

Work Holding Products

Uni-Fixtures

Hold It!



TRIANGLES,
BASE Pg E7



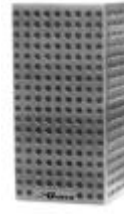
OCTAGONALS,
BASE Pg E7



HEXAGONALS,
BASE Pg E7



T-SLOT BLOCKS,
BASE Pg E4



CUBES, TAPPED
HOLES Pg E6



QUADRUPLES,
BASE Pg E7



WINDOW FRAMES,
BASE Pg E8



T-FIXTURES
Pg E8



ROUND RISER
BLOCKS Pg E10



SQUARE RISER
BLOCKS Pg E11



SUB-PLATES
Pg E12



VERTICAL ANGLE
PLATES Pg E9



SWING ARM DRILL
PLATES Pg E20



PLATFORM HINGES Pg E21



SWIVEL
CONTACT
BOLTS Pg E30



DRILL PLATE HINGES Pg E20



ATTACH ASSY Pg E15



SUPPORT ANGLES Pg E14



FIXTURE
KEYS Pg E22



RADIUS TIPS
Pg E29



V-SHAPE TIPS
Pg E29



CONICAL TIPS
Pg E29



REST PADS
Pg E30



HOOK
CLAMPS
Pg E32



STEP FIXTURE
KEYS Pg E24



PRECISION ANGLES
Pg E17



LOCATING
KEYS Pg E25



DOUBLE END
JIG FEET Pg E27



MILL FIXTURE
KEYS Pg E23



REMOVABLE
CLAMP
ASSEMBY
Pg E35



MINI CAM ACTION EDGE CLAMPS Pg E26



ADJ. 5-LEVEL CLAMPS Pg E34

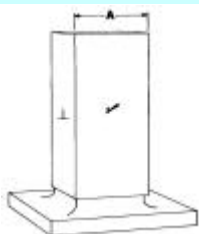


LOW PROFILE SUPPORT CLAMPS Pg E28

UCC-TBP PLAIN No Holes TYPE I PAGE E4	UCC-TBQ QUALIFIED HOLES PAGE E4	UCC-TBTS T-SLOTS PAGE E4	UCC-TBT TAPPED HOLES PAGE E4	UCC-TBS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE I TOOLING BLOCKS WITH BASE
UCC-TCP II PAGE E6	UCC-TCQ PAGE E6	UCC-TCTS PAGE E6	UCC-TCT PAGE E6	UCC-TCS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE II TOOLING CUBES NO BASE
UCC-TTP III PAGE E7	UCC-TTQ PAGE E7	UCC-TTTS PAGE E7	UCC-TTT PAGE E7	UCC-TTS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE III TRIANGLES WITH BASE
UCC-TQP IV PAGE E7	UCC-TQQ PAGE E7	UCC-TQTS PAGE E7	UCC-TQT PAGE E7	UCC-TQS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE IV QUADRUPLES WITH BASE
UCC-THP V PAGE E7	UCC-THQ PAGE E7	UCC-THTS PAGE E7	UCC-THT PAGE E7	UCC-THS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE V HEXAGONALS WITH BASE
UCC-TOP VI PAGE E7	UCC-TOQ PAGE E7	UCC-TOTS PAGE E7	UCC-TOT PAGE E7	UCC-TOS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE VI OCTAGONALS WITH BASE

UNITED specializes in providing the design and dimensions of UniFixtures, consistent with your specific machine center. Approval drawings are supplied before manufacