226	AC-22326	AC-22426	AC-22526
C	3-1/2				AC-22127	AC-22227	AC-22327	AC-22427	AC-22527
H	3-3/4				AC-22128	AC-22228	AC-22328	AC-22428	AC-22528
E	4				AC-22129	AC-22229	AC-22329	AC-22429	AC-22529
S	5			AC-21330	AC-22130	AC-22230	AC-22330	AC-22430	AC-22530
	6	AC-21131			AC-22131	AC-22231	AC-22331	AC-22431	AC-22531
C SHANK LEN		COLLAR AC-21000			COLLAR AC-22000				
LENGTH		ADD I.D. SIZE TO LINERS			ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
FOR METAL TOOLING	SINGLE LOCK FOR METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK FOR METAL	NL-16520		NL-16521	WE RECOMMEND HNL and HNL P			NL-16522	
STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	NLP-375		NLP-500					NLP-750
LOCK LINERS	FOR METAL	LL-21100	LL-21200	LL-21300				LL-22400	
LOCK LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400	
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	HNL P-213212	HNL P-214808	HNL P-214808	HNL P-224808	HNL P-224808	HNL P-225210	HNL P-225610	HNL P-226410
FOR PLASTIC TOOLING	SINGLE LOCK FOR PLASTIC	HNL P-1-213212	HNL P-1-214808	HNL P-1-214808	HNL P-1-224808	HNL P-1-224808	HNL P-1-225210	HNL P-1-225610	HNL P-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532

Shanks

AC-23000 SERIES

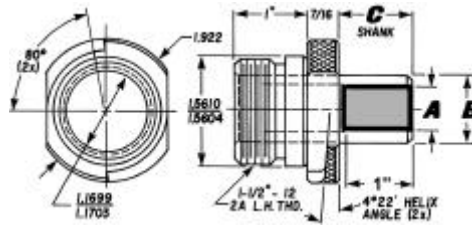
WearEver Carbide I.D.



UNITED WearEver Carbide I.D.s

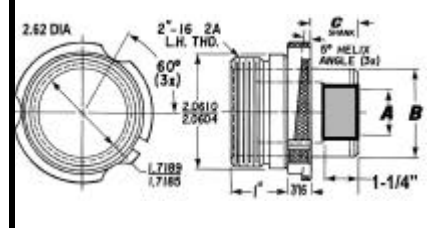
AC-24000 SERIES

WearEver Carbide I.D.



AC-25000 SERIES

WearEver Carbide I.D.



15/32	17/32	19/32	21/32	23/32	3/4	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-15/32	1-1/2	A MAX	
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	A MIN	
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B	
NEW O.D.		WearEver Carbide I.D.s						NEW O.D.					NEW O.D.		AC Means UNITED WearEver CARBIDE I.D.s.					3/8	
BELOW		A Life-Long Relationship!						BELOW				BELOW		1/2							
						AC-24103								5/8							
AC-23004	AC-23104	AC-23204	AC-23304			AC-24104	AC-24304	AC-24204						3/4							
AC-23005	AC-23105	AC-23205	AC-23305			AC-24105	AC-24305	AC-24205	AC-24405					7/8							
AC-23006	AC-23106	AC-23206	AC-23306	AC-23406	AC-23506	AC-24106	AC-24306	AC-24206	AC-24406	AC-24506	AC-24606		AC-24906	AC-24806	1						
															1-1/16						
AC-23008	AC-23108	AC-23208	AC-23308	AC-23408	AC-23508	AC-24108	AC-24308	AC-24208	AC-24408	AC-24508	AC-24608		AC-24908		1-1/8						
															1-3/16						
AC-23010	AC-23110	AC-23210	AC-23310	AC-23410	AC-23510	AC-24110	AC-24310	AC-24210	AC-24410	AC-24510	AC-24610	AC-24710			AC-25110					1-1/4	
AC-23011	AC-23111	AC-23211	AC-23311	AC-23411	AC-23511	AC-24111	AC-24311	AC-24211	AC-24411	AC-24511	AC-24611	AC-24711	AC-24911	AC-24811	AC-25111	AC-25211				1-3/8	
			AC-23312																	1-7/16	
AC-23013	AC-23113	AC-23213	AC-23313	AC-23413	AC-23513	AC-24113	AC-24313	AC-24213	AC-24413	AC-24513	AC-24613	AC-24713	AC-24913	AC-24813	AC-25113	AC-25213	AC-25313			1-1/2	
AC-23014	AC-23114	AC-23214	AC-23314	AC-23414	AC-23514	AC-24114	AC-24314	AC-24214	AC-24414	AC-24514	AC-24614	AC-24714	AC-24914	AC-24814	AC-25114	AC-25214	AC-25314			1-5/8	
AC-23015	AC-23115	AC-23215	AC-23315	AC-23415	AC-23515	AC-24115	AC-24315	AC-24215	AC-24415	AC-24515	AC-24615	AC-24715	AC-24915	AC-24815	AC-25115	AC-25215	AC-25315	AC-25415		1-3/4	
AC-23016	AC-23116	AC-23216	AC-23316	AC-23416	AC-23516	AC-24116	AC-24316	AC-24216	AC-24416	AC-24516	AC-24616	AC-24716	AC-24916	AC-24816	AC-25116	AC-25216	AC-25316	AC-25416		1-7/8	
					AC-23517						AC-24617		AC-24817							1-15/16	
AC-23018	AC-23118	AC-23218	AC-23318	AC-23418	AC-23518	AC-24118	AC-24318	AC-24218	AC-24418	AC-24518	AC-24618	AC-24718	AC-24918	AC-24818	AC-25118	AC-25218	AC-25318	AC-25418	AC-25518	2	
AC-23019	AC-23119	AC-23219	AC-23319	AC-23419	AC-23519	AC-24119	AC-24319	AC-24219	AC-24419	AC-24519	AC-24619	AC-24719	AC-24919	AC-24819	AC-25119	AC-25219	AC-25319	AC-25419		2-1/8	
AC-23020	AC-23120	AC-23220	AC-23320	AC-23420	AC-23520	AC-24120	AC-24320	AC-24220	AC-24420	AC-24520	AC-24620	AC-24720	AC-24920	AC-24820	AC-25120	AC-25220	AC-25320	AC-25420		2-1/4	
AC-23021	AC-23121	AC-23221	AC-23321	AC-23421	AC-23521	AC-24121	AC-24321	AC-24221	AC-24421	AC-24521	AC-24621	AC-24721	AC-24921	AC-24821	AC-25121	AC-25221	AC-25321	AC-25421		2-3/8	
AC-23022	AC-23122	AC-23222	AC-23322	AC-23422	AC-23522	AC-24122	AC-24322	AC-24222	AC-24422	AC-24522	AC-24622	AC-24722	AC-24922	AC-24822	AC-25122	AC-25222	AC-25322	AC-25422		2-1/2	
																		AC-25523		2-5/8	
AC-23024	AC-23124	AC-23224	AC-23324	AC-23424	AC-23524	AC-24124	AC-24324	AC-24224	AC-24424	AC-24524	AC-24624	AC-24724	AC-24924	AC-24824	AC-25124	AC-25224	AC-25324	AC-25424	AC-25524	2-3/4	
AC-23025	AC-23125	AC-23225	AC-23325	AC-23425	AC-23525	AC-24125	AC-24325	AC-24225	AC-24425	AC-24525	AC-24625	AC-24725	AC-24925	AC-24825	AC-25125	AC-25225	AC-25325	AC-25425	AC-25525	3	
AC-23026	AC-23126	AC-23226	AC-23326	AC-23426	AC-23526	AC-24126	AC-24326	AC-24226	AC-24426	AC-24526	AC-24626	AC-24726	AC-24926	AC-24826	AC-25126	AC-25226	AC-25326	AC-25426	AC-25526	3-1/4	
AC-23027	AC-23127	AC-23227	AC-23327	AC-23427	AC-23527	AC-24127	AC-24327	AC-24227	AC-24427	AC-24527	AC-24627	AC-24727	AC-24927	AC-24827	AC-25127	AC-25227	AC-25327	AC-25427	AC-25527	3-1/2	
AC-23028	AC-23128	AC-23228	AC-23328	AC-23428	AC-23528	AC-24128	AC-24328	AC-24228	AC-24428	AC-24528	AC-24628	AC-24728	AC-24928	AC-24828	AC-25128	AC-25228	AC-25328	AC-25428	AC-25528	3-3/4	
AC-23029	AC-23129	AC-23229	AC-23329	AC-23429	AC-23529	AC-24129	AC-24329	AC-24229	AC-24429	AC-24529	AC-24629	AC-24729	AC-24929	AC-24829	AC-25129	AC-25229	AC-25329	AC-25429	AC-25529	4	
AC-23030	AC-23130	AC-23230	AC-23330	AC-23430	AC-23530	AC-24130	AC-24330	AC-24230	AC-24430	AC-24530	AC-24630	AC-24730	AC-24930	AC-24830	AC-25130	AC-25230	AC-25330	AC-25430	AC-25530	5	
AC-23031	AC-23131	AC-23231	AC-23331	AC-23431	AC-23531	AC-24131	AC-24331	AC-24231	AC-24431	AC-24531	AC-24631	AC-24731	AC-24931	AC-24831	AC-25131	AC-25231	AC-25331	AC-25431	AC-25531	6	
COLLAR AC-23000 ADD I.D. SIZE TO LINERS						COLLAR AC-24000 ADD I.D. SIZE TO LINERS								COLLAR AC-25000 ADD I.D. SIZE TO LINERS						C	
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.	
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NURLOCK LINERS	
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND						HELICAL NURLOCK LINERS SINGLE
			NL-16523		NL-16524						NL-16525			NL-16526	HNL and HNLP					NL-16533	STD NURLOCK LINERS
			NLP-16523		NLP-16524						NLP-16525			NLP-16526						NLP-16533	STD NURLOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LOOK LINERS	
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LPL-25100	LPL-25200	LPL-25300	LPL-25400	LPL-25500	LOOK LINERS	
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456A	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	LOOK RINGS	
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-239624	HNLP-245616	HNLP-246416	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HELICAL NURLOCK LINERS DOUBLE	
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-239624	HNLP-1-245616	HNLP-1-246416	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816						HELICAL NURLOCK LINERS SINGLE	
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	SPRINT CLAMPS	
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	LINER BUSHINGS	
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	LOOK SCREWS	

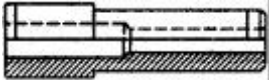
ULTRA III Adapter Tips and Accessories



RA III A

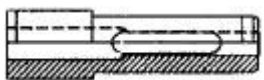
See complete
DIMENSIONAL
TOLERANCES
Pages P10
thru P15.

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.004
OVER 1/4 TO 3/4	+0.001 TO +0.005
OVER 3/4 TO 1-1/2	+0.002 TO +0.006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



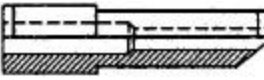
UDB-U-22531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR SHANK ONLY, OMIT PREFIX A. Example: UDB-U-22531



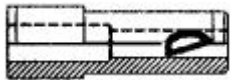
UDB-AU-22531CS-
3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER SHANKS, ADD SUFFIX CS. Ex: UDB-U-22531CS-3/16



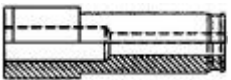
UDB-CTAU-22531-
3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SURFACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX CT. Example: UDB-CTAU-22531-3/16



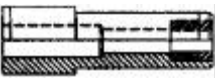
UDB-AU-22531CC-
3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PATENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO. Example: UDB-AU-22531CC-3/16



UDB-AU-22531EZ-
3/16
ADD 'EZ'

EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D. EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example: UDB-AU-22531EZ-3/16



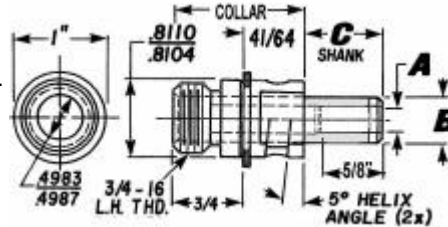
UDB-AU-22531-3/16
Insert 'U' for ULTRA III
UDB-AC-22531-3/16
Insert 'C' for CARBIDE

LONG WEARING INSERTS —TO ORDER LONG WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES WEAR, SPECIFY PREFIX AC FOR CARBIDE.

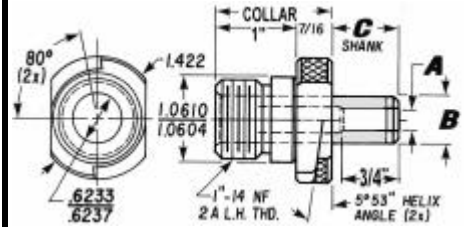
LOCKING ACCESSORIES in this Section



AU-21000 SERIES



AU-22000 SERIES

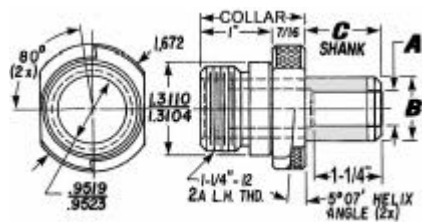


(DRILL) A	MAX	1/4	5/16	3/8	9/32	11/32	13/32	15/32	15/32
A	MIN	3/32	3/32	3/32	3/16	3/16	3/16	3/16	3/16
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	AU-21101		AU-21301	AU-22101			AU-22401	
	1/2	AU-21102	AU-21202	AU-21302	AU-22102	AU-22202		AU-22402	
L	5/8	AU-21103	AU-21203	AU-21303	AU-22103	AU-22203	AU-22303	AU-22403	
E	3/4	AU-21104	AU-21204	AU-21304	AU-22104	AU-22204	AU-22304	AU-22404	AU-22504
N	7/8	AU-21105	AU-21205	AU-21305	AU-22105	AU-22205	AU-22305	AU-22405	AU-22505
G	1	AU-21106	AU-21206	AU-21306	AU-22106	AU-22206	AU-22306	AU-22406	AU-22506
T	1-1/16	AU-21107		AU-21307					
H	1-1/8	AU-21108	AU-21208	AU-21308	AU-22108	AU-22208	AU-22308	AU-22408	AU-22508
	1-3/16							AU-22409	
F	1-1/4	AU-21110	AU-21210	AU-21310	AU-22110	AU-22210	AU-22310	AU-22410	AU-22510
R	1-3/8	AU-21111	AU-21211	AU-21311	AU-22111	AU-22211	AU-22311	AU-22411	AU-22511
O	1-7/16								
M	1-1/2	AU-21113	AU-21213	AU-21313	AU-22113	AU-22213	AU-22313	AU-22413	AU-22513
	1-5/8	AU-21114	AU-21214	AU-21314	AU-22114	AU-22214	AU-22314	AU-22414	AU-22514
C	1-3/4	AU-21115	AU-21215	AU-21315	AU-22115	AU-22215	AU-22315	AU-22415	AU-22515
O	1-7/8	AU-21116	AU-21216	AU-21316	AU-22116	AU-22216	AU-22316	AU-22416	AU-22516
L	1-15/16								
L	2	AU-21118	AU-21218	AU-21318	AU-22118	AU-22218	AU-22318	AU-22418	AU-22518
A	2-1/8	AU-21119	AU-21219	AU-21319	AU-22119	AU-22219	AU-22319	AU-22419	AU-22519
R	2-1/4	AU-21120	AU-21220	AU-21320	AU-22120	AU-22220	AU-22320	AU-22420	AU-22520
	2-3/8	AU-21121	AU-21221	AU-21321	AU-22121	AU-22221	AU-22321	AU-22421	AU-22521
I	2-1/2	AU-21122	AU-21222	AU-21322	AU-22122	AU-22222	AU-22322	AU-22422	AU-22522
N	2-5/8								
	2-3/4	AU-21124	AU-21224	AU-21324	AU-22124	AU-22224	AU-22324	AU-22424	AU-22524
I	3	AU-21125	AU-21225	AU-21325	AU-22125	AU-22225	AU-22325	AU-22425	AU-22525
N	3-1/4	AU-21126	AU-21226	AU-21326	AU-22126	AU-22226	AU-22326	AU-22426	AU-22526
C	3-1/2				AU-22127	AU-22227	AU-22327	AU-22427	AU-22527
H	3-3/4				AU-22128	AU-22228	AU-22328	AU-22428	AU-22528
E	4				AU-22129	AU-22229	AU-22329	AU-22429	AU-22529
S	5			AU-21330	AU-22130	AU-22230	AU-22330	AU-22430	AU-22530
	6	AU-21131			AU-22131	AU-22231	AU-22331	AU-22431	AU-22531
C LENGTH ABOVE		COLLAR AU-21000 ADD I.D. SIZE TO LINERS			COLLAR AU-22000 ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
HELICAL NURLOCK LINERS	SINGLE LOCK FOR METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK FOR METAL	NL-16520		NL-16521	WE RECOMMEND HNL and HNL P				NL-16522
STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	NLP-375		NLP-500					NLP-750
LOCK SCREW LINERS	FOR METAL	LL-21100	LL-21200	LL-21300					LL-22400
LOCK SCREW LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300					
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	HNL P-213212	HNL P-214808	HNL P-214808	HNL P-224808	HNL P-224808	HNL P-225210	HNL P-225610	HNL P-226410
FOR PLASTIC TOOLING	SINGLE LOCK FOR PLASTIC	HNL P-1-213212	HNL P-1-214808	HNL P-1-214808	HNL P-1-224808	HNL P-1-224808	HNL P-1-225210	HNL P-1-225610	HNL P-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532

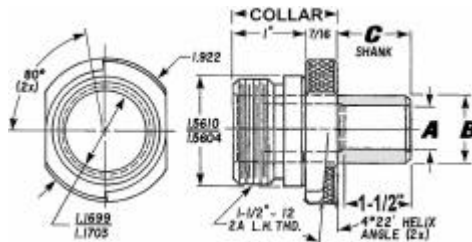
Shanks and Accessories

ULTRA III Material

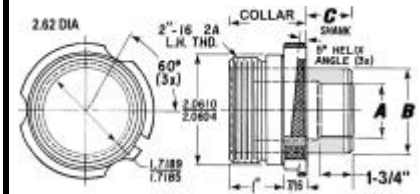
AU-23000 SERIES



AU-24000 SERIES



AU-25000 SERIES



15/32	17/32	19/32	21/32	23/32	3/4	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-15/32	1-1/2	A MAX		
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	A MIN		
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B		
NEW O.D.								NEW O.D.					NEW O.D.		USE UNITED ULTRA III FOR ULTRA DURABILITY					3/8		
BELOW								BELOW					BELOW							1/2		
						AU-24103														5/8		
AU-23004	AU-23104	AU-23204	AU-23304			AU-24104	AU-24304	AU-24204												3/4		
AU-23005	AU-23105	AU-23205	AU-23305			AU-24105	AU-24305	AU-24205	AU-24405											7/8		
AU-23006	AU-23106	AU-23206	AU-23306	AU-23406	AU-23506	AU-24106	AU-24306	AU-24206	AU-24406	AU-24506	AU-24606		AU-24906	AU-24806						1		
																				1-1/16		
AU-23008	AU-23108	AU-23208	AU-23308	AU-23408	AU-23508	AU-24108	AU-24308	AU-24208	AU-24408	AU-24508	AU-24608		AU-24908							1-1/8		
																				1-3/16		
AU-23010	AU-23110	AU-23210	AU-23310	AU-23410	AU-23510	AU-24110	AU-24310	AU-24210	AU-24410	AU-24510	AU-24610	AU-24710			AU-25110					1-1/4		
AU-23011	AU-23111	AU-23211	AU-23311	AU-23411	AU-23511	AU-24111	AU-24311	AU-24211	AU-24411	AU-24511	AU-24611	AU-24711	AU-24911	AU-24811	AU-25111	AU-25211				1-3/8		
			AU-23312																	1-7/16		
AU-23013	AU-23113	AU-23213	AU-23313	AU-23413	AU-23513	AU-24113	AU-24313	AU-24213	AU-24413	AU-24513	AU-24613	AU-24713	AU-24913	AU-24813	AU-25113	AU-25213	AU-25313			1-1/2		
AU-23014	AU-23114	AU-23214	AU-23314	AU-23414	AU-23514	AU-24114	AU-24314	AU-24214	AU-24414	AU-24514	AU-24614	AU-24714	AU-24914	AU-24814	AU-25114	AU-25214	AU-25314			1-5/8		
AU-23015	AU-23115	AU-23215	AU-23315	AU-23415	AU-23515	AU-24115	AU-24315	AU-24215	AU-24415	AU-24515	AU-24615	AU-24715	AU-24915	AU-24815	AU-25115	AU-25215	AU-25315	AU-25415		1-3/4		
AU-23016	AU-23116	AU-23216	AU-23316	AU-23416	AU-23516	AU-24116	AU-24316	AU-24216	AU-24416	AU-24516	AU-24616	AU-24716	AU-24916	AU-24816	AU-25116	AU-25216	AU-25316	AU-25416		1-7/8		
					AU-23517						AU-24617			AU-24817						1-15/16		
AU-23018	AU-23118	AU-23218	AU-23318	AU-23418	AU-23518	AU-24118	AU-24318	AU-24218	AU-24418	AU-24518	AU-24618	AU-24718	AU-24918	AU-24818	AU-25118	AU-25218	AU-25318	AU-25418	AU-25518	2		
AU-23019	AU-23119	AU-23219	AU-23319	AU-23419	AU-23519	AU-24119	AU-24319	AU-24219	AU-24419	AU-24519	AU-24619	AU-24719	AU-24919	AU-24819	AU-25119	AU-25219	AU-25319	AU-25419		2-1/8		
AU-23020	AU-23120	AU-23220	AU-23320	AU-23420	AU-23520	AU-24120	AU-24320	AU-24220	AU-24420	AU-24520	AU-24620	AU-24720	AU-24920	AU-24820	AU-25120	AU-25220	AU-25320	AU-25420		2-1/4		
AU-23021	AU-23121	AU-23221	AU-23321	AU-23421	AU-23521	AU-24121	AU-24321	AU-24221	AU-24421	AU-24521	AU-24621	AU-24721	AU-24921	AU-24821	AU-25121	AU-25221	AU-25321	AU-25421		2-3/8		
AU-23022	AU-23122	AU-23222	AU-23322	AU-23422	AU-23522	AU-24122	AU-24322	AU-24222	AU-24422	AU-24522	AU-24622	AU-24722	AU-24922	AU-24822	AU-25122	AU-25222	AU-25322	AU-25422		2-1/2		
																			AU-25523	2-5/8		
AU-23024	AU-23124	AU-23224	AU-23324	AU-23424	AU-23524	AU-24124	AU-24324	AU-24224	AU-24424	AU-24524	AU-24624	AU-24724	AU-24924	AU-24824	AU-25124	AU-25224	AU-25324	AU-25424	AU-25524	2-3/4		
AU-23025	AU-23125	AU-23225	AU-23325	AU-23425	AU-23525	AU-24125	AU-24325	AU-24225	AU-24425	AU-24525	AU-24625	AU-24725	AU-24925	AU-24825	AU-25125	AU-25225	AU-25325	AU-25425	AU-25525	3		
AU-23026	AU-23126	AU-23226	AU-23326	AU-23426	AU-23526	AU-24126	AU-24326	AU-24226	AU-24426	AU-24526	AU-24626	AU-24726	AU-24926	AU-24826	AU-25126	AU-25226	AU-25326	AU-25426	AU-25526	3-1/4		
AU-23027	AU-23127	AU-23227	AU-23327	AU-23427	AU-23527	AU-24127	AU-24327	AU-24227	AU-24427	AU-24527	AU-24627	AU-24727	AU-24927	AU-24827	AU-25127	AU-25227	AU-25327	AU-25427	AU-25527	3-1/2		
AU-23028	AU-23128	AU-23228	AU-23328	AU-23428	AU-23528	AU-24128	AU-24328	AU-24228	AU-24428	AU-24528	AU-24628	AU-24728	AU-24928	AU-24828	AU-25128	AU-25228	AU-25328	AU-25428	AU-25528	3-3/4		
AU-23029	AU-23129	AU-23229	AU-23329	AU-23429	AU-23529	AU-24129	AU-24329	AU-24229	AU-24429	AU-24529	AU-24629	AU-24729	AU-24929	AU-24829	AU-25129	AU-25229	AU-25329	AU-25429	AU-25529	4		
AU-23030	AU-23130	AU-23230	AU-23330	AU-23430	AU-23530	AU-24130	AU-24330	AU-24230	AU-24430	AU-24530	AU-24630	AU-24730	AU-24930	AU-24830	AU-25130	AU-25230	AU-25330	AU-25430	AU-25530	5		
AU-23031	AU-23131	AU-23231	AU-23331	AU-23431	AU-23531	AU-24131	AU-24331	AU-24231	AU-24431	AU-24531	AU-24631	AU-24731	AU-24931	AU-24831	AU-25131	AU-25231	AU-25331	AU-25431	AU-25531	6		
COLLAR AU-23000 ADD I.D. SIZE TO LINERS						COLLAR AU-24000 ADD I.D. SIZE TO LINERS										COLLAR AU-25000 ADD I.D. SIZE TO LINERS						C
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	2 1/2	3	
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HNL-25500	HNL-25500	
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND						HNL-25500	
			NL-16523		NL-16524						NL-16525			NL-16526	HNL and HNLP					NL-16533	NL-16533	
			NLP-16523		NLP-16524						NLP-16525			NLP-16526						NLP-16533	NLP-16533	
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LL-25500	LL-25500	
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	LLP-25500	LLP-25500	
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456A	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A		
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-239624	HNLP-245616	HNLP-246416	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HNLP-25500		
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-239624	HNLP-1-245616	HNLP-1-246416	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816								
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3		
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	19957		
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	16530		

12200 WOODRUFF AVE. DOWNEY, CA 90241-5608 TELEPHONE (562) 803-1521 / (800) 421-3466 IN CA / 800-486-3466 FAX (562) 803-6898 / (800) 486-3465

Helical Nurlock Adjustable

AD-31000 SERIES

AD-32000 SERIES

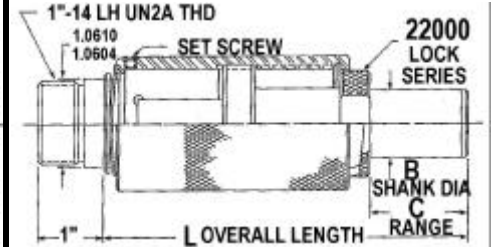
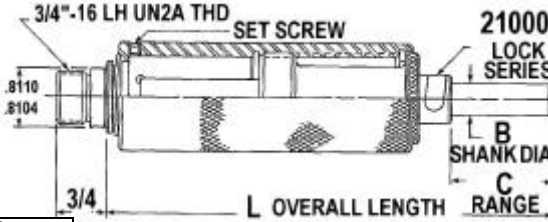


'AD' = ADJUSTABLE

Helical Nurlock ADJUSTABLE TIP

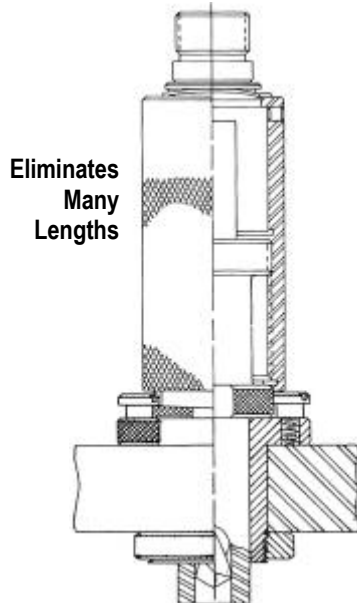
See complete DIMENSIONAL TOLERANCES
Pages P10 thru P15.

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+.0001 TO +.0004
OVER 1/4 TO 3/4	+.0001 TO +.0005
OVER 3/4 TO 1-1/2	+.0002 TO +.0006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



← ADJUST TO REQUIRED LENGTH →

ADJUSTABLE DRILL BUSHING TIPS



UNITED's Helical Nurlock Adjustable Tips are one of the most practical products developed with UNITED IMAGINEERING FEATURES:

- Reduce inventory of lengths
- Adjust to variable standoff
- Use with Standard and Nurlock liners
- Can be inserted with Press Fit Bushings for wide ID ranges

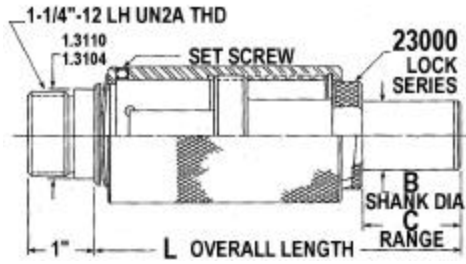
LOCKING ACCESSORIES in this Section



(DRILL) A	MAX	1/4	5/16	3/8		9/32	11/32	13/32	15/32	15/32	
A	MIN	3/32	3/32	3/32	OAL	3/16	3/16	3/16	3/16	3/16	OAL
(SHANK OD) B		3/8	7/16	1/2		7/16	1/2	9/16	5/8	3/4	
C LENGTH ADJUSTS FROM 3/8 to 1-1/2		AD-31113	AD-31213	AD-31313	6-1/8	AD-32113	AD-32213	AD-32313	AD-32413	AD-32513	6-1/8
1-1/2 to 3		AD-31125	AD-31225	AD-31325	7-5/8	AD-32125	AD-32225	AD-32325	AD-32425	AD-32525	7-5/8
3 to 4-1/2		AD-31129-B	AD-31229-B	AD-31329-B	9-1/8	AD-32129-B	AD-32229-B	AD-32329-B	AD-32429-B	AD-32529-B	9-1/8
4-1/2 to 6		AD-31131	AD-31231	AD-31331	10-5/8	AD-32131	AD-32231	AD-32321	AD-32431	AD-32531	10-5/8
C LENGTH ABOVE		COLLAR AD-31000 ADD I.D. SIZE TO LINERS				COLLAR AD-32000 ADD I.D. SIZE TO LINERS					
LINER I.D.		3/8	7/16	1/2		7/16	1/2	9/16	5/8	3/4	
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR METAL	HNL-213212	HNL-214808	HNL-214808		HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410	
HELICAL NURLOCK LINERS	SINGLE LOCK FOR METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808		HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410	
STD NURLOCK LINERS	DOUBLE LOCK FOR METAL	NL-16520		NL-16521		WE RECOMMEND HNL and HNLP				NL-16522	
STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	NLP-375		NLP-500						NLP-750	
LOCK SCREW LINERS	FOR METAL	LL-21100	LL-21200	LL-21300						LL-22400	
LOCK SCREW LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300		NL-22100	NL-22200	NL-22300	NL-22400		
LOCK RINGS		521449	521450A	521450A		521451	521451	521451A	521451	521452	
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	HNLP-213212	HNLP-214808	HNLP-214808		HNLP-224808	HNLP-224808	HNLP-225210	HNLP-225610	HNLP-226410	
HELICAL NURLOCK LINERS	SINGLE LOCK FOR PLASTIC	HNLP-1-213212	HNLP-1-214808	HNLP-1-214808		HNLP-1-224808	HNLP-1-224808	HNLP-1-225210	HNLP-1-225610	HNLP-1-226410	
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	
LINER BUSHINGS		19936	19937	19938		19937	19938	19939	19940	19941	
LOCK SCREWS		16531	16531	16531		16532	16532	16532	16532	16532	

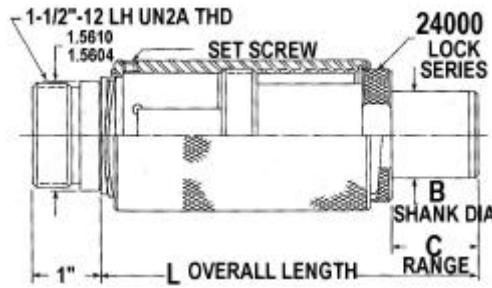
With Shanks and Accessories

AD-33000 SERIES



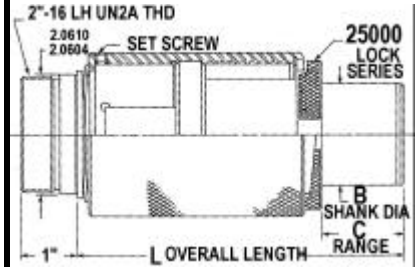
'B' O.D. 5/8 is NEW Part No.

AD-34000 SERIES



'B' O.D.s 13/16 and 1-3/8 are NEW Part No.s

AD-35000 SERIES

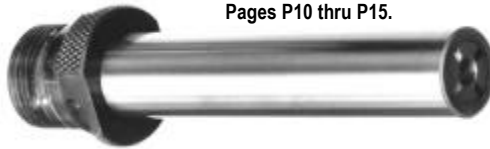


← ADJUST TO REQUIRED LENGTH →

15/32	17/32	19/32	21/32	3/4	13/16		15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16		1-1/32	1-5/32	1-9/32	1-15/32	1-1/2		A MAX A MIN
1/4	1/4	1/4	1/4	1/4	1/4	OAL	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	OAL	3/8	3/8	3/8	3/8	3/8	OAL	B
5/8	3/4	13/16	7/8	1	1-1/8		5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2		1-1/4	1-3/8	1-1/2	1-3/4	2		
AD-33013	AD-33113	AD-33213	AD-33313	AD-33413	AD-33513	6-1/8	AD-34113	AD-34313	AD-34213	AD-34413	AD-34513	AD-34613	AD-34713	AD-34913	AD-34813	6-1/8	AD-35113	AD-35213	AD-35313	AD-35413	AD-35513	6-1/8	3/8 to 1-1/2
AD-33025	AD-33125	AD-33225	AD-33325	AD-33425	AD-33525	7-5/8	AD-34125	AD-34325	AD-34225	AD-34425	AD-34525	AD-34625	AD-34725	AD-34925	AD-34825	7-5/8	AD-35125	AD-35225	AD-35325	AD-35425	AD-35525	7-5/8	1-1/2 to 3
AD-33029-B	AD-33129-B	AD-33229-B	AD-33329-B	AD-33429-B	AD-33529-B	9-1/8	AD-34129-B	AD-34329-B	AD-34229-B	AD-34429-B	AD-34529-B	AD-34629-B	AD-34729-B	AD-34929-B	AD-34829-B	9-1/8	AD-35129-B	AD-35229-B	AD-35329-B	AD-35429-B	AD-35529-B	9-1/8	3 to 4-1/2
AD-33031	AD-33131	AD-33231	AD-33331	AD-33431	AD-33531	10-5/8	AD-34131	AD-34331	AD-34231	AD-34431	AD-34531	AD-34631	AD-34731	AD-34931	AD-34831	10-5/8	AD-35131	AD-35231	AD-35331	AD-35431	AD-35531	10-5/8	4-1/2 to 6
COLLAR AD-33000 ADD I.D. SIZE TO LINERS							COLLAR AD-34000 ADD I.D. SIZE TO LINERS									COLLAR AD-35000 ADD I.D. SIZE TO LINERS					OAL & C LENGTH ABOVE		
5/8	3/4	13/16	7/8	1	1-1/8	LINER	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	LINER	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.	
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624		HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816		HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500		HELICAL NURLOCK LINERS
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624		HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816		WE RECOMMEND						HELICAL NURLOCK LINERS SINGLE
			NL-16523		NL-16524							NL-16525			NL-16526		HNL and HNL P				NL-16533		STD NURLOCK LINERS
			NLP-16523		NLP-16524							NLP-16525			NL P-16526						NLP-16533		STD NURLOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500		LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800		LL-25100	LL-25200	LL-25300	LL-25400	LL-25500		LOCK SCREW LINERS
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500		NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800		LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500		LOCK SCREW LINERS
521453A	521452	521452	521453	521454B	521454A		521451	521452	521452	521453	521453	521454A	521454B	521456A	521457A		521458A	521458A	521458A	521458A	521458A		LOCK RINGS
HNL P-235610	HNL P-236410	HNL P-236410	HNL P-238016	HNL P-239616	HNL P-239624		HNL P-245616	HNL P-246416	HNL P-246416	HNL P-248016	HNL P-248016	HNL P-248816	HNL P-249616	HNL P-2411216	HNL P-2412816		HNL P-25100	HNL P-25200	HNL P-25300	HNL P-25400	HNL P-25500		HELICAL NURLOCK LINERS DOUBLE
HNL P-1-235610	HNL P-1-236410	HNL P-1-236410	HNL P-1-238016	HNL P-1-239616	HNL P-1-239624		HNL P-1-245616	HNL P-1-246416	HNL P-1-246416	HNL P-1-248016	HNL P-1-248016	HNL P-1-248816	HNL P-1-249616	HNL P-1-2411216	HNL P-1-2412816								HELICAL NURLOCK LINERS SINGLE
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2		TLC-3	TLC-3	TLC-3	TLC-3	TLC-3		TAPERED NURLOCK CLAMPS
19940	19942	19943	19944	19945	19946		19940	19942	19943	19944	19945	19946	19952	19954	19955		19952	19954	19955	19956	19957		LINER BUSHINGS
16532	16532	16532	16532	16532	16532		16532	16532	16532	16532	16532	16532	16532	16532	16532		16530	16530	16530	16530	16530		LOCK SCREWS

Helical Nurlock Exit End Coolant

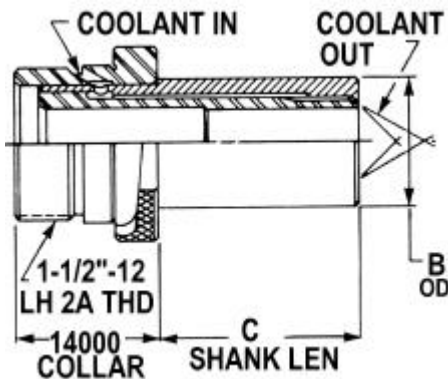
See complete DIMENSIONAL TOLERANCES
Pages P10 thru P15.



Helical Nurlock EXIT END Coolant Adapter Tip

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+ .0001 TO + .0004
OVER 1/4 TO 3/4	+ .0001 TO + .0005
OVER 3/4 TO 1-1/2	+ .0002 TO + .0006
TOLERANCE ON 'B' DIM. — .0002 TO — .0005	

EXIT END COOLANT DRILL BUSHING TIPS



**ALL COOLANT IS CONCENTRATED AT
EXIT END ON HOTTEST PART OF
DRILL.**

COLLAR DIMENSIONS ARE THE SAME AS 21000
THRU 25000 SERIES SHOWN ON PREVIOUS (2)
PAGES IN THIS SECTION. LEFT SIDE OF 21000
PAGE SHOWS STYLES AVAILABLE FOR EXIT
END COOLANT, WITH THE EXCEPTION OF
CONTOUR SURFACES TIPS.

UNITED IMAGINEERING

EXIT END COOLANT FEATURES:

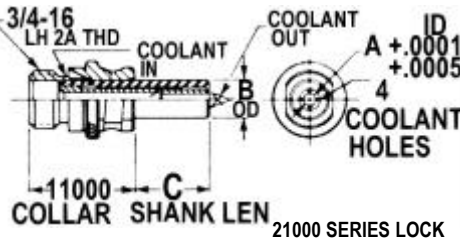
Directs coolant thru the shank, flooding
the hottest and most vulnerable portion
of the cutting tool as it exits the shank
and enters the work piece.

Normal cutting tool life is increased many
times.

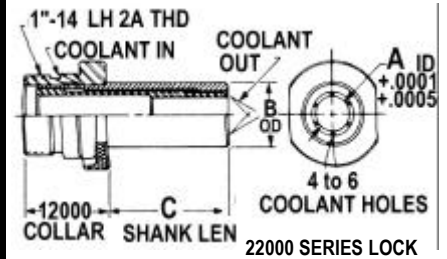
LOCKING ACCESSORIES in this Section



A-41000 SERIES



A-42000 SERIES

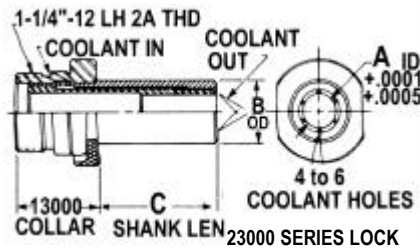


(DRILL) A	MAX	5/32	7/32	9/32	7/32	9/32	11/32	23/64	23/64
A	MIN	3/32	3/32	3/32	3/16	3/16	3/16	3/16	3/16
(SHANK OD) B		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C	3/8	A-41101	A-41201	A-41301	A-42101	A-42201	A-42301	A-42401	A-42501
	1/2	A-41102	A-41202	A-41302	A-42102	A-42202	A-42302	A-42402	A-42502
L	5/8	A-41103	A-41203	A-41303	A-42103	A-42203	A-42303	A-42403	A-42503
E	3/4	A-41104	A-41204	A-41304	A-42104	A-42204	A-42304	A-42404	A-42504
N	7/8	A-41105	A-41205	A-41305	A-42105	A-42205	A-42305	A-42405	A-42505
G	1	A-41106	A-41206	A-41306	A-42106	A-42206	A-42306	A-42406	A-42506
T	1-1/16	A-41107	A-41207	A-41307	A-42107	A-42207	A-42307	A-42407	A-42507
H	1-1/8	A-41108	A-41208	A-41308	A-42108	A-42208	A-42308	A-42408	A-42508
	1-3/16	A-41109	A-41209	A-41309	A-42109	A-42209	A-42309	A-42409	A-42509
F	1-1/4	A-41110	A-41210	A-41310	A-42110	A-42210	A-42310	A-42410	A-42510
R	1-3/8	A-41111	A-41211	A-41311	A-42111	A-42211	A-42311	A-42411	A-42511
O	1-7/16	A-41112	A-41212	A-41312	A-42112	A-42212	A-42312	A-42412	A-42512
M	1-1/2	A-41113	A-41213	A-41313	A-42113	A-42213	A-42313	A-42413	A-42513
	1-5/8	A-41114	A-41214	A-41314	A-42114	A-42214	A-42314	A-42414	A-42514
C	1-3/4	A-41115	A-41215	A-41315	A-42115	A-42215	A-42315	A-42415	A-42515
O	1-7/8	A-41116	A-41216	A-41316	A-42116	A-42216	A-42316	A-42416	A-42516
L	1-15/16	A-41117	A-41217	A-41317	A-42117	A-42217	A-42317	A-42417	A-42517
L	2	A-41118	A-41218	A-41318	A-42118	A-42218	A-42318	A-42418	A-42518
A	2-1/8	STYLES AVAILABLE ALSO INCLUDE CHIP SLOT CHIP CUTTER EASE IN RADIUS CARBIDE ULTRA III Ref: Left side this page.			A-42119	A-42219	A-42319	A-42419	A-42519
R	2-1/4				A-42120	A-42220	A-42320	A-42420	A-42520
	2-3/8				A-42121	A-42221	A-42321	A-42421	A-42521
I	2-1/2				A-42122	A-42222	A-42322	A-42422	A-42522
N	2-5/8	Ref: Left side this page.			A-42123	A-42223	A-42323	A-42423	A-42523
	2-3/4				A-42124	A-42224	A-42324	A-42424	A-42524
I	3				A-42125	A-42225	A-42325	A-42425	A-42525
N	3-1/4	ORDERING INFORMATION UDB - A - 41 3 01			SPECIFY ID, ADDING HI-SPEED CLEARANCE REQUIRED AS 4 PLACE DECIMAL GIVE LAST TWO No.s CORRESPONDING TO 'C' SHANK OD CORRESPONDING TO 'B' LOCKING SERIES COLLAR 'A' MEANS ADAPTER SUPPLIED WITH COLLAR				
C	3-1/2								
H	3-3/4								
E	4								
S	5								
	6								

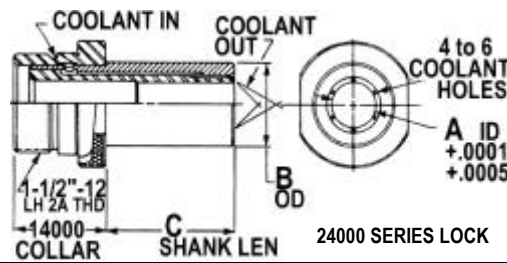
COLLAR A-41000 ADD I.D. SIZE TO LINERS				COLLAR A-42000 ADD I.D. SIZE TO LINERS				
LINER I.D.	3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
HELICAL NURLOCK LINERS	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	NL-16520		NL-16521	WE RECOMMEND HNL and HNLP			NL-16522	
STD NURLOCK LINERS	NLP-375		NLP-500					NLP-750
LOCK SCREW LINERS	LL-21100	LL-21200	LL-21300				LL-22400	
LOCK SCREW LINERS	NL-21100	NL-21200	NL-21300	NL-22100	NL-	NL-22300	NL-22400	
LOCK RINGS	UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452
HELICAL NURLOCK LINERS	HNLP-213212	HNLP-214808	HNLP-214808	HNLP-224808	HNLP-224808	HNLP-225210	HNLP-225610	HNLP-226410
HELICAL NURLOCK LINERS	HNLP-1-213212	HNLP-1-214808	HNLP-1-214808	HNLP-1-224808	HNLP-1-224808	HNLP-1-225210	HNLP-1-225610	HNLP-1-226410
TAPERED NURLOCK CLAMPS	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS	19936	19937	19938	19937	19938	19939	19940	19941
LOCK SCREWS	16531	16531	16531	16532	16532	16532	16532	16532

Shanks and Accessories Exit End Coolant Series

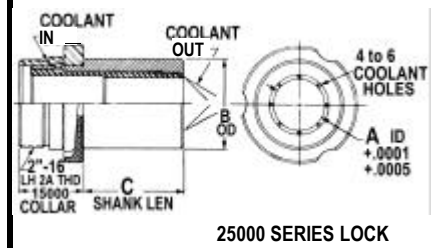
A-43000 SERIES



A-44000 SERIES



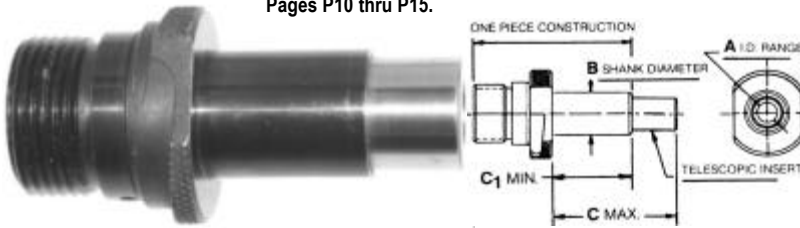
A-45000 SERIES



15/32 1/4	1/2 1/4	9/16 1/4	5/8 1/4	21/32 1/4	21/32 1/4	3/8 5/16	1/2 5/16	19/32 5/16	5/8 5/16	3/4 5/16	7/8 5/16	7/8 5/16	7/8 5/16	7/8 5/16	53/64 3/8	61/64 3/8	1-5/64 3/8	1-21/64 3/8	1-11/16 3/8	A MAX A	
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	B	
NEW O.D. BELOW								NEW O.D. BELOW					NEW O.D. BELOW							3/8 1/2 5/8 3/4 7/8	
A-43004	A-43104	A-43204	A-43304	A-43404	A-43504	A-44104	A-44304	A-44204	A-44404	A-44504	A-44604	A-44704	A-44904	A-44804							
A-43005	A-43105	A-43205	A-43305	A-43405	A-43505	A-44105	A-44305	A-44205	A-44405	A-44505	A-44605	A-44705	A-44905	A-44805							
A-43006	A-43106	A-43206	A-43306	A-43406	A-43506	A-44106	A-44306	A-44206	A-44406	A-44506	A-44606	A-44706	A-44906	A-44806	A-45106	A-45206	A-45306	A-45406	A-45506	1	
A-43007	A-43107	A-43207	A-43307	A-43407	A-43507	A-44107	A-44307	A-44207	A-44407	A-44507	A-44607	A-44707	A-44907	A-44807	A-45107	A-45207	A-45307	A-45407	A-45507	1-1/16	
A-43008	A-43108	A-43208	A-43308	A-43408	A-43508	A-44108	A-44308	A-44208	A-44408	A-44508	A-44608	A-44708	A-44908	A-44808	A-45108	A-45208	A-45308	A-45408	A-45508	1-1/8	
A-43009	A-43109	A-43209	A-43309	A-43409	A-43509	A-44109	A-44309	A-44209	A-44409	A-44509	A-44609	A-44709	A-44909	A-44809	A-45109	A-45209	A-45309	A-45409	A-45509	1-3/16	
A-43010	A-43110	A-43210	A-43310	A-43410	A-43510	A-44110	A-44310	A-44210	A-44410	A-44510	A-44610	A-44710	A-44910	A-44810	A-45110	A-45210	A-45310	A-45410	A-45510	1-1/4	
A-43011	A-43111	A-43211	A-43311	A-43411	A-43511	A-44111	A-44311	A-44211	A-44411	A-44511	A-44611	A-44711	A-44911	A-44811	A-45111	A-45211	A-45311	A-45411	A-45511	1-3/8	
A-43012	A-43112	A-43212	A-43312	A-43412	A-43512	A-44112	A-44312	A-44212	A-44412	A-44512	A-44612	A-44712	A-44912	A-44812	A-45112	A-45212	A-45312	A-45412	A-45512	1-7/16	
A-43013	A-43113	A-43213	A-43313	A-43413	A-43513	A-44113	A-44313	A-44213	A-44413	A-44513	A-44613	A-44713	A-44913	A-44813	A-45113	A-45213	A-45313	A-45413	A-45513	1-1/2	
A-43014	A-43114	A-43214	A-43314	A-43414	A-43514	A-44114	A-44314	A-44214	A-44414	A-44514	A-44614	A-44714	A-44914	A-44814	A-45114	A-45214	A-45314	A-45414	A-45514	1-5/8	
A-43015	A-43115	A-43215	A-43315	A-43415	A-43515	A-44115	A-44315	A-44215	A-44415	A-44515	A-44615	A-44715	A-44915	A-44815	A-45115	A-45215	A-45315	A-45415	A-45515	1-3/4	
A-43016	A-43116	A-43216	A-43316	A-43416	A-43516	A-44116	A-44316	A-44216	A-44416	A-44516	A-44616	A-44716	A-44916	A-44816	A-45116	A-45216	A-45316	A-45416	A-45516	1-7/8	
A-43017	A-43117	A-43217	A-43317	A-43417	A-43517	A-44117	A-44317	A-44217	A-44417	A-44517	A-44617	A-44717	A-44917	A-44817	A-45117	A-45217	A-45317	A-45417	A-45517	1-15/16	
A-43018	A-43118	A-43218	A-43318	A-43418	A-43518	A-44118	A-44318	A-44218	A-44418	A-44518	A-44618	A-44718	A-44918	A-44818	A-45118	A-45218	A-45318	A-45418	A-45518	2	
A-43019	A-43119	A-43219	A-43319	A-43419	A-43519	A-44119	A-44319	A-44219	A-44419	A-44519	A-44619	A-44719	A-44919	A-44819	A-45119	A-45219	A-45319	A-45419	A-45519	2-1/8	
A-43020	A-43120	A-43220	A-43320	A-43420	A-43520	A-44120	A-44320	A-44220	A-44420	A-44520	A-44620	A-44720	A-44920	A-44820	A-45120	A-45220	A-45320	A-45420	A-45520	2-1/4	
A-43021	A-43121	A-43221	A-43321	A-43421	A-43521	A-44121	A-44321	A-44221	A-44421	A-44521	A-44621	A-44721	A-44921	A-44821	A-45121	A-45221	A-45321	A-45421	A-45521	2-3/8	
A-43022	A-43122	A-43222	A-43322	A-43422	A-43522	A-44122	A-44322	A-44222	A-44422	A-44522	A-44622	A-44722	A-44922	A-44822	A-45122	A-45222	A-45322	A-45422	A-45522	2-1/2	
A-43023	A-43123	A-43223	A-43323	A-43423	A-43523	A-44123	A-44323	A-44223	A-44423	A-44523	A-44623	A-44723	A-44923	A-44823	A-45123	A-45223	A-45323	A-45423	A-45523	2-5/8	
A-43024	A-43124	A-43224	A-43324	A-43424	A-43524	A-44124	A-44324	A-44224	A-44424	A-44524	A-44624	A-44724	A-44924	A-44824	A-45124	A-45224	A-45324	A-45424	A-45524	2-3/4	
A-43025	A-43125	A-43225	A-43325	A-43425	A-43525	A-44125	A-44325	A-44225	A-44425	A-44525	A-44625	A-44725	A-44925	A-44825	A-45125	A-45225	A-45325	A-45425	A-45525	3	
A-43026	A-43126	A-43226	A-43326	A-43426	A-43526	A-44126	A-44326	A-44226	A-44426	A-44526	A-44626	A-44726	A-44926	A-44826	A-45126	A-45226	A-45326	A-45426	A-45526	3-1/4	
A-43027	A-43127	A-43227	A-43327	A-43427	A-43527	A-44127	A-44327	A-44227	A-44427	A-44527	A-44627	A-44727	A-44927	A-44827	A-45127	A-45227	A-45327	A-45427	A-45527	3-1/2	
A-43028	A-43128	A-43228	A-43328	A-43428	A-43528	A-44128	A-44328	A-44228	A-44428	A-44528	A-44628	A-44728	A-44928	A-44828	A-45128	A-45228	A-45328	A-45428	A-45528	3-3/4	
A-43029	A-43129	A-43229	A-43329	A-43429	A-43529	A-44129	A-44329	A-44229	A-44429	A-44529	A-44629	A-44729	A-44929	A-44829	A-45129	A-45229	A-45329	A-45429	A-45529	4	
						A-44130	A-44330	A-44230	A-44430	A-44530	A-44630	A-44730	A-44930	A-44830	A-45130	A-45230	A-45330	A-45430	A-45530	5	
						A-44131	A-44331	A-44231	A-44431	A-44531	A-44631	A-44731	A-44931	A-44831	A-45131	A-45231	A-45331	A-45431	A-45531	6	
COLLAR A-43000 ADD I.D. SIZE TO LINERS						COLLAR A-44000 ADD I.D. SIZE TO LINERS						COLLAR A-45000 ADD I.D. SIZE TO LINERS						C LEN ABOVE			
5/8	3/4	13/16	7/8	1	1-1/8	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	LINER I.D.	
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NUT LOCK LINERS	
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND						HELICAL NUT LOCK SINGLE
			NL-16523		NL-16524						NL-16525			NL-16526	HNL and HNL P					NL-16533	STD NUT LOCK LINERS
			NLP-16523		NLP-16524						NLP-16525			NLP-16526						NLP-16533	STD NUT LOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LOCK LINERS	
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LIP-25100	LIP-25200	LIP-25300	LIP-25400	LIP-25500	LOCK LINERS	
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521451	UDB-521452	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456A	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	LOCK RINGS	
HNL P-235610	HNL P-236410	HNL P-236410	HNL P-238016	HNL P-239616	HNL P-239624	HNL P-245616	HNL P-246416	HNL P-246416	HNL P-248016	HNL P-248016	HNL P-248816	HNL P-249616	HNL P-2411216	HNL P-2412816	HNL P-25100	HNL P-25200	HNL P-25300	HNL P-25400	HNL P-25500	HELICAL NUT LOCK LINERS DOUBLE	
HNL P-1-235610	HNL P-1-236410	HNL P-1-236410	HNL P-1-238016	HNL P-1-239616	HNL P-1-239624	HNL P-1-245616	HNL P-1-246416	HNL P-1-246416	HNL P-1-248016	HNL P-1-248016	HNL P-1-248816	HNL P-1-249616	HNL P-1-2411216	HNL P-1-2412816						HELICAL NUT LOCK LINERS SINGLE	
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	CLAMPED CLAMPS	
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	LINER BUSHINGS	
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	LOCK SCREWS	

See complete DIMENSIONAL TOLERANCES
Pages P10 thru P15.

Nurlock Telescoping Bushing Tips



TELESCOPING COLLAR AND SHANK 50,000 SERIES

The 51000 thru 55000 Telescopic Nurlock Series is designed for use with new fixtures.

This series has closer tolerances. The one piece collar and shank construction provides superior support and precision guidance.

Fewer lengths are required thus inventory reduced.

Each insert has 1/8" minimum pre-load — 1/8" extension beyond charted 'C' maximum length.

Closer I.D. tolerances are available on request.

Shank ends are precision ground square to O.D. and I.D. to insure flush contact with workpiece.

Used for extremely close tolerance holes, using coolant air fluid chucks and spindles.

Specify UNITED's vacuum nosepieces, air-fluid chucks and reducers to insure your finished hole tolerances.

Designed to fit any conventional nosepiece for positive feed motors, Quackenbush, Zephyr, Aro, Gardner-Denver, Dotco, Spacematic, etc.

Portable high speed drilling at its very best!

ORDERING INFORMATION: Specify the Part No. required. Include Part Description and Drill Size (4 place decimal).

For Collar Only, omit prefix 'A' and add 'C.'

For Insert Only, omit prefix 'A' and add suffix 'I' plus 4 place decimal I.D. size. Example: UDB-52731-I (.2500)

For Spring Only, add suffix 'S.' Example: UDB-52731-S

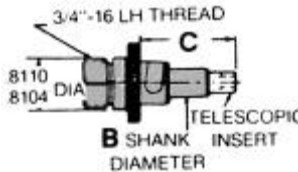
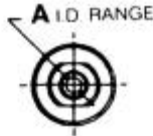
UDB - A - 52731 (.2500)



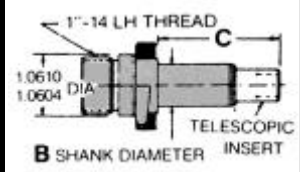
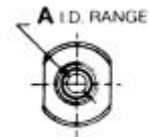
LOCKING ACCESSORIES In this Section



A-51000 3/4"-16 LH THD



A-52000 1"-14 LH THD



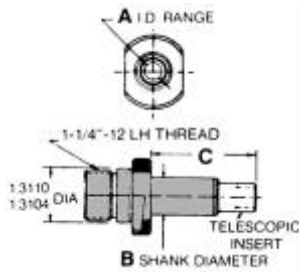
A	MAX	.136	.187	.234	.316	.375	.421	.421
DRILL SIZE	MIN	.093	.093	.093	.187	.187	.187	.187
B	SHANK O.D.	3/8	7/16	1/2	5/8	3/4	13/16	7/8
C1 MIN	C MAX	A51106	A51206	A51306	A52406	A52506	A52606	A52706
5/8	1"	A51113	A51213	A51313	A52413	A52513	A52613	A52713
7/8	1-1/2"	A51118	A51218	A51318	A52418	A52518	A52618	A52718
1-3/8	2"	A51122	A51222	A51322	A52422	A52522	A52622	A52722
1-7/8	2-1/2"	A51125	A51225	A51325	A52425	A52525	A52625	A52725
2-1/4	3"	A51127	A51227	A51327	A52427	A52527	A52627	A52727
2-3/4	3-1/2"	A51129	A51229	A51329	A52429	A52529	A52629	A52729
3-1/4	4"	A51129B	A51229B	A51329B	A52429B	A52529B	A52629B	A52729B
3-3/4	4-1/2"	A51130	A51230	A51330	A52430	A52530	A52630	A52730
4-1/4	5"	A51130B	A51230B	A51330B	A52430B	A52530B	A52630B	A52730B
4-3/4	5-1/2"	A51131	A51231	A51331	A52431	A52531	A52631	A52731
5-1/4	6"	A51131	A51231	A51331	A52431	A52531	A52631	A52731
C1 MIN	C MAX	COLLAR A-51000				COLLAR A-52000		
TELESCOPIC RANGE	SEE ABOVE ON LEFT	ADD I.D. SIZE TO LINERS				ADD I.D. SIZE TO LINERS		
LINER I.D.		3/8	7/16	1/2	5/8	3/4	13/16	7/8
HELICAL NURLOCK LINERS	DOUBLE LOCK METAL	HNL-213212	HNL-214808	HNL-214808	HNL-225610	HNL-226410	HNL-226416	HNL-227216
HELICAL NURLOCK LINERS	SINGLE LOCK METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-225610	HNL-1-226410	HNL-1-226416	HNL-1-227216
STD NURLOCK LINERS	DOUBLE LOCK METAL	NL-16520		NL-16521	NL-16522			
STD NURLOCK LINERS	DOUBLE LOCK PLASTIC	NLP-375		NLP-500		NLP-750		
LOCK SCREW LINERS	FOR METAL	LL-21100	LL-21200	LL-21300	LL-22400			
LOCK SCREW LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22400			
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521452	UDB-521452	UDB-521453A
HELICAL NURLOCK LINERS	DOUBLE LOCK PLASTIC	HNLP-213212	HNLP-214808	HNLP-214808	HNLP-225610	HNLP-226410	HNLP-226416	HNLP-227216
HELICAL NURLOCK LINERS	SINGLE LOCK PLASTIC	HNLP-1-213212	HNLP-1-214808	HNLP-1-214808	HNLP-1-225610	HNLP-1-226410	HNLP-1-226416	HNLP-1-227216
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19940	19941	19943	19944
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532

50,000 Series

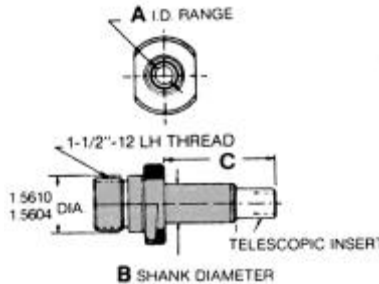
Standard

50,000 Series Telescopic

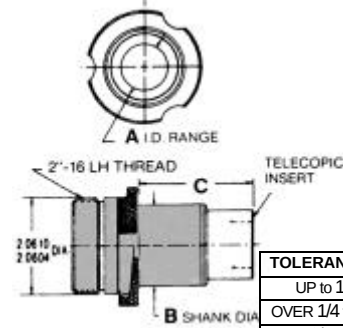
A-53000 1-1/4"-12 LH THD



A-54000 1-1/2"-12 LH THD



A-55000 2"-16 LH THD



**IDEAL FOR
OIL HOLE
AND GUN
DRILLING**

TOLERANCE on 'A' DIMENSION	
UP to 1/4	+0.001 to +0.004
OVER 1/4 to 3/4	+0.001 to +0.005
OVER 3/4 to 1-1/2	+0.002 to +0.006
TOLERANCE on 'B' DIM.	
—.0002 to —.0005	

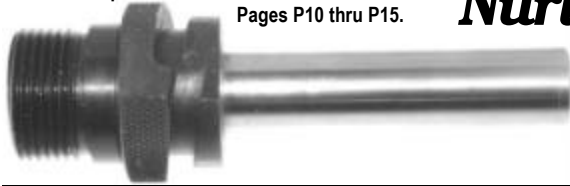
'B' O.D. 5/8 is NEW Part No.

'B' O.D.s 13/16 and 1-3/8 are NEW Part No.s

.421 .187	.437 .187	.468 .187	.500 .187	.593 .187	.718 .187	.812 .187	.531 .312	.593 .312	.718 .312	.812 .312	.906 .312	1.062 .312	.812 .375	.906 .375	1.062 .375	1.250 .375	1.403 .375	1.437 .375	MAX MIN	A DRILL SIZE
5/8	3/4	13/16	7/8	1"	1-1/8	1-1/4	13/16	1"	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2"	2-1/4	SHANK O.D.	B
A53006	A53106	A53206	A53306	A53406	A53506	A53606	A54206	A54506	A54606	A54706	A54906	A54806	A5510	A55206	A55306	A55406	A55506	A55606	C1 MIN 5/8	C MAX 1"
A53013	A53113	A53213	A53313	A53413	A53513	A53613	A54213	A54513	A54613	A54713	A54913	A54813	A5511	A55213	A55313	A55413	A55513	A55613	7/8	1-1/2
A53018	A53118	A53218	A53318	A53418	A53518	A53618	A54218	A54518	A54618	A54718	A54918	A54818	A5511	A55218	A55318	A55418	A55518	A55618	1-3/8	2"
A53022	A53122	A53222	A53322	A53422	A53522	A53622	A54222	A54522	A54622	A54722	A54922	A54822	A5512	A55222	A55322	A55422	A55522	A55622	1-7/8	2-1/2
A53025	A53125	A53225	A53325	A53425	A53525	A53625	A54225	A54525	A54625	A54725	A54925	A54825	A5512	A55225	A55325	A55425	A55525	A55625	2-1/4	3"
A53027	A53127	A53227	A53327	A53427	A53527	A53627	A54227	A54527	A54627	A54727	A54927	A54827	A55127	A55227	A55327	A55427	A55527	A55627	2-3/4	3-1/2
A53029	A53129	A53229	A53329	A53429	A53529	A53629	A54229	A54529	A54629	A54729	A54929	A54829	A55129	A55229	A55329	A55429	A55529	A55629	3-1/4	4"
A53029B	A53129B	A53229B	A53329B	A53429B	A53529B	A53629B	A54229B	A54529B	A54629B	A54729B	A54929B	A54829B	A55129B	A55229B	A55329B	A55429B	A55529B	A55629B	3-3/4	4-1/2
A53030	A53130	A53230	A53330	A53430	A53530	A53630	A54230	A54530	A54630	A54730	A54930	A54830	A55130	A55230	A55330	A55430	A55530	A55630	4-1/4	5"
A53030B	A53130B	A53230B	A53330B	A53430B	A53530B	A53630B	A54230B	A54530B	A54630B	A54730B	A54930B	A54830B	A55130B	A55230B	A55330B	A55430B	A55530B	A55630B	4-3/4	5-1/2
A53031	A53131	A53231	A53331	A53431	A53531	A53631	A54231	A54531	A54631	A54731	A54931	A54831	A55131	A55231	A55331	A55431	A55531	A55631	5-1/4	6"
COLLAR A-53000 ADD I.D. SIZE TO LINERS							COLLAR A-54000 ADD I.D. SIZE TO LINERS						COLLAR A-55000 ADD I.D. SIZE TO LINERS						C1 MIN 5/8C MAX 1"	
5/8	3/4	13/16	7/8	1"	1-1/8	1-1/4	13/16	1"	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2"	2-1/4	LINER I.D.	
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-238816	HNL-239616	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HNL-25600	HELICAL NURLOCK LINERS	DOUBLE LOCK FOR METAL
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-238816	HNL-1-239616	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND						HELICAL NURLOCK LINERS	SINGLE LOCK FOR METAL
					NL-16524				NL-16525			NL-16526	HNL and HNLP				NL-16533		STD NURLOCK LINERS	DOUBLE LOCK METAL
					NLP-16524				NLP-16525			NLP-16526					NLP-16533		STD NURLOCK LINERS	DOUBLE LOCK PLASTIC
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500		LL-24500	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	LL-25600	LOCK SCREW LINERS	FOR METAL
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500		NL-24500	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	LLP-25600	LOCK SCREW LINERS	FOR PLASTIC
UDB-521453A	UDB-521452	UDB-521452	UDB-521454B	UDB-521454B	UDB-521454A	UDB-521454	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456A	UDB-521457A	UDB-521458	UDB-521458	UDB-521458	UDB-521458	UDB-521458A	UDB-521458A	LOCK RINGS	
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-238816	HNLP-239616	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HNLP-25600	HELICAL NURLOCK LINERS	DOUBLE LOCK PLASTIC
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-238816	HNLP-1-239616	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816							HELICAL NURLOCK LINERS	SINGLE LOCK PLASTIC
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TAPERED NURLOCK CLAMPS	
19940	19942	19943	19944	19945	19946	19952	19945	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	19958	LINER BUSHINGS	
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	16530	LOCK SCREWS	

See complete DIMENSIONAL TOLERANCES
Pages P10 thru P15.

Nurlock Telescoping Bushing Tips



TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+ .0001 TO + .0004
OVER 1/4 TO 3/4	+ .0001 TO + .0005
OVER 3/4 TO 1-1/2	+ .0002 TO + .0006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	

TELESCOPING COLLAR AND SHANK 60,000 SERIES

The 61000 thru 65000 Telescopic Nurlock Series is designed for use on existing fixtures.

This series used for extremely close tolerances.

Manufactured for use with coolant air fluid chucks and spindles.

Each telescopic insert has 1/8" minimum pre-load or 1/8" extension beyond charted 'C' maximum length.

Shank ends are precision ground square to O.D. and I.D. to insure flush contact with workpiece.

Specify **UNITED's** vacuum nosepieces, air-fluid chucks and reducers to insure your finished hole tolerances.

Designed to fit any conventional nosepiece for positive feed motors, Quackenbush, Zephyr, Aro, Gardner-Denver, Dotco, Spacematic, etc.

Portable high speed drilling at its very best!

ORDERING INFORMATION: Specify the Part No. required. Include Part Description and Drill Size (4 place decimal).

For Collar Only, omit prefix 'A' and add 'C.'

For Insert Only, omit prefix 'A' and add suffix 'I' plus 4 place decimal I.D. size.

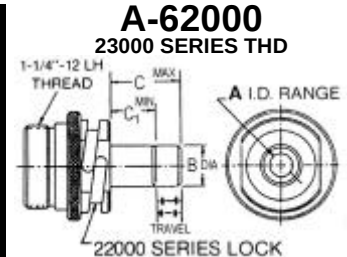
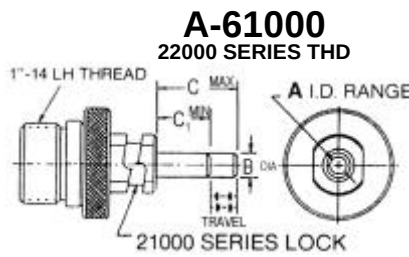
Example: UDB-62531-I (.2500)

For Spring Only, add suffix 'S.' Example: UDB-62531-S

UDB - A - 62531 (.2500)



LOCKING ACCESSORIES in this Section



(DRILL) A	.2500	.3125	.3750	.2812	.3438	.4062	.4688	.5312
A MIN	.0938	.0938	.0938	.1875	.1875	.1875	.1875	.1875
(SHANK OD) B	3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
C1 MIN FLUSH	C MAX TO 1/2	A-61102	A-61202	A-61302	A-62102	A-62202	A-62302	A-62402
1/8	5/8	A-61103	A-61203	A-61303	A-62103	A-62203	A-62303	A-62403
1/4	3/4	A-61104	A-61204	A-61304	A-62104	A-62204	A-62304	A-62404
3/8	7/8	A-61105	A-61205	A-61305	A-62105	A-62205	A-62305	A-62405
1/2	1"	A-61106	A-61206	A-61306	A-62106	A-62206	A-62306	A-62406
9/16	1-1/16	A-61107	A-61207	A-61307	A-62107	A-62207	A-62307	A-62407
5/8	1-1/8	A-61108	A-61208	A-61308	A-62108	A-62208	A-62308	A-62408
11/16	1-3/16	A-61109	A-61209	A-61309	A-62109	A-62209	A-62309	A-62409
3/4	1-1/4	A-61110	A-61210	A-61310	A-62110	A-62210	A-62310	A-62410
7/8	1-3/8	A-61111	A-61211	A-61311	A-62111	A-62211	A-62311	A-62411
15/16	1-7/16	A-61112	A-61212	A-61312	A-62112	A-62212	A-62312	A-62412
1"	1-1/2	A-61113	A-61213	A-61313	A-62113	A-62213	A-62313	A-62413
1-1/8	1-5/8	A-61114	A-61214	A-61314	A-62114	A-62214	A-62314	A-62414
1-1/4	1-3/4	A-61115	A-61215	A-61315	A-62115	A-62215	A-62315	A-62415
1-3/8	1-7/8	A-61116	A-61216	A-61316	A-62116	A-62216	A-62316	A-62416
1-7/16	1-15/16	A-61117	A-61217	A-61317	A-62117	A-62217	A-62317	A-62417
1-1/2	2"	A-61118	A-61218	A-61318	A-62118	A-62218	A-62318	A-62418
1-5/8	2-1/8	A-61119	A-61219	A-61319	A-62119	A-62219	A-62319	A-62419
1-3/4	2-1/4	A-61120	A-61220	A-61320	A-62120	A-62220	A-62320	A-62420
1-7/8	2-3/8	A-61121	A-61221	A-61321	A-62121	A-62221	A-62321	A-62421
2"	2-1/2	A-61122	A-61222	A-61322	A-62122	A-62222	A-62322	A-62422
2-1/8	2-5/8	A-61123	A-61223	A-61323	A-62123	A-62223	A-62323	A-62423
2-1/4	2-3/4	A-61124	A-61224	A-61324	A-62124	A-62224	A-62324	A-62424
2-1/2	3"	A-61125	A-61225	A-61325	A-62125	A-62225	A-62325	A-62425
2-3/4	3-1/4	A-61126	A-61226	A-61326	A-62126	A-62226	A-62326	A-62426
3"	3-1/2	A-61127	A-61227	A-61327	A-62127	A-62227	A-62327	A-62427
3-1/4	3-3/4	A-61128	A-61228	A-61328	A-62128	A-62228	A-62328	A-62428
3-1/2	4"	A-61129	A-61229	A-61329	A-62129	A-62229	A-62329	A-62429
3-3/4	4-1/4	A-61129A	A-61229A	A-61329A	A-62129A	A-62229A	A-62329A	A-62429A
4"	4-1/2	A-61129B	A-61229B	A-61329B	A-62129B	A-62229B	A-62329B	A-62429B
4-1/4	4-3/4	A-61129C	A-61229C	A-61329C	A-62129C	A-62229C	A-62329C	A-62429C
4-1/2	5"	A-61130	A-61230	A-61330	A-62130	A-62230	A-62330	A-62430
4-3/4	5-1/4	A-61130A	A-61230A	A-61330A	A-62130A	A-62230A	A-62330A	A-62430A
5"	5-1/2	A-61130B	A-61230B	A-61330B	A-62130B	A-62230B	A-62330B	A-62430B
5-1/4	5-3/4	A-61130C	A-61230C	A-61330C	A-62130C	A-62230C	A-62330C	A-62430C
5-1/2	6"	A-61131	A-61231	A-61331	A-62131	A-62231	A-62331	A-62431
C1 MIN	C MAX TELESCOPIC RANGE	COLLAR A-61000 ADD I.D. SIZE TO LINERS			COLLAR A-62000 ADD I.D. SIZE TO LINERS			
LINER I.D.	3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4
HELICAL NURLOCK LINERS	DOUBLE LOCK METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-225210	HNL-225610	HNL-226410
HELICAL NURLOCK LINERS	SINGLE LOCK METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410
STD NURLOCK LINERS	DOUBLE LOCK FOR METAL	NL-16520		NL-16521	WE RECOMMEND HNL and HNLP			NL-16522
STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	NLP-375		NLP-500				NLP-750
LOCK SCREW LINERS	FOR METAL	LL-21100	LL-21200	LL-21300				LL-22400
LOCK SCREW LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451
HELICAL NURLOCK LINERS	DOUBLE LOCK PLASTIC	HNLP-213212	HNLP-214808	HNLP-214808	HNLP-224808	HNLP-225210	HNLP-225610	HNLP-226410
HELICAL NURLOCK LINERS	SINGLE LOCK PLASTIC	HNLP-1-213212	HNLP-1-214808	HNLP-1-214808	HNLP-1-224808	HNLP-1-225210	HNLP-1-225610	HNLP-1-226410
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19941
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532

60,000 Series

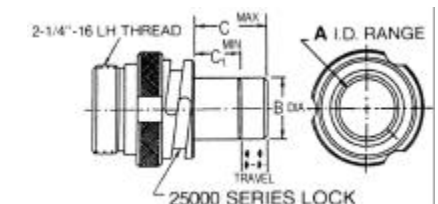
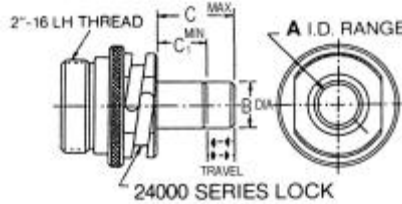
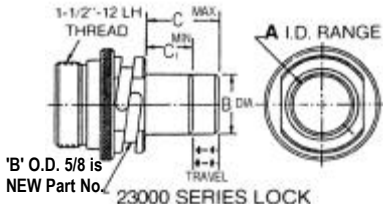
With Broad I.D. Range

60,000 Series Telescopic

A-63000 24000 SERIES THD

A-64000 25000 SERIES THD

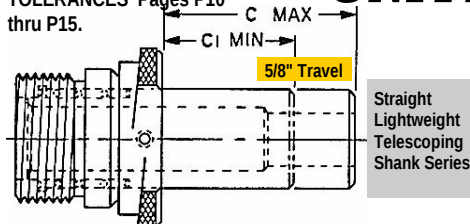
A-65000 26000 SERIES THD



'B' O.D.s
13/16 and
1-3/8 are
NEW Part
No.s

.4688 .2500	.5312 .2500	.5938 .2500	.6562 .2500	.7188 .2500	.7500 .2500	.4688 .3125	.5312 .3125	.5937 .3125	.6562 .3125	.7812 .3125	.9062 .3125	.9375 .3125	1.1250 .3125	1.1875 .3125	1.032 .3750	1.1562 .3750	1.2812 .3750	1.4688 .3750	1.5000 .3750	A MAX A MIN	B SHANK O.D. C1 MIN C MAX TO 1/2	
5/8	3/4	13/16	7/8	1"	1-1/8	5/8	3/4	13/16	7/8	1"	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2"			
A-63002	A-63102	A-63202	A-63302	A-63402	A-63502	A-64102	A-64302	A-64202	A-64402	A-64502	A-64602	A-64702	A-64902	A-64802	A-65102	A-65202	A-65302	A-65402	A-65502			
A-63003	A-63103	A-63203	A-63303	A-63403	A-63503	A-64103	A-64303	A-64203	A-64403	A-64503	A-64603	A-64703	A-64903	A-64803	A-65103	A-65203	A-65303	A-65403	A-65503	1/8	5/8	
A-63004	A-63104	A-63204	A-63304	A-63404	A-63504	A-64104	A-64304	A-64204	A-64404	A-64504	A-64604	A-64704	A-64904	A-64804	A-65104	A-65204	A-65304	A-65404	A-65504	1/4	3/4	
A-63005	A-63105	A-63205	A-63305	A-63405	A-63505	A-64105	A-64305	A-64205	A-64405	A-64505	A-64605	A-64705	A-64905	A-64805	A-65105	A-65205	A-65305	A-65405	A-65505	3/8	7/8	
A-63006	A-63106	A-63206	A-63306	A-63406	A-63506	A-64106	A-64306	A-64206	A-64406	A-64506	A-64606	A-64706	A-64906	A-64806	A-65106	A-65206	A-65306	A-65406	A-65506	1/2	1"	
A-63007	A-63107	A-63207	A-63307	A-63407	A-63507	A-64107	A-64307	A-64207	A-64407	A-64507	A-64607	A-64707	A-64907	A-64807	A-65107	A-65207	A-65307	A-65407	A-65507	9/16	1-1/16	
A-63008	A-63108	A-63208	A-63308	A-63408	A-63508	A-64108	A-64308	A-64208	A-64408	A-64508	A-64608	A-64708	A-64908	A-64808	A-65108	A-65208	A-65308	A-65408	A-65508	5/8	1-1/8	
A-63009	A-63109	A-63209	A-63309	A-63409	A-63509	A-64109	A-64309	A-64209	A-64409	A-64509	A-64609	A-64709	A-64909	A-64809	A-65109	A-65209	A-65309	A-65409	A-65509	11/16	1-3/16	
A-63010	A-63110	A-63210	A-63310	A-63410	A-63510	A-64110	A-64310	A-64210	A-64410	A-64510	A-64610	A-64710	A-64910	A-64810	A-65110	A-65210	A-65310	A-65410	A-65510	3/4	1-1/4	
A-63011	A-63111	A-63211	A-63311	A-63411	A-63511	A-64111	A-64311	A-64211	A-64411	A-64511	A-64611	A-64711	A-64911	A-64811	A-65111	A-65211	A-65311	A-65411	A-65511	7/8	1-3/8	
A-63012	A-63112	A-63212	A-63312	A-63412	A-63512	A-64112	A-64312	A-64212	A-64412	A-64512	A-64612	A-64712	A-64912	A-64812	A-65112	A-65212	A-65312	A-65412	A-65512	15/16	1-7/16	
A-63013	A-63113	A-63213	A-63313	A-63413	A-63513	A-64113	A-64313	A-64213	A-64413	A-64513	A-64613	A-64713	A-64913	A-64813	A-65113	A-65213	A-65313	A-65413	A-65513	1"	1-1/2	
A-63014	A-63114	A-63214	A-63314	A-63414	A-63514	A-64114	A-64314	A-64214	A-64414	A-64514	A-64614	A-64714	A-64914	A-64814	A-65114	A-65214	A-65314	A-65414	A-65514	1-1/8	1-5/8	
A-63015	A-63115	A-63215	A-63315	A-63415	A-63515	A-64115	A-64315	A-64215	A-64415	A-64515	A-64615	A-64715	A-64915	A-64815	A-65115	A-65215	A-65315	A-65415	A-65515	1-1/4	1-3/4	
A-63016	A-63116	A-63216	A-63316	A-63416	A-63516	A-64116	A-64316	A-64216	A-64416	A-64516	A-64616	A-64716	A-64916	A-64816	A-65116	A-65216	A-65316	A-65416	A-65516	1-3/8	1-7/8	
A-63017	A-63117	A-63217	A-63317	A-63417	A-63517	A-64117	A-64317	A-64217	A-64417	A-64517	A-64617	A-64717	A-64917	A-64817	A-65117	A-65217	A-65317	A-65417	A-65517	1-7/16	1-15/16	
A-63018	A-63118	A-63218	A-63318	A-63418	A-63518	A-64118	A-64318	A-64218	A-64418	A-64518	A-64618	A-64718	A-64918	A-64818	A-65118	A-65218	A-65318	A-65418	A-65518	1-1/2	2"	
A-63019	A-63119	A-63219	A-63319	A-63419	A-63519	A-64119	A-64319	A-64219	A-64419	A-64519	A-64619	A-64719	A-64919	A-64819	A-65119	A-65219	A-65319	A-65419	A-65519	1-5/8	2-1/8	
A-63020	A-63120	A-63220	A-63320	A-63420	A-63520	A-64120	A-64320	A-64220	A-64420	A-64520	A-64620	A-64720	A-64920	A-64820	A-65120	A-65220	A-65320	A-65420	A-65520	1-3/4	2-1/4	
A-63021	A-63121	A-63221	A-63321	A-63421	A-63521	A-64121	A-64321	A-64221	A-64421	A-64521	A-64621	A-64721	A-64921	A-64821	A-65121	A-65221	A-65321	A-65421	A-65521	1-7/8	2-3/8	
A-63022	A-63122	A-63222	A-63322	A-63422	A-63522	A-64122	A-64322	A-64222	A-64422	A-64522	A-64622	A-64722	A-64922	A-64822	A-65122	A-65222	A-65322	A-65422	A-65522	2"	2-1/2	
A-63023	A-63123	A-63223	A-63323	A-63423	A-63523	A-64123	A-64323	A-64223	A-64423	A-64523	A-64623	A-64723	A-64923	A-64823	A-65123	A-65223	A-65323	A-65423	A-65523	2-1/8	2-5/8	
A-63024	A-63124	A-63224	A-63324	A-63424	A-63524	A-64124	A-64324	A-64224	A-64424	A-64524	A-64624	A-64724	A-64924	A-64824	A-65124	A-65224	A-65324	A-65424	A-65524	2-1/4	2-3/4	
A-63025	A-63125	A-63225	A-63325	A-63425	A-63525	A-64125	A-64325	A-64225	A-64425	A-64525	A-64625	A-64725	A-64925	A-64825	A-65125	A-65225	A-65325	A-65425	A-65525	2-1/2	3"	
A-63026	A-63126	A-63226	A-63326	A-63426	A-63526	A-64126	A-64326	A-64226	A-64426	A-64526	A-64626	A-64726	A-64926	A-64826	A-65126	A-65226	A-65326	A-65426	A-65526	2-3/4	3-1/4	
A-63027	A-63127	A-63227	A-63327	A-63427	A-63527	A-64127	A-64327	A-64227	A-64427	A-64527	A-64627	A-64727	A-64927	A-64827	A-65127	A-65227	A-65327	A-65427	A-65527	3"	3-1/2	
A-63028	A-63128	A-63228	A-63328	A-63428	A-63528	A-64128	A-64328	A-64228	A-64428	A-64528	A-64628	A-64728	A-64928	A-64828	A-65128	A-65228	A-65328	A-65428	A-65528	3-1/4	3-3/4	
A-63029	A-63129	A-63229	A-63329	A-63429	A-63529	A-64129	A-64329	A-64229	A-64429	A-64529	A-64629	A-64729	A-64929	A-64829	A-65129	A-65229	A-65329	A-65429	A-65529	3-1/2	4"	
A-63029A	A-63129A	A-63229A	A-63329A	A-63429A	A-63529A	A-64129A	A-64329A	A-64229A	A-64429A	A-64529A	A-64629A	A-64729A	A-64929A	A-64829A	A-65129A	A-65229A	A-65329A	A-65429A	A-65529A	3-3/4	4-1/4	
A-63029B	A-63129B	A-63229B	A-63329B	A-63429B	A-63529B	A-64129B	A-64329B	A-64229B	A-64429B	A-64529B	A-64629B	A-64729B	A-64929B	A-64829B	A-65129B	A-65229B	A-65329B	A-65429B	A-65529B	4"	4-1/2	
A-63029C	A-63129C	A-63229C	A-63329C	A-63429C	A-63529C	A-64129C	A-64329C	A-64229C	A-64429C	A-64529C	A-64629C	A-64729C	A-64929C	A-64829C	A-65129C	A-65229C	A-65329C	A-65429C	A-65529C	4-1/4	4-3/4	
A-63030	A-63130	A-63230	A-63330	A-63430	A-63530	A-64130	A-64330	A-64230	A-64430	A-64530	A-64630	A-64730	A-64930	A-64830	A-65130	A-65230	A-65330	A-65430	A-65530	4-1/2	5"	
A-63030A	A-63130A	A-63230A	A-63330A	A-63430A	A-63530A	A-64130A	A-64330A	A-64230A	A-64430A	A-64530A	A-64630A	A-64730A	A-64930A	A-64830A	A-65130A	A-65230A	A-65330A	A-65430A	A-65530A	4-3/4	5-1/4	
A-63030B	A-63130B	A-63230B	A-63330B	A-63430B	A-63530B	A-64130B	A-64330B	A-64230B	A-64430B	A-64530B	A-64630B	A-64730B	A-64930B	A-64830B	A-65130B	A-65230B	A-65330B	A-65430B	A-65530B	5"	5-1/2	
A-63030C	A-63130C	A-63230C	A-63330C	A-63430C	A-63530C	A-64130C	A-64330C	A-64230C	A-64430C	A-64530C	A-64630C	A-64730C	A-64930C	A-64830C	A-65130C	A-65230C	A-65330C	A-65430C	A-65530C	5-1/4	5-3/4	
A-63031	A-63131	A-63231	A-63331	A-63431	A-63531	A-64131	A-64331	A-64231	A-64431	A-64531	A-64631	A-64731	A-64931	A-64831	A-65131	A-65231	A-65331	A-65431	A-65531	5-1/2	6"	
COLLAR A-63000 ADD I.D. SIZE TO LINERS						COLLAR A-64000 ADD I.D. SIZE TO LINERS						COLLAR A-65000 ADD I.D. SIZE TO LINERS						LINER I. D.		C1 MIN C MAX RANGE		
5/8	3/4	13/16	7/8	1"	1-1/8	5/8	3/4	13/16	7/8	1"	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2"			
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-241121	HNL-241281	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HELICAL NURLOCK LINERS	DOUBLE LOCK METAL	
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-241121	HNL-1-241281	WE RECOMMEND					HELICAL NURLOCK LINERS	SINGLE LOCK METAL	
			NL-16523		NL-16524					NL-16525				NL-16526	HNL and HNL					NL-16533	STD NURLOCK LINERS	DOUBLE LOCK FOR METAL
			NLP-16523		NLP-16524					NLP-16525				NLP-16526						NLP-16533	STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-251							

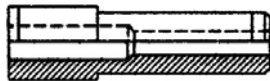
See complete DIMENSIONAL TOLERANCES Pages P10 thru P15.



Straight Lightweight Telescoping Shank Series

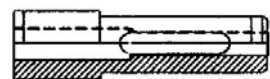
Lighter than the 51000-55000 and 61000-65000 Series. The 91000-95000 Series FITS ALL STANDARD LOCK LINERS and is interchangeable with the 21000-25000 Series.

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.004
OVER 1/4 TO 3/4	+0.001 TO +0.005
OVER 3/4 TO 1-1/2	+0.002 TO +0.006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	



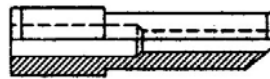
UDB-92531-3/16
OMIT 'A'

EXTENDED RANGE SHANK ONLY —FOR SHANK ONLY, OMIT PREFIX A. Example: UDB-92531



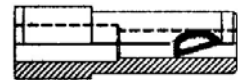
UDB-A-92531CS-3/16
ADD 'CS'

CHIP SLOT —SPECIFY A CHIP SLOT ON LONGER SHANKS, ADD SUFFIX CS. Ex: UDB-A-92531CS-3/16



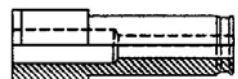
UDB-CTA-92531-3/16
PREFIX 'CT'

CONTOUR SURFACES —FOR CONTOUR SURFACES, USE OUR ANGULAR NOSE SHANK. ADD PREFIX CT. Example: UDB-CTA-92531-3/16



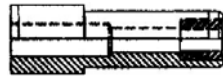
UDB-A-92531CC-3/16
ADD 'CC'

CHIP CUTTER —TO SPECIFY UNITED'S NEW PATENTED CHIP CUTTER, ADD SUFFIX CC TO PART NO. Example: UDB-A-92531CC-3/16



UDB-A-92531EZ-3/16
ADD 'EZ'

EASE IN RADIUS —TO SPECIFY UNITED'S NEW O.D. EASE IN RADIUS, ADD SUFFIX EZ TO PART NO. Example: UDB-A-92531EZ-3/16



UDB-AU-92531-3/16
Insert 'U' for ULTRA III
UDB-AC-92531-3/16
Insert 'C' for CARBIDE

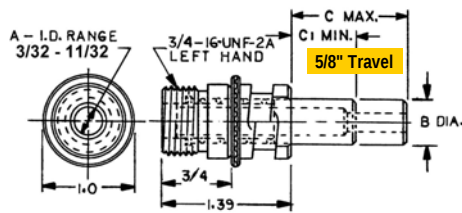
LONG WEARING INSERTS —TO ORDER LONG WEARING INSERTS FOR FIVE TIMES WEAR, SPECIFY PREFIX AU FOR ULTRA III MATERIAL. FOR TEN TIMES WEAR, SPECIFY PREFIX AC FOR CARBIDE.

LOCKING ACCESSORIES — In this Section



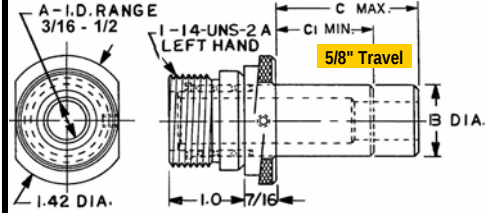
UNITED's Helical Nurlock Telescoping

A-91000 SERIES



SAME LOCK-THREAD AS 21000
Available in STANDARD or ULTRA III

A-92000 SERIES



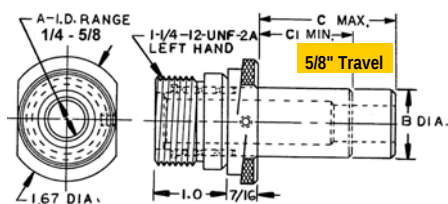
SAME LOCK-THREAD AS 22000
Available in STANDARD or ULTRA III

	A-91000 SERIES					A-92000 SERIES				
	(DRILL) A A MIN	MAX 3/32	1/4 3/32	5/16 3/32	11/32 3/32	9/32 3/16	11/32 3/16	13/32 3/16	15/32 3/16	1/2 3/16
	(SHANK OD) B	3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4	
T	C FLUSH TO	1/2	A-91102	A-91202	A-91302	A-92102	A-92202	A-92302	A-92402	A-92502
E	0	5/8	A-91103	A-91203	A-91303	A-92103	A-92203	A-92303	A-92403	A-92503
L	1/8	3/4	A-91104	A-91204	A-91304	A-92104	A-92204	A-92304	A-92404	A-92504
E	1/4	7/8	A-91105	A-91205	A-91305	A-92105	A-92205	A-92305	A-92405	A-92505
S	3/8	1"	A-91106	A-91206	A-91306	A-92106	A-92206	A-92306	A-92406	A-92506
O	7/16	1-1/16	A-91107	A-91207	A-91307	A-92107	A-92207	A-92307	A-92407	A-92507
C	1/2	1-1/8	A-91108	A-91208	A-91308	A-92108	A-92208	A-92308	A-92408	A-92508
P	9/16	1-3/16	A-91109	A-91209	A-91309	A-92109	A-92209	A-92309	A-92409	A-92509
I	5/8	1-1/4	A-91110	A-91210	A-91310	A-92110	A-92210	A-92310	A-92410	A-92510
N	3/4	1-3/8	A-91111	A-91211	A-91311	A-92111	A-92211	A-92311	A-92411	A-92511
G	13/16	1-7/16	A-91112	A-91212	A-91312	A-92112	A-92212	A-92312	A-92412	A-92512
L	7/8	1-1/2	A-91113	A-91213	A-91313	A-92113	A-92213	A-92313	A-92413	A-92513
E	1"	1-5/8	A-91114	A-91214	A-91314	A-92114	A-92214	A-92314	A-92414	A-92514
N	1-1/8	1-3/4	A-91115	A-91215	A-91315	A-92115	A-92215	A-92315	A-92415	A-92515
G	1-1/4	1-7/8	A-91116	A-91216	A-91316	A-92116	A-92216	A-92316	A-92416	A-92516
T	1-5/16	1-15/16	A-91117	A-91217	A-91317	A-92117	A-92217	A-92317	A-92417	A-92517
H	1-3/8	2"	A-91118	A-91218	A-91318	A-92118	A-92218	A-92318	A-92418	A-92518
R	1-1/2	2-1/8	A-91119	A-91219	A-91319	A-92119	A-92219	A-92319	A-92419	A-92519
A	1-5/8	2-1/4	A-91120	A-91220	A-91320	A-92120	A-92220	A-92320	A-92420	A-92520
N	1-3/4	2-3/8	A-91121	A-91221	A-91321	A-92121	A-92221	A-92321	A-92421	A-92521
G	1-7/8	2-1/2	A-91122	A-91222	A-91322	A-92122	A-92222	A-92322	A-92422	A-92522
E	2"	2-5/8	A-91123	A-91223	A-91323	A-92123	A-92223	A-92323	A-92423	A-92523
C	2-1/8	2-3/4	A-91124	A-91224	A-91324	A-92124	A-92224	A-92324	A-92424	A-92524
'F	2-3/8	3"	A-91125	A-91225	A-91325	A-92125	A-92225	A-92325	A-92425	A-92525
R	2-5/8	3-1/4	A-91126	A-91226	A-91326	A-92126	A-92226	A-92326	A-92426	A-92526
O	2-7/8	3-1/2	A-91127	A-91227	A-91327	A-92127	A-92227	A-92327	A-92427	A-92527
M	3-1/8	3-3/4	A-91128	A-91228	A-91328	A-92128	A-92228	A-92328	A-92428	A-92528
—	3-3/8	4"	A-91129	A-91229	A-91329	A-92129	A-92229	A-92329	A-92429	A-92529
T	3-5/8	4-1/4	A-91129A	A-91229A	A-91329A	A-92129A	A-92229A	A-92329A	A-92429A	A-92529A
O	3-7/8	4-1/2	A-91129B	A-91229B	A-91329B	A-92129B	A-92229B	A-92329B	A-92429B	A-92529B
	4-1/8	4-3/4	A-91129C	A-91229C	A-91329C	A-92129C	A-92229C	A-92329C	A-92429C	A-92529C
	4-3/8	5"	A-91130	A-91230	A-91330	A-92130	A-92230	A-92330	A-92430	A-92530
	4-5/8	5-1/4	A-91130A	A-91230A	A-91330A	A-92130A	A-92230A	A-92330A	A-92430A	A-92530A
	4-7/8	5-1/2	A-91130B	A-91230B	A-91330B	A-92130B	A-92230B	A-92330B	A-92430B	A-92530B
	5-1/8	5-3/4	A-91130C	A-91230C	A-91330C	A-92130C	A-92230C	A-92330C	A-92430C	A-92530C
	5-3/8	6"	A-91131	A-91231	A-91331	A-92131	A-92231	A-92331	A-92431	A-92531
C LEN ABOVE		COLLAR A-91000 ADD I.D. SIZE TO LINERS				COLLAR A-92000 ADD I.D. SIZE TO LINERS				
LINER I.D.		3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4	
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR METAL	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410	
HELICAL NURLOCK LINERS	SINGLE LOCK FOR METAL	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410	
STD NURLOCK LINERS	DOUBLE LOCK FOR METAL	NL-16520		NL-16521						
STD NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	NLP-375		NLP-500						
LOCK LINERS	FOR METAL	LL-21100	LL-21200	LL-21300						
LOCK LINERS	FOR PLASTIC	NL-21100	NL-21200	NL-21300	NL-22100	NL-22200	NL-22300	NL-22400		
LOCK RINGS		UDB-521449	UDB-521450A	UDB-521450A	UDB-521451	UDB-521451	UDB-521451A	UDB-521451	UDB-521452	
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	HNL-213212	HNL-214808	HNL-214808	HNL-224808	HNL-224808	HNL-225210	HNL-225610	HNL-226410	
HELICAL NURLOCK LINERS	SINGLE LOCK FOR PLASTIC	HNL-1-213212	HNL-1-214808	HNL-1-214808	HNL-1-224808	HNL-1-224808	HNL-1-225210	HNL-1-225610	HNL-1-226410	
TAPERED NURLOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941	
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532	

We Recommend
HNL and HNLP

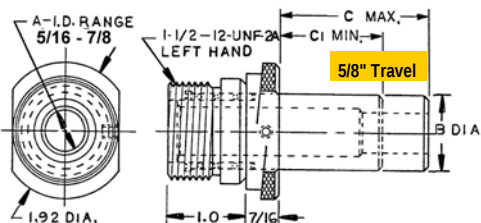
Shanks — Standard Light Weight Series

A-93000 SERIES



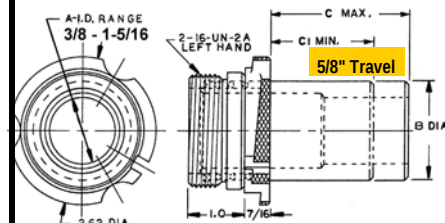
B' O.D. 5/8 is
NEW Part No. **SAME LOCK-THREAD AS 23000**
Available in STANDARD or ULTRA III

A-94000 SERIES



SAME LOCK-THREAD AS 24000
Available in STANDARD or ULTRA III

A-95000 SERIES



SAME LOCK-THREAD AS 25000
Available in STANDARD or ULTRA III

15/32	17/32	19/32	21/32	23/32	25/32	15/32	17/32	19/32	21/32	25/32	27/32	7/8	1-1/32	1-5/32	1-9/32	1-5/16	(DRILL) A MAX
1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	13/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	A MIN
5/8	3/4	13/16	7/8	1"	1-1/8	5/8	3/4	13/16	7/8	1"	1-1/8	1-1/4	1-1/4	1-3/8	1-1/2	1-3/4	(SHANK OD) B
A-93002	A-93102	A-93202	A-93302	A-93402	A-93502	A-94102	A-94302	A-94202	A-94402	A-94502	A-94602	A-94702	A-95102	A-95202	A-95302	A-95402	C FLUSH TO 1/2
A-93003	A-93103	A-93203	A-93303	A-93403	A-93503	A-94103	A-94303	A-94203	A-94403	A-94503	A-94603	A-94703	A-95103	A-95203	A-95303	A-95403	0 5/8
A-93004	A-93104	A-93204	A-93304	A-93404	A-93504	A-94104	A-94304	A-94204	A-94404	A-94504	A-94604	A-94704	A-95104	A-95204	A-95304	A-95404	1/8 3/4
A-93005	A-93105	A-93205	A-93305	A-93405	A-93505	A-94105	A-94305	A-94205	A-94405	A-94505	A-94605	A-94705	A-95105	A-95205	A-95305	A-95405	1/4 7/8
A-93006	A-93106	A-93206	A-93306	A-93406	A-93506	A-94106	A-94306	A-94206	A-94406	A-94506	A-94606	A-94706	A-95106	A-95206	A-95306	A-95406	3/8 1"
A-93007	A-93107	A-93207	A-93307	A-93407	A-93507	A-94107	A-94307	A-94207	A-94407	A-94507	A-94607	A-94707	A-95107	A-95207	A-95307	A-95407	7/16 1-1/16
A-93008	A-93108	A-93208	A-93308	A-93408	A-93508	A-94108	A-94308	A-94208	A-94408	A-94508	A-94608	A-94708	A-95108	A-95208	A-95308	A-95408	1/2 1-1/8
A-93009	A-93109	A-93209	A-93309	A-93409	A-93509	A-94109	A-94309	A-94209	A-94409	A-94509	A-94609	A-94709	A-95109	A-95209	A-95309	A-95409	9/16 1-3/16
A-93010	A-93110	A-93210	A-93310	A-93410	A-93510	A-94110	A-94310	A-94210	A-94410	A-94510	A-94610	A-94710	A-95110	A-95210	A-95310	A-95410	5/8 1-1/4
A-93011	A-93111	A-93211	A-93311	A-93411	A-93511	A-94111	A-94311	A-94211	A-94411	A-94511	A-94611	A-94711	A-95111	A-95211	A-95311	A-95411	3/4 1-3/8
A-93012	A-93112	A-93212	A-93312	A-93412	A-93512	A-94112	A-94312	A-94212	A-94412	A-94512	A-94612	A-94712	A-95112	A-95212	A-95312	A-95412	13/16 1-7/16
A-93013	A-93113	A-93213	A-93313	A-93413	A-93513	A-94113	A-94313	A-94213	A-94413	A-94513	A-94613	A-94713	A-95113	A-95213	A-95313	A-95413	7/8 1-1/2
A-93014	A-93114	A-93214	A-93314	A-93414	A-93514	A-94114	A-94314	A-94214	A-94414	A-94514	A-94614	A-94714	A-95114	A-95214	A-95314	A-95414	1" 1-5/8
A-93015	A-93115	A-93215	A-93315	A-93415	A-93515	A-94115	A-94315	A-94215	A-94415	A-94515	A-94615	A-94715	A-95115	A-95215	A-95315	A-95415	1-1/8 1-3/4
A-93016	A-93116	A-93216	A-93316	A-93416	A-93516	A-94116	A-94316	A-94216	A-94416	A-94516	A-94616	A-94716	A-95116	A-95216	A-95316	A-95416	1-1/4 1-7/8
A-93017	A-93117	A-93217	A-93317	A-93417	A-93517	A-94117	A-94317	A-94217	A-94417	A-94517	A-94617	A-94717	A-95117	A-95217	A-95317	A-95417	1-5/16 1-15/16
A-93018	A-93118	A-93218	A-93318	A-93418	A-93518	A-94118	A-94318	A-94218	A-94418	A-94518	A-94618	A-94718	A-95118	A-95218	A-95318	A-95418	1-3/8 2"
A-93019	A-93119	A-93219	A-93319	A-93419	A-93519	A-94119	A-94319	A-94219	A-94419	A-94519	A-94619	A-94719	A-95119	A-95219	A-95319	A-95419	1-1/2 2-1/8
A-93020	A-93120	A-93220	A-93320	A-93420	A-93520	A-94120	A-94320	A-94220	A-94420	A-94520	A-94620	A-94720	A-95120	A-95220	A-95320	A-95420	1-5/8 2-1/4
A-93021	A-93121	A-93221	A-93321	A-93421	A-93521	A-94121	A-94321	A-94221	A-94421	A-94521	A-94621	A-94721	A-95121	A-95221	A-95321	A-95421	1-3/4 2-3/8
A-93022	A-93122	A-93222	A-93322	A-93422	A-93522	A-94122	A-94322	A-94222	A-94422	A-94522	A-94622	A-94722	A-95122	A-95222	A-95322	A-95422	1-7/8 2-1/2
A-93023	A-93123	A-93223	A-93323	A-93423	A-93523	A-94123	A-94323	A-94223	A-94423	A-94523	A-94623	A-94723	A-95123	A-95223	A-95323	A-95423	2" 2-5/8
A-93024	A-93124	A-93224	A-93324	A-93424	A-93524	A-94124	A-94324	A-94224	A-94424	A-94524	A-94624	A-94724	A-95124	A-95224	A-95324	A-95424	2-1/8 2-3/4
A-93025	A-93125	A-93225	A-93325	A-93425	A-93525	A-94125	A-94325	A-94225	A-94425	A-94525	A-94625	A-94725	A-95125	A-95225	A-95325	A-95425	2-3/8 3"
A-93026	A-93126	A-93226	A-93326	A-93426	A-93526	A-94126	A-94326	A-94226	A-94426	A-94526	A-94626	A-94726	A-95126	A-95226	A-95326	A-95426	2-5/8 3-1/4
A-93027	A-93127	A-93227	A-93327	A-93427	A-93527	A-94127	A-94327	A-94227	A-94427	A-94527	A-94627	A-94727	A-95127	A-95227	A-95327	A-95427	2-7/8 3-1/2
A-93028	A-93128	A-93228	A-93328	A-93428	A-93528	A-94128	A-94328	A-94228	A-94428	A-94528	A-94628	A-94728	A-95128	A-95228	A-95328	A-95428	3-1/8 3-3/4
A-93029	A-93129	A-93229	A-93329	A-93429	A-93529	A-94129	A-94329	A-94229	A-94429	A-94529	A-94629	A-94729	A-95129	A-95229	A-95329	A-95429	3-3/8 4"
A-93029A	A-93129A	A-93229A	A-93329A	A-93429A	A-93529A	A-94129A	A-94329A	A-94229A	A-94429A	A-94529A	A-94629A	A-94729A	A-95129A	A-95229A	A-95329A	A-95429A	3-5/8 4-1/4
A-93029B	A-93129B	A-93229B	A-93329B	A-93429B	A-93529B	A-94129B	A-94329B	A-94229B	A-94429B	A-94529B	A-94629B	A-94729B	A-95129B	A-95229B	A-95329B	A-95429B	3-7/8 4-1/2
A-93029C	A-93129C	A-93229C	A-93329C	A-93429C	A-93529C	A-94129C	A-94329C	A-94229C	A-94429C	A-94529C	A-94629C	A-94729C	A-95129C	A-95229C	A-95329C	A-95429C	4-1/8 4-3/4
A-93030	A-93130	A-93230	A-93330	A-93430	A-93530	A-94130	A-94330	A-94230	A-94430	A-94530	A-94630	A-94730	A-95130	A-95230	A-95330	A-95430	4-3/8 5"
A-93030A	A-93130A	A-93230A	A-93330A	A-93430A	A-93530A	A-94130A	A-94330A	A-94230A	A-94430A	A-94530A	A-94630A	A-94730A	A-95130A	A-95230A	A-95330A	A-95430A	4-5/8 5-1/4
A-93030B	A-93130B	A-93230B	A-93330B	A-93430B	A-93530B	A-94130B	A-94330B	A-94230B	A-94430B	A-94530B	A-94630B	A-94730B	A-95130B	A-95230B	A-95330B	A-95430B	4-7/8 5-1/2
A-93030C	A-93130C	A-93230C	A-93330C	A-93430C	A-93530C	A-94130C	A-94330C	A-94230C	A-94430C	A-94530C	A-94630C	A-94730C	A-95130C	A-95230C	A-95330C	A-95430C	5-1/8 5-3/4
A-93031	A-93131	A-93231	A-93331	A-93431	A-93531	A-94131	A-94331	A-94231	A-94431	A-94531	A-94631	A-94731	A-95131	A-95231	A-95331	A-95431	5-3/8 6"
COLLAR A-93000 ADD I. D. SIZE TO LINERS						COLLAR A-94000 ADD I. D. SIZE TO LINERS						COLLAR A-95000 ADD I. D. SIZE TO LINERS				C LEN ABOVE IS FROM TO MIN MAX	
5/8	3/4	13/16	7/8	1"	1-1/8	5/8	3/4	13/16	7/8	1"	1-1/8	1-1/4	1-1/4	1-3/8	1-1/2	1-3/4	LINER I. D.
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-239624	HNL-245616	HNL-246416	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HELICAL NURLOCK LINERS
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-239624	HNL-1-245616	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2412816	We Recommend HNL and HNLP				HELICAL NURLOCK LINERS
			NL-16523		NL-16524					NL-16525		NL-16526					STD NURLOCK LINERS
			NLP-16523		NLP-16524					NLP-16525		NLP-16526					STD NURLOCK LINERS
	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500	LL-24100	LL-24300	LL-24400	LL-24500	LL-24600	LL-24700	LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LOCK SCREW LINERS
	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500	NL-24100	NL-24300	NL-24400	NL-24500	NL-24600	NL-24700	NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LOCK SCREW LINERS
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454B	UDB-521451	UDB-521452	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	LOCK RINGS
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-239624	HNLP-245616	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HELICAL NURLOCK LINERS DOUBLE
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-239624	HNLP-1-245616	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2412816					HELICAL NURLOCK LINERS SINGLE
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TAPERED NURLOCK CLAMPS
19940	19942	19943	19944	19945	19946	19940	19942	19943	19944	19945	19946	19952	19952	19954	19955	19956	LINER BUSHINGS
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	LOCK SCREWS

Locking Accessories

The Only Complete Listing of
Liners for Every Shank O.D. in
our Industry!

See complete
DIMENSIONAL
TOLERANCES
Pages P10
thru P15.

Complete Selection Guide

SIMPLE STEPS:

Select Drill or Reamer size.

Select smallest Shank O.D. with that size.

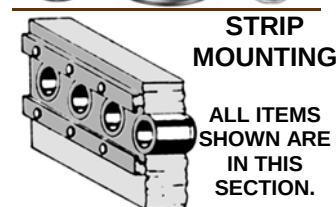
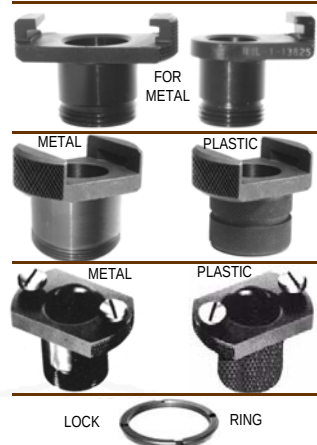
Select smallest Locking Collar for that shank.

Select I.D. Liner to guide O.D. Shank to fit Collar.

Select Lock Ring, Screw, TLC Clamp or Strip Mounting, if needed.

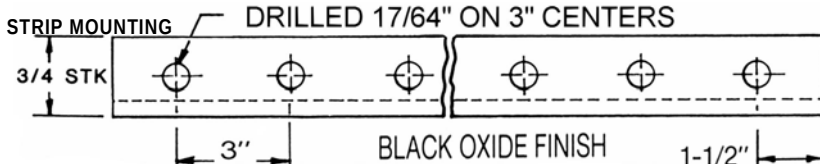
Lock up and Drill!!

CONTINUED NEXT PAGE...



COLLAR THREAD SIZE	3/4"-16 L.H. THD. (EXCEPT 61000)			1"-14 L.H. THD. (EXCEPT 62000)							
COLLARS & SHANKS:	A-11000, A-21000,			A-12000, A-22000, A-32000, A-42000							
STANDARD	A-31000, A-41000			ALL 'A-' PREFIXES INCLUDE 'AU-' & 'AC-' SERIES							
TELESCOPIC	A-51000, A-91000			A-52000, A-92000							
TELESCOPIC	A-61000 (COLLAR HAS 1"-14 UNF-2A L.H. THD)			A-62000 (COLLAR HAS 1-1/4"-12 UNF-2A L.H. THD)							
A MAX (DRILL SHANK I.D.)	1/4	5/16	3/8	9/32	11/32	13/32	15/32	15/32	15/32	15/32	15/32
A MIN	3/32	3/32	3/32	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
B SHANK O.D.	3/8	7/16	1/2	7/16	1/2	9/16	5/8	3/4	13/16	7/8	7/8
Add Shank O.D. Size to LINER Part Number.				Please Add Shank O.D. Size to LINER Part Number.							
HELICAL NURLOCK LINERS	DOUBLE LOCK METAL	HNL- 213212	HNL- 214808	HNL- 214808	HNL- 224808	HNL- 224808	HNL- 225210	HNL- 225610	HNL- 226410	HNL- 226416	HNL- 227216
HELICAL NURLOCK LINERS	SINGLE LOCK METAL	HNL-1- 213212	HNL-1- 214808	HNL-1- 214808	HNL-1- 224808	HNL-1- 224808	HNL-1- 225210	HNL-1- 225610	HNL-1- 226410	HNL-1- 226416	HNL-1- 227216
STD NURLOCK LINERS	DOUBLE LOCK METAL	NL- 16520		NL- 16521	WE RECOMMEND HNL and HNLP ALL 'A-' PREFIXES INCLUDE 'AU-' & 'AC-' SERIES			NL- 16522		NL- 23200	NL- 16523
STD NURLOCK LINERS	DOUBLE LOCK PLASTIC	NLP- 375		NLP- 500					NLP- 750		
LOCK SCREW LINERS	FOR METAL	LL- 21100	LL- 21200	LL- 21300				LL- 22400			
LOCK SCREW LINERS	FOR PLASTIC	NL- 21100	NL- 21200	NL- 21300				NL- 22400			
LOCK RINGS		UDB- 521449	UDB- 521450	UDB- 521450A	UDB- 521451	UDB- 521451	UDB- 521451	UDB- 521451	UDB- 521452	UDB- 521452	UDB- 521453A
HELICAL NURLOCK LINERS	DOUBLE LOCK FOR PLASTIC	HNLP- 213212	HNLP- 214808	HNLP- 214808	HNLP- 224808	HNLP- 224808	HNLP- 225210	HNLP- 225610	HNLP- 226410	HNLP- 226416	HNLP- 227216
HELICAL NURLOCK LINERS	SINGLE LOCK FOR PLASTIC	HNLP-1- 213212	HNLP-1- 214808	HNLP-1- 214808	HNLP-1- 224808	HNLP-1- 224808	HNLP-1- 225210	HNLP-1- 225610	HNLP-1- 226410	HNLP-1- 226416	HNLP-1- 227216
TAPERED NUR- LOCK CLAMPS		TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2
LINER BUSHINGS		19936	19937	19938	19937	19938	19939	19940	19941	19943	19944
LOCK SCREWS		16531	16531	16531	16532	16532	16532	16532	16532	16532	16532

STRIP MNTG	OAL
UDB-LSM-9	9"
UDB-LSM-12	12"
UDB-LSM-24	24"
UDB-LSM-36	36"
UDB-LSM-48	48"



For UNITED Clamps & Liners

Liners-Clamps-Screws

Page P30 Chart continued this page.

SIMPLE STEPS:

Select Drill or Reamer size.

Select smallest Shank O.D. with that size.

Select smallest Locking Collar for that shank.

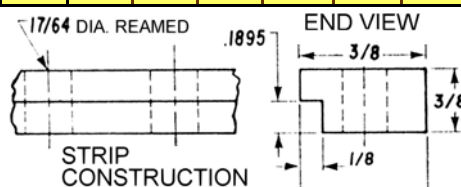
Select I.D. Liner to guide O.D. Shank to fit Collar.

Select Lock Ring, Screw, TLC Clamp or Strip Mounting, if needed.

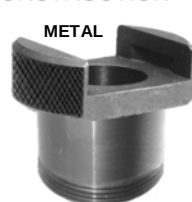
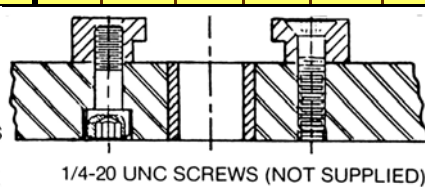
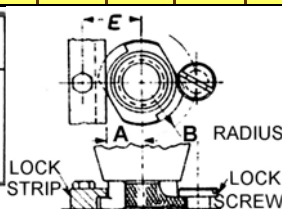
Lock up and Drill!!

TOLERANCE ON 'A' DIMENSION	
UP TO 1/4	+0.001 TO +0.0004
OVER 1/4 TO 3/4	+0.001 TO +0.0005
OVER 3/4 TO 1-1/2	+0.002 TO +0.0006
TOLERANCE ON 'B' DIM. —.0002 TO —.0005	

1-1/4"-12 L.H. THD. (EXCEPT 63000)							1-1/2"-12 L.H. THD. (EXCEPT 64000)									2"-16 L.H. THD. (EXCEPT 65000)					
A-13000, A-23000, A-33000, A-43000 ALL 'A' PREFIXES INCLUDE 'AU-' & 'AC-'							A-14000, A-24000, A-34000, A-44000 ALL 'A-' PREFIXES INCLUDE 'AU-' & 'AC-'									A-15000, A-25000, A-35000, A-45000					
A-53000, A-93000							A-54000, A-94000									A-55000, A-95000					
A-63000 (COLLAR HAS 1-1/2"-12 UNF-2A L.H. THD)							A-64000 (COLLAR HAS 2"-16 UNF-2A L.H. THD)									A-65000 (COLLAR HAS 2-1/4"-16 UNF-2A L.H. THD)					
15/32	17/32	19/32	21/32	23/32	3/4	7/8	15/32	17/32	19/32	21/32	25/32	29/32	15/16	1"	1-1/16	1-1/32	1-5/32	1-9/32	1-	1-1/2	1-1/2
1/4	1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8	3/8	3/8	3/8
5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	5/8	3/4	13/16	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4
Add Shank O.D. Size to LINER Part Number.							Please Add Shank O.D. Size to LINER Part Number.														
HNL-235610	HNL-236410	HNL-236410	HNL-238016	HNL-239616	HNL-238816	HNL-239616	HNL-245616	HNL-246416	HNL-248016	HNL-248016	HNL-248016	HNL-248816	HNL-249616	HNL-2411216	HNL-2412816	HNL-25100	HNL-25200	HNL-25300	HNL-25400	HNL-25500	HNL-25600
HNL-1-235610	HNL-1-236410	HNL-1-236410	HNL-1-238016	HNL-1-239616	HNL-1-238816	HNL-1-239616	HNL-1-245616	HNL-1-246416	HNL-1-248016	HNL-1-248016	HNL-1-248016	HNL-1-248816	HNL-1-249616	HNL-1-2411216	HNL-1-2412816	WE RECOMMEND HNL and HNLP ALL 'A-' PREFIXES INCLUDE 'AU-' & 'AC-' SERIES					
			NL-16523		NL-16524							NL-16525			NL-16526					NL-16533	
			NLP-16523		NLP-16524							NL P-16525			NLP-16526					NLP-16533	
LL-23100	LL-23100	LL-23200	LL-23300	LL-23400	LL-23500		LL-24100	LL-24300		LL-24400	LL-24500	LL-24600	LL-24700		LL-24800	LL-25100	LL-25200	LL-25300	LL-25400	LL-25500	
NL-23100	NL-23100	NL-23200	NL-23300	NL-23400	NL-23500		NL-24100	NL-24300		NL-24400	NL-24500	NL-24600	NL-24700		NL-24800	LLP-25100	LLP-25200	LLP-25300	LLP-25400	LLP-25500	
UDB-521453A	UDB-521452	UDB-521452	UDB-521453	UDB-521454B	UDB-521454A	UDB-521454	UDB-521451	UDB-521452	UDB-521453	UDB-521453	UDB-521453	UDB-521454A	UDB-521454B	UDB-521456A	UDB-521457A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A	UDB-521458A
HNLP-235610	HNLP-236410	HNLP-236410	HNLP-238016	HNLP-239616	HNLP-238816	HNLP-239616	HNLP-245616	HNLP-246416	HNLP-248016	HNLP-248016	HNLP-248016	HNLP-248816	HNLP-249616	HNLP-2411216	HNLP-2412816	HNLP-25100	HNLP-25200	HNLP-25300	HNLP-25400	HNLP-25500	HNLP-25600
HNLP-1-235610	HNLP-1-236410	HNLP-1-236410	HNLP-1-238016	HNLP-1-239616	HNLP-1-238816	HNLP-1-239616	HNLP-1-245616	HNLP-1-246416	HNLP-1-248016	HNLP-1-248016	HNLP-1-248016	HNLP-1-248816	HNLP-1-249616	HNLP-1-2411216	HNLP-1-2412816						
TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-2	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3	TLC-3
19940	19942	19943	19944	19945	19946	19952	19940	19942	19943	19944	19945	19946	19952	19954	19955	19952	19954	19955	19956	19957	19958
16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16532	16530	16530	16530	16530	16530	16530



DRILL BUSHING TIP SERIES	A	B	E
21000	.312	.625	.687
22000	.609	.922	.984
23000	.734	1.047	1.109
24000	.859	1.172	1.234
25000	—	1.562	—



STANDARD LOCK LINERS



PLASTIC



LINER BUSHING



LOCK RING



NURLOCK CLAMP



LOCK SCREW

Helical Nurlock Liners 21000 thru 23000

A Helical Nurlock Liner

Eliminates Lock Screws - Closer Hole Spacing

FOR METAL

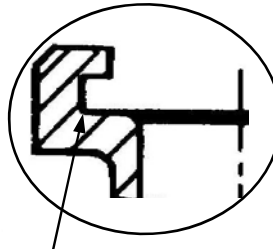
FOR PLASTIC



TYPE HNL



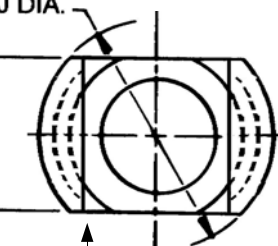
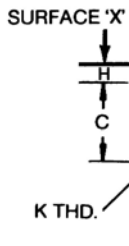
TYPE HNLP



TYPE HNL-1



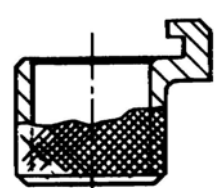
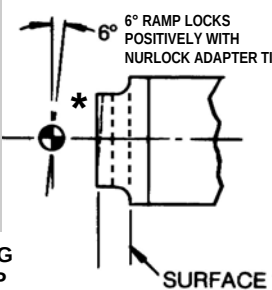
TYPE HNLP-1



Dowel Pin Hole Optional
on Request

*** NEW STRONGER MATERIALS** will hold increasing weights and pressures of positive feed motor assemblies.

*** POSITIVE LOCKING WITH ADAPTER TIP**



KNURLED O.D. ON TYPES HNLP AND HNLP-1

NOTE: THE ONLY COMPLETE LISTING OF LINERS FOR EVERY SHANK SIZE! SPECIFY TYPE BEFORE PART NUMBER WHEN ORDERING. SERIES continued next page.

NEW LINER I.D. TOLERANCES ELIMINATE SHANK SEIZURE!

* The six degree Helical Ramp of the Nurlock Liner locks positively to the Helical Ramp of the Nurlock Adapter Tip. Eliminates 'slip-slop.' Prevents startup drill breakage.

* HNL — 22 56	12 — 1/2	SEE NEW ORDERING EXAMPLE:
Type	I.D. Size .5000	HNL-225612-1/2
Locking Series 22000	Fraction or Decimal	TYPE HNL
7/8" O.D. in 64ths	3/4" Length in 16ths	LOCK SERIES 22000
		O.D. 7/8
		LENGTH 3/4
		I.D. SIZE 1/2 (.5000)

UNITED ADD TYPE PREFIX TO NEW PART NO.	OLD PART NO.	LINER I.D. A	+0.0005 -0.0000 B O.D.	C	D	E	J DIA	N	H	HNL K L. H. THD.	AND HNL-1 LOCK RING	MATCH COLLAR SERIES	DRILL 20000 SE RIES	SIZE ONLY MAX
213208- 3/8	13800	.3751 / .3754	.4990	1/2	39/64	1/4	1-1/8	.505	.250	1/2 - 20	521449	21000	3/32	1/4
213212- 3/8	13801	.3751 / .3754	.4990	3/4	39/64	5/16	1-1/8	.505	.250	1/2 - 20	521449	21000	3/32	1/4
214808- 7/16	13814	.4377 / .4380	.7490	1/2	39/64	1/4	1-1/8	.755	.250	3/4 - 16	521450A	21000	3/32	5/16
214812- 7/16	NEW	.4377 / .4380	.7490	3/4	39/64	5/16	1-1/8	.755	.250	3/4 - 16	521450A	21000	3/32	5/16
214808- 1/2	13802	.5002 / .5005	.7490	1/2	39/64	1/4	1-1/8	.755	.250	3/4 - 16	521450A	21000	3/32	3/8
214812- 1/2	NEW	.5002 / .5005	.7490	3/4	39/64	5/16	1-1/8	.755	.250	3/4 - 16	521450A	21000	3/32	3/8
214816- 1/2	NEW	.5002 / .5005	.7490	1	39/64	5/16	1-1/8	.755	.250	3/4 - 16	521450A	21000	3/32	3/8
224808- 7/16	13816	.4377 / .4380	.7490	1/2	39/64	1/4	1-13/16	.755	.250	3/4 - 16	521450A	22000	3/16	9/32
224812- 7/16	NEW	.4377 / .4380	.7490	3/4	39/64	5/16	1-13/16	.755	.250	3/4 - 16	521450A	22000	3/16	9/32
224808- 1/2	13817	.5002 / .5005	.7490	1/2	39/64	1/4	1-13/16	.755	.250	3/4 - 16	521450A	22000	3/16	11/32
224812- 1/2	NEW	.5002 / .5005	.7490	3/4	39/64	5/16	1-13/16	.755	.250	3/4 - 16	521450A	22000	3/16	11/32
225210- 9/16	13804	.5627 / .5630	.8117	5/8	39/64	5/16	1-13/16	.816	.250	13/16 - 16	521451A	22000	3/16	13/32
225612- 1/2	NEW	.5002 / .5005	.8740	3/4	39/64	5/16	1-13/16	.880	.250	7/8 - 14	521451	22000	3/16	11/32
225610- 5/8	13805	.6252 / .6255	.8740	5/8	39/64	5/16	1-13/16	.880	.250	7/8 - 14	521451	22000	3/16	15/32
225612- 5/8	NEW	.6252 / .6255	.8740	3/4	39/64	5/16	1-13/16	.880	.250	7/8 - 14	521451	22000	3/16	15/32
226410- 3/4	13818	.7503 / .7506	.9990	5/8	39/64	5/16	1-13/16	1.005	.250	1" - 14	521452	22000	3/16	15/32
226412- 3/4	NEW	.7503 / .7506	.9990	3/4	39/64	5/16	1-13/16	1.005	.250	1" - 14	521452	22000	3/16	15/32
226416- 3/4	NEW	.7503 / .7506	.9990	1	39/64	5/16	1-13/16	1.005	.250	1" - 14	521452	22000	3/16	15/32
226416- 13/16	13819	.8128 / .8131	.9990	1	39/64	5/16	1-13/16	1.005	.250	1" - 14	521452	22000	3/16	15/32
227216- 7/8	13808	.8754 / .8757	1.1240	1	39/64	5/16	1-13/16	1.130	.250	1-1/8 - 16	521453A	22000	3/16	15/32
235610- 5/8	NEW	.6252 / .6255	.8740	5/8	5/8	5/16	2-1/8	1.005	.250	7/8 - 14	521451	23000	1/4	17/32
235616- 5/8	NEW	.6252 / .6255	.8740	1	5/8	1	2-1/8	1.005	.250	7/8 - 14	521451	23000	1/4	17/32
236410- 3/4	13807	.7503 / .7506	.9990	5/8	5/8	5/16	2-1/8	1.005	.250	1" - 14	521452	23000	1/4	17/32
236416- 3/4	NEW	.7503 / .7506	.9990	1	5/8	5/16	2-1/8	1.005	.250	1" - 14	521452	23000	1/4	17/32
236410- 13/16	13820	.8128 / .8131	.9990	5/8	5/8	5/16	2-1/8	1.005	.250	1" - 14	521452	23000	1/4	19/32
236416- 13/16	NEW	.8128 / .8131	.9990	1	5/8	5/16	2-1/8	1.005	.250	1" - 14	521452	23000	1/4	19/32
238016- 7/8	13821	.8754 / .8757	1.2490	1	5/8	5/16	2-1/8	1.255	.250	1-1/4 - 12	521453	23000	1/4	21/32
238816- 1-1/8	13823	1.1254 / 1.1257	1.3740	1	5/8	5/16	2-1/8	1.380	.250	1-3/8 - 16	521454A	23000	1/4	23/32
238820- 1-1/8	NEW	1.1254 / 1.1257	1.3740	1-1/4	5/8	5/16	2-1/8	1.380	.250	1-3/8 - 16	521454A	23000	1/4	23/32
239616- 1	13822	1.0004 / 1.0007	1.4990	1	5/8	5/16	2-1/8	1.505	.250	1-1/2 - 16	521454B	23000	1/4	23/32
239616- 1-1/4	13809	1.2505 / 1.2509	1.4990	1	5/8	5/16	2-1/8	1.505	.250	1-1/2 - 16	521454B	23000	1/4	23/32
239620- 1-1/4	NEW	1.2505 / 1.2509	1.4990	1-1/4	5/8	5/16	2-1/8	1.505	.250	1-1/2 - 16	521454B	23000	1/4	23/32
239624- 1	NEW	1.0004 / 1.0007	1.4990	1-1/2	5/8	5/16	2-1/8	1.505	.250	1-1/2 - 16	521454B	23000	1/4	23/32
239624- 1-1/8	NEW	1.1254 / 1.1257	1.4990	1-1/2	5/8	5/16	2-1/8	1.505	.250	1-1/2 - 16	521454B	23000	1/4	23/32
239628- 1-1/4	NEW	1.2505 / 1.2509	1.4990	1-3/4	5/8	5/16	2-1/8	1.505	.250	1-1/2 - 16	521454B	23000	1/4	23/32

* Specify HNL, HNL-1, HNLP, HNLP-1 PLUS DASH NUMBER

ALLOY STEEL — HEAT TREATED — BLACK OXIDE FINISH

For Every Shank Size

Holds Firmly - Positive Helical Lock - No Slip

FOR METAL

FOR PLASTIC

Helical Nurlock Liners
24000 thru 25000

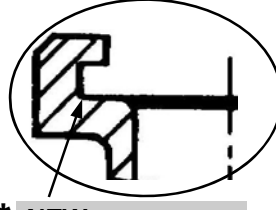
Ordering
Example
on
previous
page.



TYPE HNL



TYPE HNLP

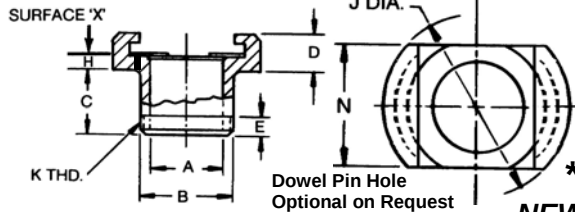


TYPE HNL-1



TYPE HNLP-1

FOR
CLOSE
HOLE
SPACING

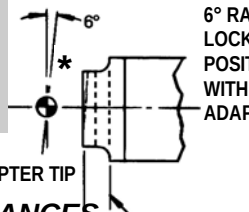


Dowel Pin Hole
Optional on Request

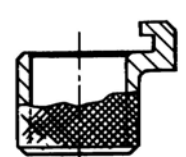
*** NEW STRONGER MATERIALS** will hold increasing weights and pressures of positive feed motor assemblies.

NEW O.D. TOLERANCES

*** POSITIVE LOCKING WITH ADAPTER TIP**



6° RAMP
LOCKS
POSITIVELY
WITH NURLOCK
ADAPTER TIP.



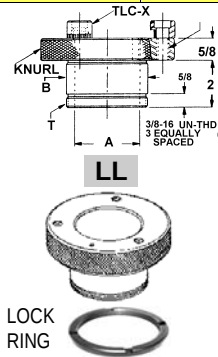
KNURLED O.D. ON TYPES HNLP
AND HNLP-1 +.025 +.010

*** Specify HNL, HNL-1, HNLP, HNLP-1 PLUS DASH NUMBER.**

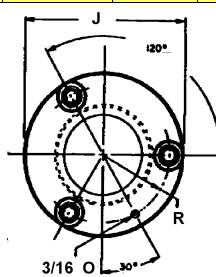
**NEW LINER I.D. TOLERANCES
ELIMINATE SHANK SEIZURE!**

ALLOY STEEL — HEAT TREATED — BLACK OXIDE FINISH

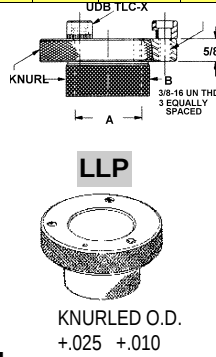
* UNITED ADD TYPE PREFIX TO NEW PART NO.	OLD PART NO.	LINER I. D. A	+ .0005 - .0000 B O. D.	C	D	E	J DIA	N	H	HNL AND K L. H. THD.	HNL-1 ONLY LOCK RING	MATCH COLLAR SERIES	DRILL 20000 SE MIN	SIZE RIES ONLY MAX
245616- 5/8	13824	.6252 / .6255	.8740	1	5/8	5/16	2-7/16	.880	.250	7/8 - 14	521451	24000	5/16	13/32
245624- 5/8	NEW	.6252 / .6255	.8740	1-1/2	5/8	5/16	2-7/16	.880	.250	7/8 - 14	521451	24000	5/16	13/32
246416- 3/4	13825	.7503 / .7506	.9990	1	5/8	5/16	2-7/16	1.005	.250	1" - 14	521452	24000	5/16	17/32
246424- 3/4	NEW	.7503 / .7506	.9990	1-1/2	5/8	5/16	2-7/16	1.005	.250	1" - 14	521452	24000	5/16	17/32
248016- 13/16	NEW	.8128 / .8131	1.2490	1	5/8	5/16	2-7/16	1.255	.250	1-1/4 - 12	521453	24000	5/16	19/32
248024- 13/16	NEW	.8128 / .8131	1.2490	1-1/2	5/8	5/16	2-7/16	1.255	.250	1-1/4 - 12	521453	24000	5/16	19/32
248016- 7/8	13826	.8754 / .8757	1.2490	1	5/8	5/16	2-7/16	1.255	.250	1-1/4 - 12	521453	24000	5/16	21/32
248024- 7/8	NEW	.8754 / .8757	1.2490	1-1/2	5/8	5/16	2-7/16	1.255	.250	1-1/4 - 12	521453	24000	5/16	21/32
248016- 1.0	13827	1.0004 / 1.0007	1.2490	1	5/8	5/16	2-7/16	1.255	.250	1-1/4 - 12	521453	24000	5/16	25/32
248024- 1.0	NEW	1.0004 / 1.0007	1.2490	1-1/2	5/8	5/16	2-7/16	1.255	.250	1-1/4 - 12	521453	24000	5/16	25/32
248816- 1-1/8	13828	1.1254 / 1.1257	1.3740	1	5/8	5/16	2-7/16	1.380	.250	1-3/8 - 16	521454A	24000	5/16	29/32
248824- 1-1/8	NEW	1.1254 / 1.1257	1.3740	1-1/2	5/8	5/16	2-7/16	1.380	.250	1-3/8 - 16	521454A	24000	5/16	29/32
249616- 1-1/4	13810	1.2505 / 1.2509	1.4990	1	5/8	5/16	2-7/16	1.505	.250	1-1/2 - 16	521454B	24000	1/4	23/32
249620- 1-1/4	NEW	1.2505 / 1.2509	1.4990	1-1/4	5/8	5/16	2-7/16	1.505	.250	1-1/2 - 16	521454B	24000	1/4	23/32
249624- 1-1/4	NEW	1.2505 / 1.2509	1.4990	1-1/2	5/8	5/16	2-7/16	1.505	.250	1-1/2 - 16	521454B	24000	5/16	15/16
2411216- 1-3/8	13829	1.3756 / 1.3760	1.7490	1	5/8	5/16	2-7/16	1.755	.250	1-3/4 - 16	521456A	24000	5/16	15/16
2411224- 1-3/8	NEW	1.3756 / 1.3760	1.7490	1-1/2	5/8	5/16	2-7/16	1.755	.250	1-3/4 - 16	521456A	24000	5/16	15/16
2412816- 1-1/2	13813	1.5006 / 1.5010	1.9990	1	5/8	5/16	2-7/16	2.005	.250	2" - 16	521457A	24000	5/16	15/16
2412824- 1-1/2	NEW	1.5006 / 1.5010	1.9990	1-1/2	5/8	5/16	2-7/16	2.005	.250	2" - 16	521457A	24000	5/16	15/16



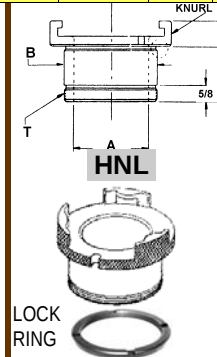
LOCK
RING



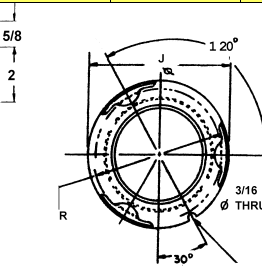
Specify LL or LLP.



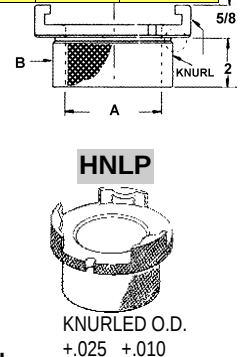
KNURLED O.D.
+.025 +.010



LOCK
RING



Specify HNL or HNLP.



KNURLED O.D.
+.025 +.010

UNITED PART NO.	LINER I. D. A	B O. D. + .0005 - .0000	J	R	T LH THRD	TLC NO.	ADAPTER TIP SERIES	LOCK RING	UNITED PART NO.	LINER I. D. A	B O. D. + .0005 - .0000	J	R	T LH THRD	TLC NO.	ADAPTER TIP SERIES	LOCK RING
UCC-LL- 25100	1.2505 1.2509	2.499	3-3/4	1-9/16	2-1/2-16	-3	251XX	UDB- 521458A	UCC-HNL- 25100	1.2505 1.2509	2.499	3-1/8	1.335	2-1/2-16	-3	251XX	UDB- 521458A
UCC-LL- 25200	1.3756 1.3760	2.499	3-3/4	1-9/16	2-1/2-16	-3	252XX	UDB- 521458A	UCC-HNL- 25200	1.3756 1.3760	2.499	3-1/8	1.335	2-1/2-16	-3	252XX	UDB- 521458A
UCC-LL- 25300	1.5006 1.5010	2.499	3-3/4	1-9/16	2-1/2-16	-3	253XX	UDB- 521458A	UCC-HNL- 25300	1.5006 1.5010	2.499	3-1/8	1.335	2-1/2-16	-3	253XX	UDB- 521458A
UCC-LL- 25400	1.7508 1.7512	2.499	3-3/4	1-9/16	2-1/2-16	-3	254XX	UDB- 521458A	UCC-HNL- 25400	1.7508 1.7512	2.499	3-1/8	1.335	2-1/2-16	-3	254XX	UDB- 521458A
UCC-LL- 25500	2.0010 2.0015	2.499	3-3/4	1-9/16	2-1/2-16	-3	255XX	UDB- 521458A	UCC-HNL- 25500	2.0010 2.0015	2.499	3-1/8	1.335	2-1/2-16	-3	255XX	UDB- 521458A

3-14-08

12200 WOODRUFF AVE. • DOWNEY, CA 90241-5608 • TELEPHONE (562) 803-1521 / (800) 421-3466 IN CA / 800-486-3466 • FAX (562) 803-6898 / (800) 486-3465

P33

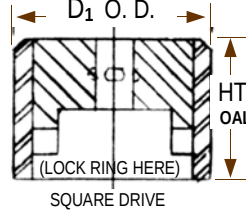
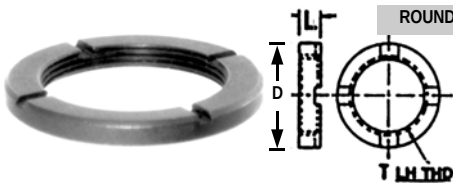
Install/Remove Lock Rings

Installation / Removal Tools for Lock Rings

LOCK RINGS

RTS SOCKETS.

UDB-RT-5 HANDLES



SQUARE DRIVE

For SETS,
See below
for
RTS-5-11.

Includes
Handle &
Nine
Sockets in
a Set.



1/4" SQ

HANDLE
FOR
SOCKETS
UDB-
521449-
RTS

thru
UDB-
521453A-
RTS

**HANDLE
ONLY
UDB-RT-5**

Handle is
1/4 O.D.
and
6" Long.

ORDER
INDIVIDUALLY
OR IN SETS.

UDB-RT-6 HANDLE



HANDLE
FOR
SOCKETS
UDB-
521453-
RTS

thru
UDB-
521480-
RTS

**HANDLE
ONLY
UDB-RT-6**

Handle is
11/16 O.D.
and 6" Long.

ORDER
INDIVIDUALLY
OR IN SETS.

1/2" SQ

ALL ITEMS AVAILABLE INDIVIDUALLY OR IN SETS.

**USE WITH
MATCHING
UNITED
LOCK RINGS
FOR DE-
PENDABLE
SERVICE.**

Set RTS-6—16
THESE SET ASSEMBLIES
Receive all Thread Lock Ring
Sizes from 1-3/8 – 16 thru
2-7/8 – 16 and HANDLE.
**SET contains RTS-6 Handle
and 14 Sockets in a case**
(UDB-521454ARTS--UDB-521460RTS).

LOCK RINGS	T L/H	D	L	SOCKETS	HANDLE STYLE	I.D.	D ₁	SOCKET HEIGHT
UDB-521449	1/2 -20	0.75	0.25	UDB-521449-RTS	UDB-RT-5	0.75	1"	3/4"
UDB-521450	5/8 -18	0.87	0.25	UDB-521450-RTS	UDB-RT-5	0.87	1-1/8	
UDB-521450A	3/4 -16	1.00	0.25	UDB-521450A-RTS	UDB-RT-5	1.00	1-1/4	
UDB-521451A	13/16 -16	1.18	0.25	UDB-521451A-RTS	UDB-RT-5	1.18	1-7/16	
UDB-521451	7/8 -14	1.25	0.25	UDB-521451-RTS	UDB-RT-5	1.25	1-1/2	
UDB-521452A	15/16 -16	1.37	0.25	UDB-521452A-RTS	UDB-RT-5	1.37	1-5/8	
UDB-521452	1 -14	1.37	0.25	UDB-521452-RTS	UDB-RT-5	1.37	1-5/8	
UDB-521453A	1-1/8 -16	1.50	0.25	UDB-521453A-RTS	UDB-RT-5	1.50	1-3/4	
UDB-521453	1-1/4 -12	1.75	0.31	UDB-521453-RTS	UDB-RT-5	1.75	2"	(SET #: RTS- 5—11)
UDB-521454A	1-3/8 -16	1.75	0.31	UDB-521454A-RTS	UDB-RT-6	1.75	2"	1"
UDB-521454	1-1/2 -12	1.75	0.31	UDB-521454-RTS	UDB-RT-6	1.75	2"	
UDB-521454B	1-1/2 -16	1.75	0.25	UDB-521454B-RTS	UDB-RT-6	1.75	2"	
UDB-521455A	1-9/16 -16	2.06	0.25	UDB-521455A-RTS	UDB-RT-6	2.06	2-5/16	
UDB-521455	1-5/8 -16	2.12	0.25	UDB-521455-RTS	UDB-RT-6	2.12	2-3/8	
UDB-521455B	1-11/16 -16	2.18	0.25	UDB-521455B-RTS	UDB-RT-6	2.18	2-7/16	
UDB-521456A	1-3/4 -16	2.37	0.25	UDB-521456A-RTS	UDB-RT-6	2.37	2-5/8	
UDB-521456	1-7/8 -16	2.37	0.25	UDB-521456-RTS	UDB-RT-6	2.37	2-5/8	
UDB-521457A	2 -16	2.50	0.25	UDB-521457A-RTS	UDB-RT-6	2.50	2-3/4	
UDB-521457	2-1/8 -16	2.62	0.31	UDB-521457-RTS	UDB-RT-6	2.62	2-7/8	
UDB-521458	2-1/4 -16	2.75	0.31	UDB-521458-RTS	UDB-RT-6	2.75	3"	
UDB-521458A	2-1/2 -16	3.00	0.31	UDB-521458A-RTS	UDB-RT-6	3.01	3-1/4	
UDB-521459	2-5/8 -16	3.12	0.37	UDB-521459-RTS	UDB-RT-6	3.12	3-3/8	(SET #: RTS- 6—16)
UDB-521460	2-7/8 -16	3.37	0.37	UDB-521460-RTS	UDB-RT-6	3.37	3-5/8	
UDB-521470A	3 -16	3.50	0.37	UDB-521470A-RTS	UDB-RT-6	3.50	3-3/4	
UDB-521472A	3-1/2 -16	4.00	0.37	UDB-521472A-RTS	UDB-RT-6	4.00	4-1/4	
UDB-521474A	4 -16	4.50	0.43	UDB-521474A-RTS	UDB-RT-6	4.50	4-3/4	(SET #: RTS- 6—6)
UDB-521480	4-1/2 -16	5.00	0.43	UDB-521480-RTS	UDB-RT-6	5.00	5-1/4	

STANDARD LOCK NUTS—TOUGH LEFT HAND—SPACE SAVERS

LOCK NUTS



LOCK	T L/H	H	L
UDB-14441	1/2 -20	0.75	0.25
UDB-14442	3/4 -16	1.00	0.25
UDB-14443	7/8 -14	1.25	0.25
UDB-14445	1-1/4 -12	1.75	0.37
UDB-14446	1-1/2 -12	2.00	0.50
UDB-14447	2 -16	2.50	0.50
UDB-14448	2-1/2 -16	3.00	0.50

Also in SETS!

Set RTS-5—11
THESE SET ASSEMBLIES
Receive all Thread Lock Ring
Sizes from 1/2 – 20 thru
1-1/4 – 12 and HANDLE.
**SET contains RTS-5 Handle
and 9 Sockets in a case**
(UDB-521449RTS -- UDB-521453RTS).

Set RTS-6—6
THESE SET ASSEMBLIES
Receive all Thread Lock Ring
Sizes from 3-1/2 – 16 thru
4-1/2 – 16 and HANDLE.
**SET contains RTS-6 Handle
and 4 Sockets in a case**
(UDB-521470ARTS--UDB-521480RTS).

Reducers — Liners Clamps in All Diameters

Reducer Bushings Liners & Clamps

REDUCER BUSHINGS with COOLANT ADAPTERS

Reduce Nosepieces to Adapter Tips
DOUBLES the USE of NOSEPIECES!

REDUCERS are used to reduce the thread size
in a specific nosepiece and adapt it to
accommodate smaller thread drill bushing tips.

COOLANT REDUCER PART NO.	STANDARD REDUCER PART NO.	A L.H. INSIDE THREAD	B L.H. OUTSIDE THREAD	C +.001 -.000	D +.0000 -.0006	E	F	G
UDB-A-17952	UDB-17952	3/4 -16	1" -14	.8125	1.0610	9/32	1-3/8	1-1/16
UDB-A-25018	UDB-25018	3/4 -16	1-1/4 -12	.8125	1.3110	9/32	1-5/8	1-5/16
UDB-A-25583	UDB-25583	1" -14	1-1/4 -12	1.0625	1.3110	11/32	1-5/8	1-5/16
UDB-A-25582	UDB-25582	3/4 -16	1-1/2 -12	.8125	1.5610	9/32	1-15/16	1-9/16
UDB-A-20132	UDB-20132	1" -14	1-1/2 -12	1.0625	1.5610	11/32	1-15/16	1-9/16
UDB-A-20017	UDB-20017	1-1/4 -12	1-1/2 -12	1.3125	1.5610	11/32	1-15/16	1-9/16
UDB-A-27910	UDB-27910	1-1/2 -12	2" -16	1.5625	2.0610	11/32	2-1/2	2-1/16

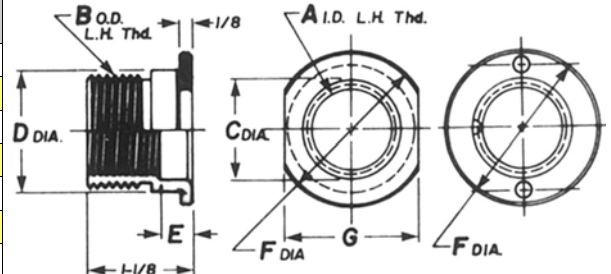
See Nosepiece Section for further information.



STANDARD REDUCER BUSHINGS

USE PREFIX
UDB-A-
WITH
COOLANT

STANDARD
USE PREFIX
UDB-



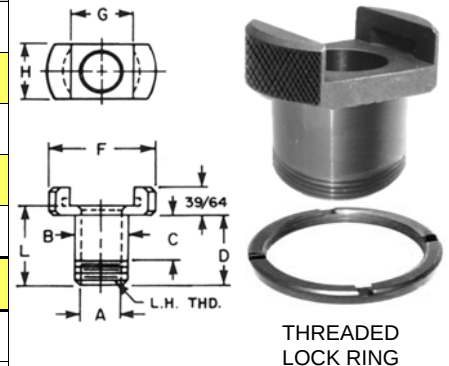
ALLOY STEEL - HEAT TREATED - BLACK OXIDE FINISH

NURLOCK LINER PART NO.	A	B	C	D	F	G	H	L	L.H. THREAD	LOCK RING NO.	MATCHING NURLOCK TIP
NL-16520	.3752 .3756	.4995 .4990	7/16	3/4	1-1/8	.625	3/4	1"	1/2 -20	521449	A-21106
NL-16521	.5002 .5006	.7495 .7490	7/16	3/4	1-3/16	.625	7/8	1"	3/4 -16	521450A	A-21306
NL-16522	.6252 .6256	.8745 .8740	7/16	3/4	1-13/16	1.218	1-1/8	1"	7/8 -14	521451	A-22406
NL-16523	.8753 .8757	1.2495 1.2490	9/16	1"	2-1/8	1.468	1-3/8	1-1/4	1-1/4 -12	521453	A-23310
NL-16524	1.1254 1.1257	1.4990 1.4985	27/32	1-1/2	2-1/8	1.468	1-5/8	1-3/4	1-1/2 12	521454	A-23515
NL-16525	1.1254 1.1257	1.4990 1.4985	27/32	1-1/2	2-7/16	1.718	1-5/8	1-3/4	1-1/2 -12	521454	A-24615
NL-16526	1.5006 1.5010	1.9990 1.9985	27/32	1-1/2	2-7/16	1.718	2-1/8	1-3/4	2" -16	521457A	A-24815

NEW LINER TOLERANCES PREVENT SHANK SEIZURE!

Use Threaded Lock Rings.

STANDARD NURLOCK LINERS SLIP FIT Eliminates Lock Screws

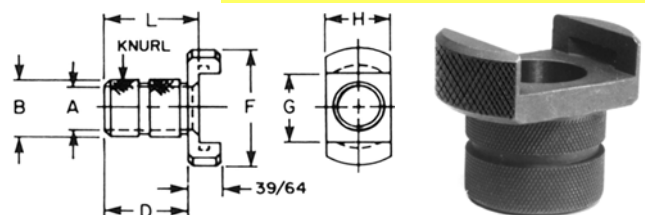


THREADED
LOCK RING

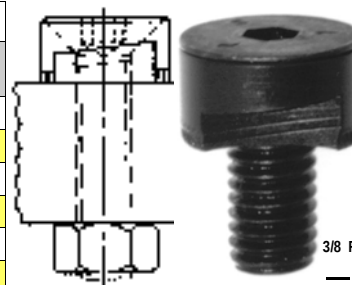
NURLOCK LINER PART NO.	A	B	D	F	G	H	L	MATCHING NURLOCK TIP
NLP-375	.3752 .3756	3/4	7/8	1-3/16	.625	7/8	1-1/8	A-21108
NLP-500	.5002 .5006	3/4	7/8	1-3/16	.625	7/8	1-1/8	A-21308
NLP-750	.7503 .7507	1-1/8	7/8	1-13/16	1.218	1-1/8	1-1/8	A-22508

MEDIUM HEAVY KNURL STAYS PUT! Perfect for laminate Drill Bars & fixtures.

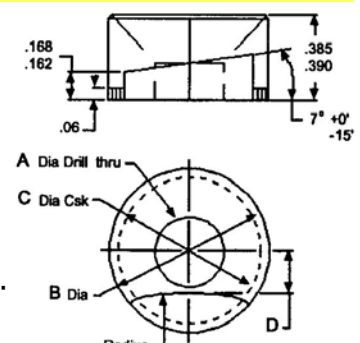
STANDARD NURLOCK LINERS For PLASTIC TOOLING



NURLOCK CLAMPS — TOUGH — DURABLE							
CLAMP NO.	A	B	C	D	FLAT HEAD SCREW	JAM NUT	RADIUS
TLC-2	21/64	5/8	.595	.188	5/16-18x3/4	5/16-18	1.5
TLC-3	25/64	3/4	.720	.218	3/8-16x1	3/8-16	1.5
TLC-4	21/64	5/8	.595	.188	5/16-18x1-1/2	5/16-18	1.5
TLC-5	21/64	5/8	.595	.188	5/16-18x2	5/16-18	1.5
TLC-6	25/64	3/4	.720	.218	3/8-16x2	3/8-16	2.0
TLC-7	25/64	3/4	.720	.218	3/8-16x2	3/8-16	2.5



NURLOCK CLAMPS



Tapered clamping surface accommodates all adapter tips in use • Positive lock • Uniform and Repeatable •
Serrations Reduce Rotation • Heat-treated Steel • Interchanges with weaker lock screws.

4-20-01

12200 WOODRUFF AVE. • DOWNEY, CA 90241-5608 • TELEPHONE (562) 803-1521 / (800) 421-3466 IN CA / 800-486-3466 • FAX (562) 803-6898 / (800) 486-3465

P35

Lock Liners for Most All Adapter Tip Diameters



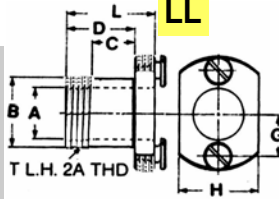
SLIP FIT WITH LOCK RING

KNURLED FOR EPOXY

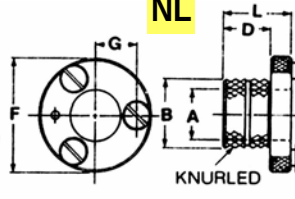


Complete Size Range for Slip Fit Applications

Lock Liners are provided for all Adapter Tip diameters. Select any adapter tip and a corresponding lock liner with lock ring. Use when a high amount of torque is generated.



21100 thru 24800 SERIES



25000 SERIES ONLY

Complete Size Range for Plastic Tooling

These Lock Liners will accept any Adapter Tip Shank diameter. They are both tough and knurled to "stay fast" in potted or cast-in-place applications.

SPECIFY LL FOR SLIP FIT OR NL FOR KNURLED

ROCKWELL 42-46C

OLD ER PART NUMBER	NEW PART NUMBER LL or NL	A I.D. NOMINAL	A I.D. ACTUAL	B O.D. NOMINAL	B O.D. ACTUAL	C	D	F	G NOM.	H	L	T L.H. THREAD	LOCK RING	MATCHING ADAPTER TIP SERIES	LOCK SCREWS USED
A-16520	LL-21100	3/8	.3750 .3756	1/2	.4995 .4989	7/16	3/4	1-3/4	5/8	3/4	1-1/16	1/2 -20	521449	A-11100 A-16500 A-21100	16531 (2)
	LL-21200	7/16	.4375 .4381	3/4	.7495 .7489	7/16	3/4	1-3/4	5/8	1"	1-1/16	3/4 -16	521450A	A-11200 A-21200	2 LOCK
A-16521	LL-21300	1/2	.5000 .5006	3/4	.7495 .7489	7/16	3/4	1-3/4	5/8	1"	1-1/16	3/4 -16	521450A	A-11300 A-16501 A-21300	LL-21000
	LL-22100	7/16	.4375 .4381	7/8	.8745 .8739	7/16	3/4	2-7/16	59/64	1-1/8	1-3/16	7/8 -14	521451	A-12100 A-22100	16532 (2)
	LL-22200	1/2	.5000 .5006	7/8	.8745 .8739	7/16	3/4	2-7/16	59/64	1-1/8	1-3/16	7/8 -14	521451	A-12200 A-22200	2 LOCK
	LL-22300	9/16	.5625 .5631	7/8	.8745 .8739	7/16	3/4	2-7/16	59/64	1-1/8	1-3/16	7/8 -14	521451	A-12300 A-22300	LL-22000
A-16522	LL-22400	5/8	.6250 .6256	7/8	.8745 .8739	7/16	3/4	2-7/16	59/64	1-1/8	1-3/16	7/8 -14	521451	A-12400 A-16502 A-22400	
	LL-23100	3/4	.7500 .7506	1-1/4	1.2495 1.2485	9/16	1"	2-11/16	1-3/64	1-1/2	1-7/16	1-1/4 -12	521453	A-13100 A-23100	16532 (2)
	LL-23200	13/16	.8125 .8131	1-1/4	1.2495 1.2485	9/16	1"	2-11/16	1-3/64	1-1/2	1-7/16	1-1/4 -12	521453	A-13200 A-23200	2 LOCK
A-16523	LL-23300	7/8	.8750 .8756	1-1/4	1.2495 1.2485	9/16	1"	2-11/16	1-3/64	1-1/2	1-7/16	1-1/4 -12	521453	A-13300 A-16503 A-23300	LL-23000
	LL-23400	1"	1.0000 1.0010	1-1/2	1.4990 1.4980	27/32	1-1/2	2-11/16	1-3/64	1-3/4	1-15/16	1-1/2 -12	521454	A-13400 A-23400	
A-16524	LL-23500	1-1/8	1.1250 1.1260	1-1/2	1.4990 1.4980	27/32	1-1/2	2-11/16	1-3/64	1-3/4	1-15/16	1-1/2 -12	521454	A-13500 A-16504 A-23500	
	LL-24100	5/8	.6250 .6256	1-1/2	1.4990 1.4980	27/32	1-1/2	3"	1-11/64	1-3/4	1-15/16	1-1/2 -12	521454	A-14100 A-24100	16532 (2)
	LL-24300	3/4	.7500 .7506	1-1/2	1.4990 1.4980	27/32	1-1/2	3"	1-11/64	1-3/4	1-15/16	1-1/2 -12	521454	A-14300 A-24300	
	LL-24400	7/8	.8750 .8756	1-1/2	1.4990 1.4980	27/32	1-1/2	3"	1-11/64	1-3/4	1-15/16	1-1/2 -12	521454	A-14400 A-24400	2 LOCK
	LL-24500	1"	1.0000 1.0010	1-1/2	1.4990 1.4980	27/32	1-1/2	3"	1-11/64	1-3/4	1-15/16	1-1/2 -12	521454	A-14500 A-24500	LL-24000
A-16525	LL-24600	1-1/8	1.1250 1.1260	1-1/2	1.4990 1.4980	27/32	1-1/2	3"	1-11/64	1-3/4	1-15/16	1-1/2 -12	521454	A-14600 A-16505 A-24600	
	LL-24700	1-1/4	1.2500 1.2510	2"	1.9990 1.9980	27/32	1-1/2	3"	1-11/64	2-1/2	1-15/16	2" -16	521457A	A-14700 A-24700	
A-16526	LL-24800	1-1/2	1.5000 1.5010	2"	1.9990 1.9980	27/32	1-1/2	3"	1-11/64	2-1/2	1-15/16	2" -16	521457A	A-14800 A-16506 A-24800	
	LL-25100	1-1/4	1.2500 1.2510	2-1/2	2.4990 2.4980	1-3/8	2"	3-3/4	1-9/16	--	2-5/8	2-1/2 -16	521458A	A-15100 A-25100	16530 (3)
	LL-25200	1-3/8	1.3750 1.3760	2-1/2	2.4990 2.4980	1-3/8	2"	3-3/4	1-9/16	--	2-5/8	2-1/2 -16	521458A	A-15200 A-25200	
	LL-25300	1-1/2	1.5000 1.5010	2-1/2	2.4990 2.4980	1-3/8	2"	3-3/4	1-9/16	--	2-5/8	2-1/2 -16	521458A	A-15300 A-25300	3 LOCK
	LL-25400	1-3/4	1.7500 1.7510	2-1/2	2.4990 2.4980	1-3/8	2"	3-3/4	1-9/16	--	2-5/8	2-1/2 -16	521458A	A-15400 A-25400	LL-25000
A-16533	LL-25500	2"	2.0000 2.0015	2-1/2	2.4990 2.4980	1-3/8	2"	3-3/4	1-9/16	--	2-5/8	2-1/2 -16	521458A	A-15500 A-16513 A-25500	

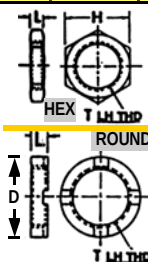
LOCK RINGS



HEX LOCK NUTS

are UDB-14441 thru UDB-14448. See pg. P34 for Installation Tools.

P36



LOCK RING #	T	L/H THD	H or D	L	LOCK RING #	T	L/H THD	O.D.	L	LOCK RING #	T	L/H THD	O.D.	L
UDB-14441	1/2 -20	0.75	0.25	0.25	UDB-521451	7/8 -14	1.25	0.25	0.25	UDB-521456A	1-3/4 -16	2.37	0.25	0.25
UDB-14442	3/4 -16	1.00	0.25	0.25	UDB-521452A	15/16 -16	1.37	0.25	0.25	UDB-521456B	1-7/8 -16	2.37	0.25	0.25
UDB-14443	7/8 -14	1.25	0.25	0.25	UDB-521452	1 -14	1.37	0.25	0.25	UDB-521457A	2 -16	2.50	0.25	0.25
UDB-14445	1-1/4 -12	1.75	0.37	0.37	UDB-521453A	1-1/8 -16	1.50	0.25	0.25	UDB-521457B	2-1/8 -16	2.62	0.31	0.31
UDB-14446	1-1/2 -12	2.00	0.50	0.50	UDB-521453	1-1/4 -12	1.75	0.31	0.31	UDB-521458	2-1/4 -16	2.75	0.31	0.31
UDB-14447	2 -16	2.50	0.50	0.50	UDB-521454A	1-3/8 -16	1.75	0.31	0.31	UDB-521458A	2-1/2 -16	3.00	0.31	0.31
UDB-14448	2-1/2 -16	3.00	0.50	0.50	UDB-521454	1-1/2 -12	1.75	0.31	0.31	UDB-521459	2-5/8 -16	3.12	0.37	0.37
UDB-521449	1/2 -20	0.75	0.25	0.25	UDB-521454B	1-1/2 -16	1.75	0.25	0.25	UDB-521460	2-7/8 -16	3.37	0.37	0.37
UDB-521450	5/8 -18	0.87	0.25	0.25	UDB-521455A	1-9/16 -16	2.06	0.25	0.25	UDB-521470A	3-1/2 -16	3.50	0.37	0.37
UDB-521450A	3/4 -16	1.20	0.25	0.25	UDB-521455	1-5/8 -16	2.12	0.25	0.25	UDB-521472A	3-1/2 -16	4.00	0.37	0.37
UDB-521451A	13/16 -16	1.18	0.25	0.25	UDB-521455B	1-11/16 -16	2.18	0.25	0.25	UDB-521474A	4 -16	4.50	0.43	0.43
										UDB-521480	4-1/2 -16	5.00	0.43	0.43

A New Product - A New Direction - A New Commitment!

Nurlock Extended Range Tooling

Locking Liners

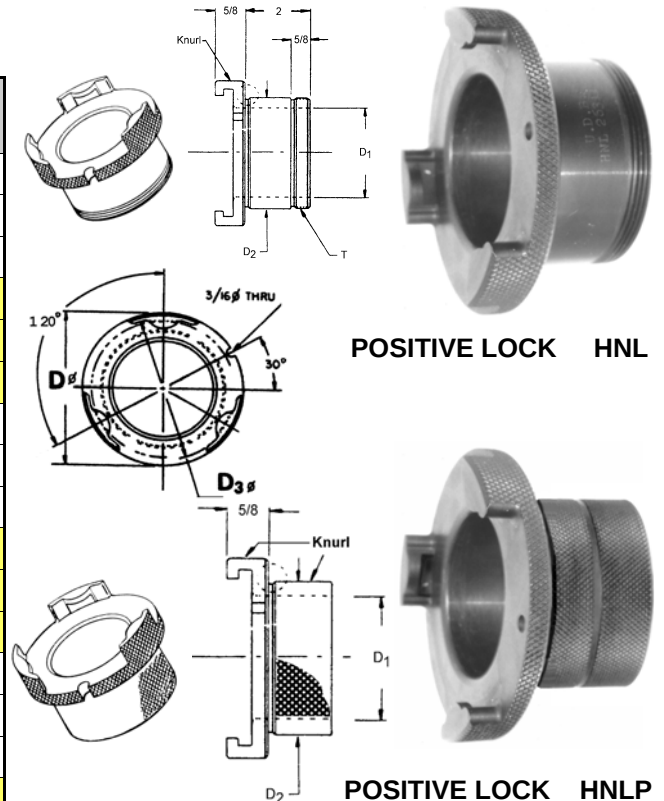
Extended Range sizes are used with TLC and our Taper Lock Clamp series.

EXTENDED RANGE HELICAL NURLOCK LOCK LINERS (STYLES HNL and HNLP)

HNL is threaded for hard tooling. HNLP is coarse knurled to stay in place for soft tools. Specify either HNL or HNLP when ordering.

UNITED PART NO.	D HD DIA	D1 I.D.	D2 O.D.	T LH THRD	D3	ADAPTER TIP SERIES	LOCK RING
UCC-XXX-26160	3.50	1.50	2.499	2-1/2-16	2.920	261XX	UDB-521458A
UCC-XXX-26360	3.50	1.75	2.499	2-1/2-16	2.920	263XX	UDB-521458A
UCC-XXX-26560	3.50	2.00	2.499	2-1/2-16	2.920	265XX	UDB-521458A
UCC-XXX-27160	4.00	2.00	2.999	3-16	3.420	271XX	UDB-521470A
UCC-XXX-27360	4.00	2.37	2.999	3-16	3.420	273XX	UDB-521470A
UCC-XXX-27560	4.00	2.50	2.999	3-16	3.420	275XX	UDB-521470A
UCC-XXX-28160	4.50	2.50	3.499	3-1/2-16	3.920	281XX	UDB-521472A
UCC-XXX-28360	4.50	2.75	3.499	3-1/2-16	3.920	283XX	UDB-521472A
UCC-XXX-28560	4.50	3.00	3.499	3-1/2-16	3.920	285XX	UDB-521472A
UCC-XXX-29160	5.00	3.00	3.999	4-16	4.420	291XX	UDB-521474A
UCC-XXX-29360	5.00	3.25	3.999	4-16	4.420	293XX	UDB-521474A
UCC-XXX-29560	5.00	3.50	3.999	4-16	4.420	295XX	UDB-521474A
UCC-XXX-30160	5.50	3.50	4.499	4-1/2-16	4.920	301XX	UDB-521480
UCC-XXX-30360	5.50	3.75	4.499	4-1/2-16	4.920	303XX	UDB-521480
UCC-XXX-30560	5.50	4.00	4.499	4-1/2-16	4.920	305XX	UDB-521480

Specify HNL or HNLP when ordering. Example: UCC-HNLP-30560



POSITIVE LOCK HNL

POSITIVE LOCK HNLP

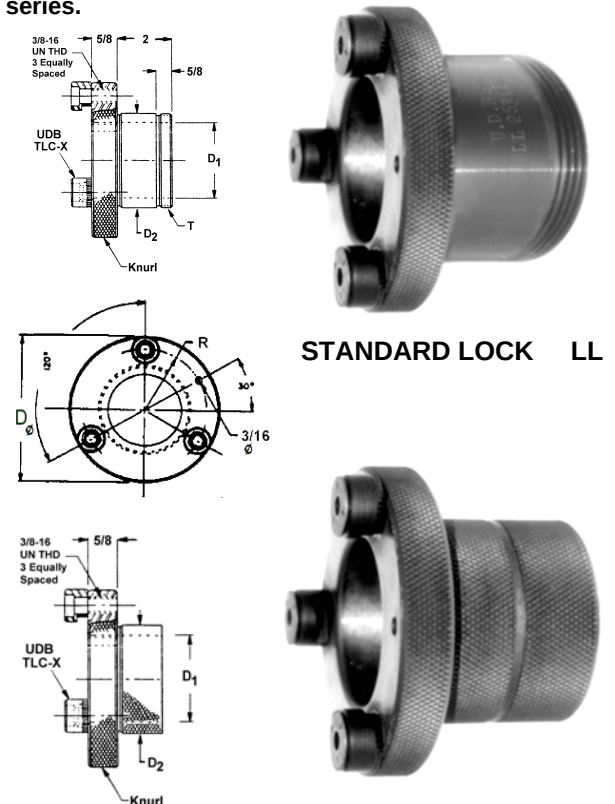
EXTENDED RANGE STANDARD NURLOCK LOCK LINERS (STYLES LL and LLP)

Extended Range sizes are used with TLC and our Taper Lock Clamp series.

LL is threaded for hard tooling. LLP is coarse knurled to stay in place for soft tooling. Specify either LL or LLP when ordering.

UNITED PART NO.	D HD DIA	D1 I.D.	D2 O.D.	T LH THRD	R Lock Screw Location	TLC NO.	ADAPTER TIP SERIES	LOCK RING
UCC-XXX-26160	4-1/8	1.50	2.499	2-1/2-16	1.688	-3	261XX	UDB-521458A
UCC-XXX-26360	4-1/8	1.75	2.499	2-1/2-16	1.688	-3	263XX	UDB-521458A
UCC-XXX-26560	4-1/8	2.00	2.499	2-1/2-16	1.688	-3	265XX	UDB-521458A
UCC-XXX-27160	4-5/8	2.00	2.999	3-16	1.938	-6	271XX	UDB-521470A
UCC-XXX-27360	4-5/8	2.37	2.999	3-16	1.938	-6	273XX	UDB-521470A
UCC-XXX-27560	4-5/8	2.50	2.999	3-16	1.938	-6	275XX	UDB-521470A
UCC-XXX-28160	5-1/8	2.50	3.499	3-1/2-16	2.187	-6	281XX	UDB-521472A
UCC-XXX-28360	5-1/8	2.75	3.499	3-1/2-16	2.187	-6	283XX	UDB-521472A
UCC-XXX-28560	5-1/8	3.00	3.499	3-1/2-16	2.187	-6	285XX	UDB-521472A
UCC-XXX-29160	5-5/8	3.00	3.999	4-16	2.438	-7	291XX	UDB-521474A
UCC-XXX-29360	5-5/8	3.25	3.999	4-16	2.438	-7	293XX	UDB-521474A
UCC-XXX-29560	5-5/8	3.50	3.999	4-16	2.438	-7	295XX	UDB-521474A
UCC-XXX-30160	6-1/8	3.50	4.499	4-1/2-16	2.678	-7	301XX	UDB-521480
UCC-XXX-30360	6-1/8	3.75	4.499	4-1/2-16	2.678	-7	303XX	UDB-521480
UCC-XXX-30560	6-1/8	4.00	4.499	4-1/2-16	2.678	-7	305XX	UDB-521480

Specify LL or LLP when ordering. Example: UCC-LL-30560



STANDARD LOCK LL

STANDARD LLP

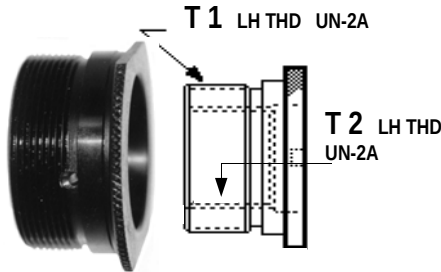
Extended Range

Reducers-Increasers

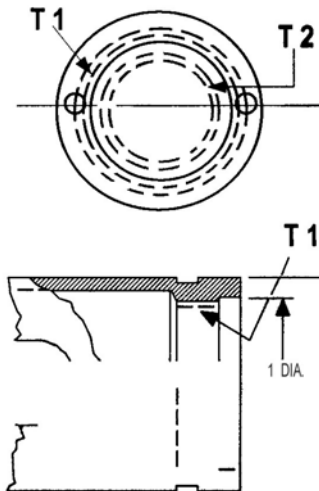
DOWN from 4-1/4 - 16 LH to 3/4 - 16 LH
UP from 3/4 - 16 LH to 4-1/4 - 16 LH

REDUCER BUSHINGS

From 4-1/4-16 LH to 3/4-16 LH
 Add 'A' to Part No. for Coolant type.



T 1 Reducer Threads Fit T 1 Nosepiece



NOSEPIECE

Part No. Indicates Thread Size

EXTENDED RANGE REDUCER BUSHINGS

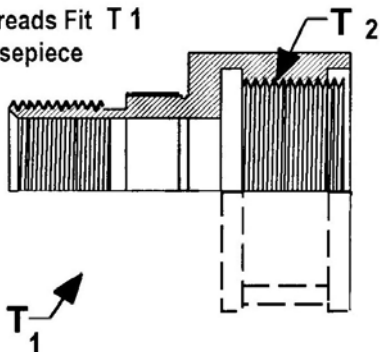
Allowing REDUCTIONS from large 4-1/4 - 16 LH 30,000 Series to as small as 3/4 - 16 LH 21,000 Series. This provides a broad range of internal I.D. diameters available from a wide variety of Nurlock Adapter Tips.

Add 'A' for Coolant Type to PART NO.	T 1 NOSEPIECE THREAD		T 2 BUSHING TIP THREAD	
	LENGTH THREAD	THREAD SERIES	LENGTH THREAD	THREAD SERIES
UCC-26021	2-1/4-16	26000	3/4-16	21000
UCC-26022	2-1/4-16	26000	1-14	22000
UCC-26023	2-1/4-16	26000	1-1/4-12	23000
UCC-26024	2-1/4-16	26000	1-1/2-12	24000
UCC-26025	2-1/4-16	26000	2-16	25000
UCC-27021	2-3/4-16	27000	3/4-16	21000
UCC-27022	2-3/4-16	27000	1-14	22000
UCC-27023	2-3/4-16	27000	1-1/4-12	23000
UCC-27024	2-3/4-16	27000	1-1/2-12	24000
UCC-27025	2-3/4-16	27000	2-16	25000
UCC-27026	2-3/4-16	27000	2-1/4-16	26000
UCC-28021	3-1/4-16	28000	3/4-16	21000
UCC-28022	3-1/4-16	28000	1-14	22000
UCC-28023	3-1/4-16	28000	1-1/4-12	23000
UCC-28024	3-1/4-16	28000	1-1/2-12	24000
UCC-28025	3-1/4-16	28000	2-16	25000
UCC-28026	3-1/4-16	28000	2-1/4-16	26000
UCC-28027	3-1/4-16	28000	2-3/4-16	27000
UCC-29021	3-3/4-16	29000	3/4-16	21000
UCC-29022	3-3/4-16	29000	1-14	22000
UCC-29023	3-3/4-16	29000	1-1/4-12	23000
UCC-29024	3-3/4-16	29000	1-1/2-12	24000
UCC-29025	3-3/4-16	29000	2-16	25000
UCC-29026	3-3/4-16	29000	2-1/4-16	26000
UCC-29027	3-3/4-16	29000	2-3/4-16	27000
UCC-29028	3-3/4-16	29000	3-1/4-16	28000
UCC-30021	4-1/4-16	30000	3/4-16	21000
UCC-30022	4-1/4-16	30000	1-14	22000
UCC-30023	4-1/4-16	30000	1-1/4-12	23000
UCC-30024	4-1/4-16	30000	1-1/2-12	24000
UCC-30025	4-1/4-16	30000	2-16	25000
UCC-30026	4-1/4-16	30000	2-1/4-16	26000
UCC-30027	4-1/4-16	30000	2-3/4-16	27000
UCC-30028	4-1/4-16	30000	3-1/4-16	28000
UCC-30029	4-1/4-16	30000	3-3/4-16	29000

INCREASER BUSHINGS

From 3/4-16 LH to 4-1/4-16 LH

T 1 Increaser Threads Fit T 1 Nosepiece



EXTENDED RANGE INCREASER BUSHINGS

Allowing INCREASES from small 3/4 - 16 LH 21,000 Series to as large as 4-1/4 - 16 LH 30,000 Series. This provides a broad range of internal I.D. diameters available from a wide variety of Nurlock Adapter Tips.

LIMITED PART NO.	NOSEPIECE		BUSHING TIP THREAD	
	T 1 LEN	THREAD SERIES	T 2 LEN	THREAD SERIES
UCC-25026	2-16	25000	2-1/4-16	26000
UCC-25027	2-16	25000	2-3/4-16	27000
UCC-25028	2-16	25000	3-1/4-16	28000
UCC-25029	2-16	25000	3-3/4-16	29000
UCC-25030	2-16	25000	4-1/4-16	30000
UCC-26027	2-1/4-16	26000	2-3/4-16	27000
UCC-26028	2-1/4-16	26000	3-1/4-16	28000
UCC-26029	2-1/4-16	26000	3-3/4-16	29000
UCC-26030	2-1/4-16	26000	4-1/4-16	30000
UCC-27028	2-3/4-16	27000	3-1/4-16	28000
UCC-27029	2-3/4-16	27000	3-3/4-16	29000
UCC-27030	2-3/4-16	27000	4-1/4-16	30000
UCC-28029	3-1/4-16	28000	3-3/4-16	29000
UCC-28030	3-1/4-16	28000	4-1/4-16	30000
UCC-29030	3-3/4-16	29000	4-1/4-16	30000

New Jigs to Close Space Nurlock Adapter Tips, Liners, Locating Lock Screws and TLC Clamps

UTK-LJU-44 JIG KIT UNIVERSAL LOCATING JIG

New Universal Locating and Spacing Fixtures, Nurlock Shanks, Collars, Lock Screws and TLC Clamps. Spacing and location of lock screws and TLC clamps is achieved instantly!

THREE SIMPLE STEPS:

REF UTK-200118

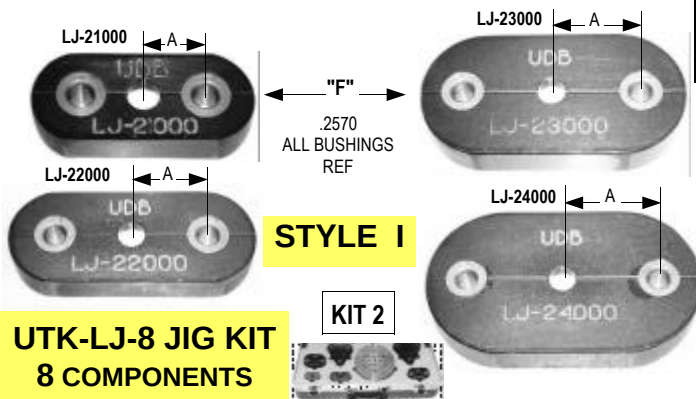
1. Select Locating Shanks and Adapters (LSA) that match your shank O.D.'s.
2. Select the Locating Jig that matches your Nurlock Adapter Tip Collar Series. Attach the Locating Shank Adapter to the Locating Jig with the 5/16-18 UNC Socket Head Screw. Your Jig is now complete!
3. Insert the Jig with the Locating Shank Adapter O.D. into the I.D. of your fixture hole or liner. Align to your drill line. Clamp, drill and tap thru jig bushing for correct spacing and lock screw or TLC location.

UTK-LJU-44 MASTER JIG KIT 44 COMPONENTS



Rib-I
Stacker
Case

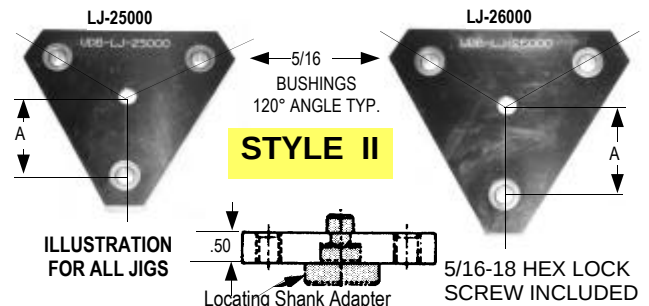
UTK-LJU-44 KIT CONTAINS ALL 44 COMPONENTS ON THIS PAGE:
SHANKS, ADAPTERS, BUSHINGS, JIGS, SCREWS & CUSTOM CASE.



STYLE I

KIT 2

UTK-LJ-8 JIG KIT 8 COMPONENTS



STYLE II

ILLUSTRATION
FOR ALL JIGS

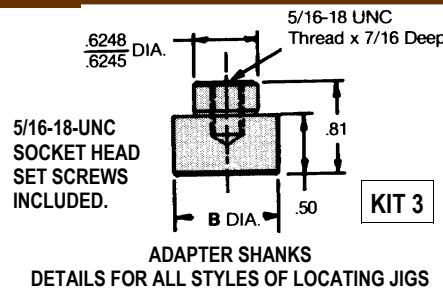


5/16-18 HEX LOCK
SCREW INCLUDED

UDB-LJ-8 KIT CONTAINS ALL 7 JIGS SHOWN THIS PAGE IN A CUSTOM-FITTED CASE WITH TOP & BOTTOM LAYOUT INSERTS.

UNITED PART NO.	A DIM	STYLE	LOCKSCREW TLC CLAMP NO.	UNITED PART NO.	A DIM	STYLE	LOCKSCREW TLC CLAMP NO.	UNITED PART NO.	A DIM	STYLE	LOCKSCREW TLC CLAMP NO.
LJ-21000	.625	I	16531 - TLC 2	LJ-23000	1.078	I	16532 - TLC 2	LJ-25000	1.562	II	16530 - TLC 3
LJ-22000	.953	I	16532 - TLC 2	LJ-24000	1.203	I	16532 - TLC 2	LJ-26000	1.687	II	16530 - TLC 3

UNITED PART NO.	B DIA.	UNITED PART NO.	B DIA.
LSA-1	.3745	LSA-10	1.1245
LSA-2	.4370	LSA-11	1.2495
LSA-3	.4995	LSA-12	1.3745
LSA-4	.5620	LSA-13	1.4995
LSA-5	.6245	LSA-14	1.6245
LSA-6	.7495	LSA-15	1.7495
LSA-7	.8120	LSA-16	1.9995
LSA-8	.8745	LSA-17	2.3745
LSA-9	.9995	LSA-18	2.4995

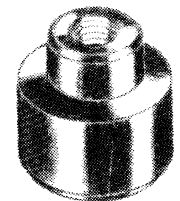


UTK-LSA-37 KIT 37 COMPONENTS

SPECIFY LSA-37 FOR KIT

CONTENTS: ALL 18
LOCATING SHANK
ADAPTERS, LSA-1 THRU
LSA-18, AND ALL 18 OF
THE 5/16-18 UNC SOCKET
HEAD SCREWS IN A CASE.

LOCATING SHANK ADAPTER



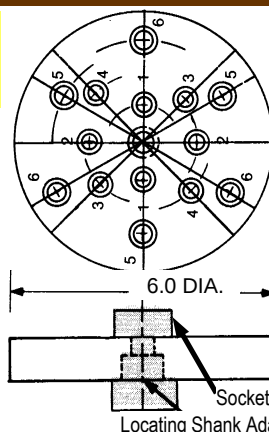
STYLE III

UTK-ULJK-38 JIG KIT 38 COMPONENTS

SCRIBED NUMBERS	COLLAR SERIES
1	21000
2	22000
3	23000
4	24000
5	25000
6	26000

CONTENTS: ALL 18
LOCATING SHANK
ADAPTERS: LSA-1 THRU
LSA-18, ALL 5/16-18 UNC
SOCKET HEAD SCREWS
AND THE LJ-1
UNIVERSAL LOCATING
JIG, IN A CASE.

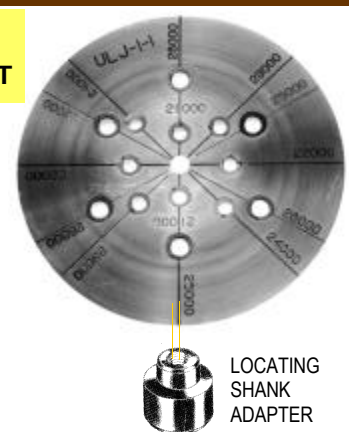
KIT 4



ULJ-1 JIG 1 COMPONENT

UNIVERSAL LOCATING JIG

LOCKING COLLAR
SIZES SCRIBED TO
LOCATE ALL LOCK
SCREWS OR TLC
CLAMPS, 21000
THRU 26000.



LOCATING
SHANK
ADAPTER

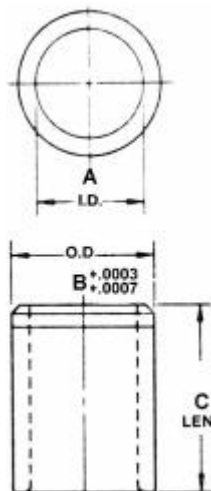
CONTAINS ALL LOCKING SERIES SIZES.
LOCATING NUMBERS DENOTE LOCKING SERIES.

4-5-04

Liners, Lock Screws, Spindle Guards

Liners, Lock Screws & Fluid Swivel Guides

HEADLESS LINERS

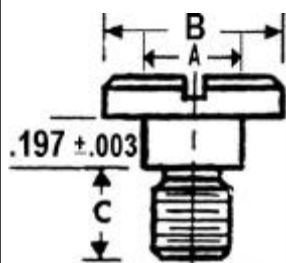


LINER PART NO.	A I.D.	B O.D.	C LENGTH
19936	3/8	5/8	1"
19937	7/16	3/4	1"
19938	1/2	3/4	1"
19939	9/16	7/8	1"
19940	5/8	7/8	1"
19941	3/4	1"	1"
19942	3/4	1"	1-3/8
19943	13/16	1-3/8	1-3/8
19944	7/8	1-3/8	1-3/8
19945	1	1-3/8	1-3/8
19946	1-1/8	1-3/4	1-3/4

LINER PART NO.	A I.D.	B O.D.	C LENGTH
19947	5/8	7/8	1-3/4
19949	3/4	1"	1-3/4
19950	7/8	1-3/8	1-3/4
19951	1	1-3/8	1-3/4
19952	1-1/4	1-3/4	1-3/4
19953	1-1/4	1-3/4	2-1/2
19954	13/8	1-3/4	2-1/2
19955	1-1/2	2-1/4	2-1/2
19956	1-3/4	2-1/4	2-1/2
19957	2	2-1/2	2-1/2
19958	2-1/4	2-3/4	2-1/2

LOCK SCREWS

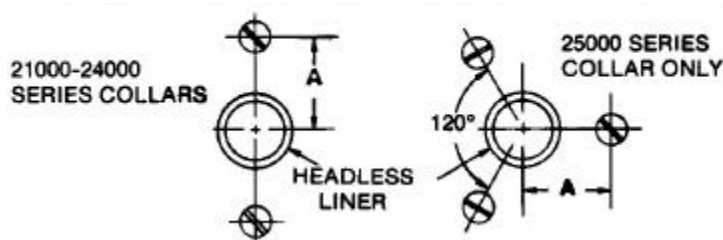
SLOTTED



HEAT TREATED — BLACK OXIDE FINISH

LOCK SCREW PART NO.	A	B	C	THREAD
16530	7/16	3/4	5/8	3/8 - 16
16531	3/8	5/8	5/16	5/16 - 18
16532	3/8	5/8	7/16	5/16 - 18

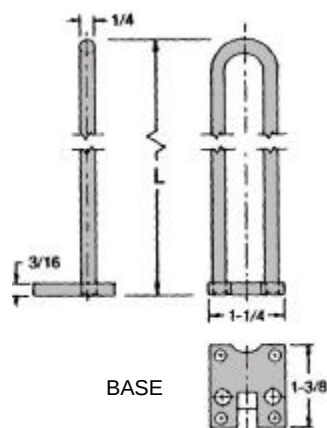
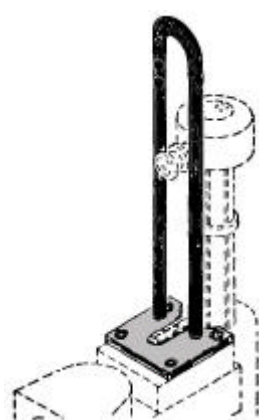
LOCK SCREW INSTALLATION DATA



Use **UNITED**
Locating Jigs
on Page P39.

ADAPTER TIP SERIES	A	LOCK SCREW PART NO.	NO. OF SCREWS REQUIRED
21000	.625	16531	2
22000	.922	16532	2
23000	1.047	16532	2
24000	1.172	16532	2
25000	1.562	16530	3

SPINDLE GUARD FOR FLUID SWIVEL GUIDES



PROTECTION FOR

- SPINDLES
- COOLANT LINES
- AIR FLUID CHUCKS

FITS QUACKENBUSH, ROCKWELL
AND COOPER RIGHT ANGLE MOTORS.

PART NO.	L HEIGHT
UDB-170906	6
UDB-170995	8-7/8
UDB-170996	4-1/4

Adapters for Small Holes

for Fiberglass and Plastic Tooling requiring use of automatic feed drill motors

Adapter Tips AT -LL

UNITED INCLUSIVE FEATURE — FITS ALL

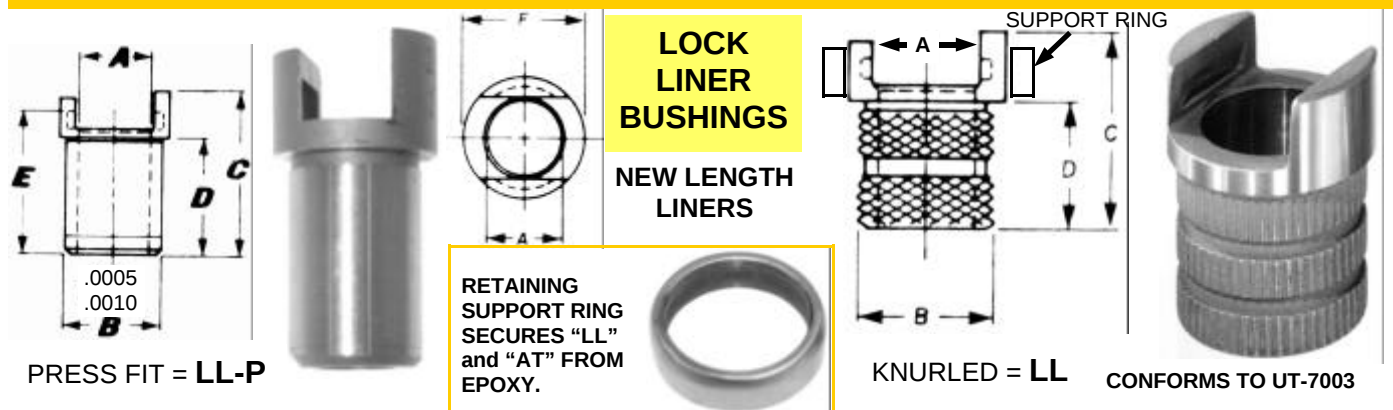
UNITED's Adapter Tips fit all standard automatic feed drill motors, including Gardner-Denver, Keller, Aro, Buckeye, Quackenbush, Zephyr, etc. A close tolerance is maintained when drilling rivet holes in titanium, stainless steel, nickel and other hard metals.

NOTE: UNITED Adapter Tips (AT) and Lock Liner (LL) Bushings listed are not interchangeable with UNITED's Nurlock drill bushing tips and liners. "AT" Adapter Tips will only fit the "LL" Lock Liners shown on this page.

ANOTHER UNITED EXCLUSIVE

UNITED's Adapter Tips now feature two piece construction and longer lengths. The shank is hardened for wear protection and the collar for toughness.

UNITED ADAPTER TIPS



ADAPTER TIPS						LOCK LINERS							
ADAPTER TIP PART NO.	A $\pm .0001$ I.D. RANGE	B $\pm .0000$ -.0002	C	D	L.H. THREAD	LOCK LINER PART NO.	A $\pm .0003$ -.0000	B	C	D	E	F	RETAINING RING
AT 22 25	.1875 - .2055	.3437	2 7/16	1-9/16	3/4 - 16	LL-36-14	.3440	9/16	1 3/8	7/8	1 3/16	11/16	LL-36-R UT-7003A-1
AT 22 34			3"	2 1/8									
AT 22 42			3 1/2	2 5/8		LL-36-14 P	.3440	.5625	1 3/8	7/8	1 3/16	11/16	
AT 22 50			4"	3 1/8									
AT 28 25	.1910 - .2812	.4375	2 7/16	1-9/16	3/4 - 16	LL-44-14	.4377	11/16	1 3/8	7/8	1 3/16	13/16	LL-44-R UT-7003A-2
AT 28 34			3"	2 1/8									
AT 28 42			3 1/2	2 5/8		LL-44-14 P	.4377	.6875	1 3/8	7/8	1 3/16	13/16	
AT 28 50			4"	3 1/8									
AT 36 25	.2812 - .4130	.5625	2 7/16	1-9/16	3/4 - 16	LL-52-14	.5627	13/16	1 3/8	7/8	1 3/16	15/16	LL-52-R UT-7003A-3
AT 36 34			3"	2 1/8									
AT 36 42			3 1/2	2 5/8		LL 52 14 P	.5627	.8125	1 3/8	7/8	1 3/16	15/16	
AT 36 50			4"	3 1/8									
AT 48 25	.2812 - .6250	.7500	2 7/16	1-9/16	1" - 14	LL-64-14	.7503	1"	1 3/8	7/8	1 3/16	1 1/8	LL-64-R UT-7003A-4
AT 48 34			3"	2 1/8									
AT 48 42			3 1/2	2 5/8		LL 64 14 P	.7503	1.0000	1 3/8	7/8	1 3/16	1 1/8	
AT 48 50			4"	3 1/8									

Helical Nurlock Liner Fixtures

Helical Nurlock Liner Ideal For Drill Bar Fixtures

Solid, Adjustable or Swivel Types

UCC-268002-192 and -193 SERIES SOLID ADJUSTABLE DRILL BARS

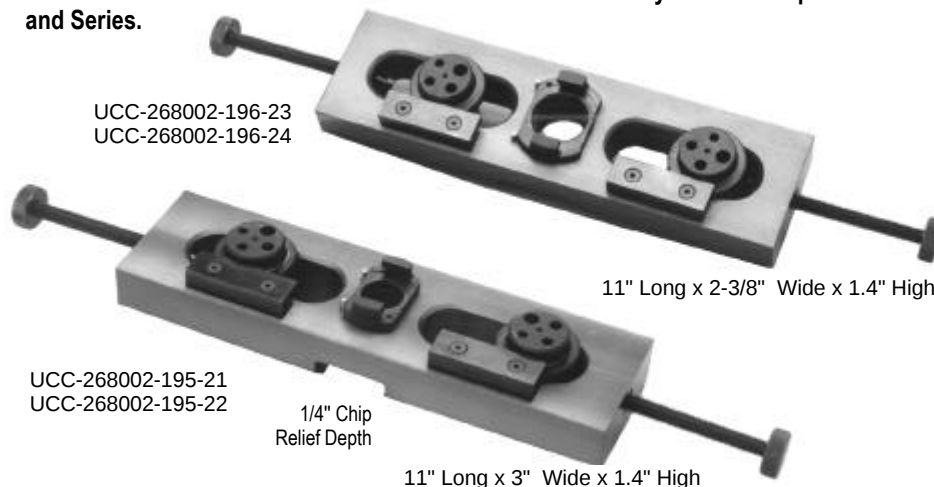
Durable, precision-designed to hold Positive Feed Drill Motors with Nurlock Adapter Tips, Collars and Shanks (See page P10). Attractive hard anodized blue finish and alloy steel heat treated. Nurlock Liners are black oxide finished. Clearly visible stamped Part No. and Series.



21000 and 22000 Series are 1.4" High x 1.6" Wide x 11" Long with 1/4" Chip Relief depth. 23000 and 24000 Series are 1.4" High x 2.1" Wide x 11" Long with 1/4" Chip Relief depth. Special 25000 Series available on request.

UCC-268002-195 and -196 DRILL BAR SERIES

Universal Adjustable Drill Bars to work for Positive Feed Drill Motors with Nurlock Adapter Tips, Collars and Shanks (See page P10). Designed with Twin Revolving Bushings for Fasteners, Clamping or Support Guides. Guide Holes are 1/8, 5/32, 3/16 and 1/4 with Counter-bore Relief. Attractive hard anodized blue finish and alloy steel heat treated. Nurlock Liners are black oxide finished. Clearly visible stamped Part No. and Series.



21000 and 22000 Series are 1.4" High x 2-3/8" Wide x 11" Long with 1/4" Chip Relief depth. 23000 and 24000 Series are 1.4" High x 3" Wide x 11" Long with 1/4" Chip Relief depth. Special 25000 Series available on request.

UCC-268002-192 / -193 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-192-211	A211XXX	3/8	
UCC-268002-192-212	A212XXX	7/16	
UCC-268002-192-213	A213XXX	1/2	
UCC-268002-192-221	A221XXX	7/16	
UCC-268002-192-222	A222XXX	1/2	
UCC-268002-192-223	A223XXX	9/16	
UCC-268002-192-224	A224XXX	5/8	
UCC-268002-192-225	A225XXX	3/4	
UCC-268002-193-231	A231XXX	3/4	
UCC-268002-193-232	A232XXX	13/16	
UCC-268002-193-233	A233XXX	7/8	
UCC-268002-193-234	A234XXX	1	
UCC-268002-193-235	A235XXX	1-1/8	
UCC-268002-193-241	A241XXX	5/8	
UCC-268002-193-243	A243XXX	3/4	
UCC-268002-193-242	A242XXX	13/16	
UCC-268002-193-244	A244XXX	7/8	
UCC-268002-193-245	A245XXX	1	
UCC-268002-193-246	A246XXX	1-1/8	
UCC-268002-193-247	A247XXX	1-1/4	
UCC-268002-193-249	A249XXX	1-3/8	
UCC-268002-193-248	A248XXX	1-1/2	

UCC-268002-195 / -196 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-195-211	A211XXX	3/8	
UCC-268002-195-212	A212XXX	7/16	
UCC-268002-195-213	A213XXX	1/2	
UCC-268002-195-221	A221XXX	7/16	
UCC-268002-195-222	A222XXX	1/2	
UCC-268002-195-223	A223XXX	9/16	
UCC-268002-195-224	A224XXX	5/8	
UCC-268002-195-225	A225XXX	3/4	
UCC-268002-196-231	A231XXX	3/4	
UCC-268002-196-232	A232XXX	13/16	
UCC-268002-196-233	A233XXX	7/8	
UCC-268002-196-234	A234XXX	1	
UCC-268002-196-235	A235XXX	1-1/8	
UCC-268002-196-241	A241XXX	5/8	
UCC-268002-196-243	A243XXX	3/4	
UCC-268002-196-242	A242XXX	13/16	
UCC-268002-196-244	A244XXX	7/8	
UCC-268002-196-245	A245XXX	1	
UCC-268002-196-246	A246XXX	1-1/8	
UCC-268002-196-247	A247XXX	1-1/4	
UCC-268002-196-249	A249XXX	1-3/8	
UCC-268002-196-248	A248XXX	1-1/2	

Swivel-Adjustable-Universal

Fixtures with Helical Nurlock Liners

Swivel Adjustable Helical Nurlock Liners

UCC-268002-201 / -202 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-201-211		A211XXX	3/8
UCC-268002-201-212		A212XXX	7/16
UCC-268002-201-213		A213XXX	1/2
UCC-268002-201-221		A221XXX	7/16
UCC-268002-201-222		A222XXX	1/2
UCC-268002-201-223		A223XXX	9/16
UCC-268002-201-224		A224XXX	5/8
UCC-268002-201-225		A225XXX	3/4
UCC-268002-202-231		A231XXX	3/4
UCC-268002-202-232		A232XXX	13/16
UCC-268002-202-233		A233XXX	7/8
UCC-268002-202-234		A234XXX	1
UCC-268002-202-235		A235XXX	1-1/8
UCC-268002-202-241		A241XXX	5/8
UCC-268002-202-243		A243XXX	3/4
UCC-268002-202-242		A242XXX	13/16
UCC-268002-202-244		A244XXX	7/8
UCC-268002-202-245		A245XXX	1
UCC-268002-202-246		A246XXX	1-1/8
UCC-268002-202-247		A247XXX	1-1/4
UCC-268002-202-249		A249XXX	1-3/8
UCC-268002-202-248		A248XXX	1-1/2

Universal Adjustable Swivel Fixture Features

High strength Swivels in all directions Adjustments can be made for alignment location clamping 3/8" chip clearance below Helical Nurlock Liner Use on irregular surfaces, corners and difficult locations Control perpendicularity All alloy heat treated steel fixture

Simply locate with pin or Nurlock shank Align Lock up swivel Clamp to work piece Insert appropriate Nurlock Adapter tip, collars and shanks Drill Ream Counterbore Countersink.

UCC-268002-201 Series



10" to 12" Long x 4" Wide x 1-3/4" High

Available in A21000 - A22000 - A23000 - A24000 Collars and Shank Series Nurlock Adapter Tips. Fixtures are manufactured to close tolerances with strong heat treated black oxide finish and clear identification on each drill bar. Will hold Positive Feed Motors. UNITED Kits are available with fixtures and swivels for each size Nurlock Collar and Adapter Tip. 25000 Series are available on special request.

UCC-268002-198 / -199 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-198-211		A211XXX	3/8
UCC-268002-198-212		A212XXX	7/16
UCC-268002-198-213		A213XXX	1/2
UCC-268002-198-221		A221XXX	7/16
UCC-268002-198-222		A222XXX	1/2
UCC-268002-198-223		A223XXX	9/16
UCC-268002-198-224		A224XXX	5/8
UCC-268002-198-225		A225XXX	3/4
UCC-268002-199-231		A231XXX	3/4
UCC-268002-199-232		A232XXX	13/16
UCC-268002-199-233		A233XXX	7/8
UCC-268002-199-234		A234XXX	1
UCC-268002-199-235		A235XXX	1-1/8
UCC-268002-199-241		A241XXX	5/8
UCC-268002-199-243		A243XXX	3/4
UCC-268002-199-242		A242XXX	13/16
UCC-268002-199-244		A244XXX	7/8
UCC-268002-199-245		A245XXX	1
UCC-268002-199-246		A246XXX	1-1/8
UCC-268002-199-247		A247XXX	1-1/4
UCC-268002-199-249		A249XXX	1-3/8
UCC-268002-199-248		A248XXX	1-1/2

Universal Adjustable Swivel Fixture Features

Swivels in all directions Location, Alignment, Clamping and Angular Adjustments Excellent for contoured or irregular surfaces Adjustable for alignment or clamping from both ends 3/8" chip clearance below Helical Nurlock Liner Attractive aluminum blue hard anodized finish and alloy steel Swivel Black oxide Liners and Clamps

Adjust height and width by leveling screw pads in four locations Adjust 1-7/8" to 3-3/8" Clamp and adjust vertically and horizontally Swivels Expand Baseup to three inches Drill Ream Countersink Counterbore.

UCC-268002-198 Series



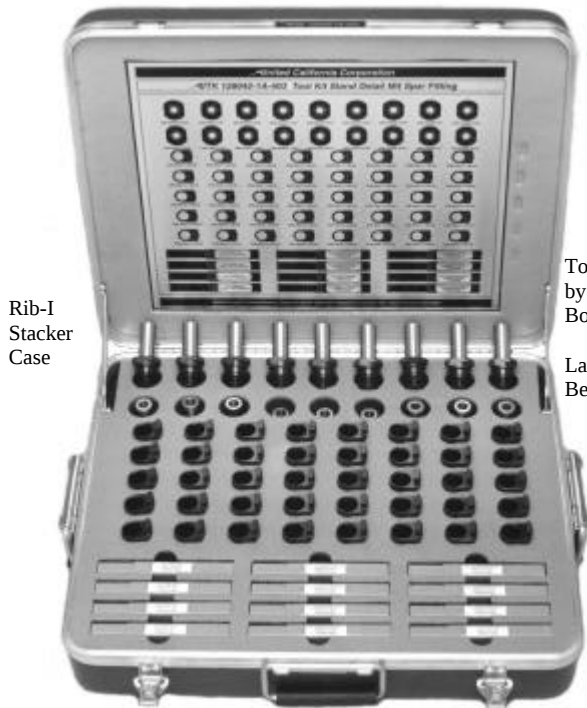
Chip Clearance 3/8
13-1/2" Long closed Adjusts to 16-1/2" Long x 6" Wide x 1-7/8" High

Will hold, align and lock in A21000 - A22000 - A23000 - A24000 - A25000 Nurlock Collars and Shank Series with I.D. ranges from 3/32" to 1-1/2". See page T14. Fixtures are manufactured to close tolerances with clear identification on each drill bar. Available in Aluminum or Steel. UNITED Kits are available with fixtures and swivels for each size Nurlock Collar and Adapter Tip. Kits with all sizes of slipfit sleeves to align all Nurlock Shank O.D. sizes to Nurlock Liners can also be provided. Call or Fax UNITED for further details.

Nurlock Liners in Retrofit Kits

Helical Nurlock Liners in Retrofit- Mod-Repair & A.O.G. Custom Kits

Tool Kit Drill Stand MIT Spar Fitting



Rib-I
Stacker
Case

Tool Design
by L. Ledoux,
Boeing.

Layout by Don
Bedell, United.

Rib-I Case UCC-128042-2 is
22" L x 18" W x 6-1/2" H

This handsome Navy Blue Rib-I Stacker Case contains Lasting Latch and Heavy Duty Hardware, including self-retracting rubber grip handles and quarter-turn pressurized latch clamps.

With quantity order and reasonable lead time, **UNITED** will provide your company logo molded in the case.

A large detailed metal contents tag is mounted inside the lid listing each tool with Part No. and location. Inside hard foam is light blue hard foam for ease of part location.

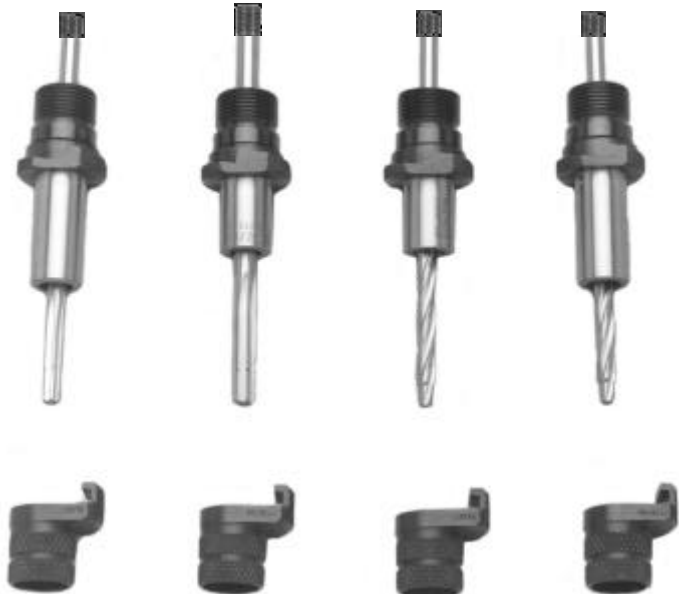
Kit Contents

12	UDBA-22615 15/32 thru 37/64 Nurlock Adapter Tips
6	UDBA-22608 15/32 thru 3-3/64 Nurlock Adapter Tips
40	UDB-HNLP-1 Single Ear Helical Nurlock Liners
2	UCC-796B-15/32 and 7/32 Custom Threaded Shanks
2	UCC-7110-1/2, 17/32, 9/16 & 37/64 Custom Piloted Oil Hole Threaded Shank Reamers

UTK-128042-1A-403 KIT

Modification, Retrofit Repair and A.O.G. Kits are manufactured with speed and alacrity for our preferred customer requirements. This Kit was designed by Senior Tool Engineer Lenny Ledoux, Boeing Everett, and manufactured for their 757 customer rework.

Coolant Oil Hole Threaded Shank Reamers



ADAPTABILITY KITS

Positive Feed Air Tools, Nosepieces, Adapters, Chucks and Accessories are kitted separately for use with those tools.

CUSTOM COMBINATION KITS

UNITED can supply you with a custom combination kit with tools for your particular needs.

A **UNITED** Engineer, experienced in Retrofit - Modification - Repair and A.O.G. Kit Design, is available to assist in selecting the correct tools, design layout, application data and case.

We will provide your requirements at reasonable cost and will guide you in any special kit conditions you require. Call or Fax us for further details. "Just in time!" Call **UNITED** — You'll be glad you did!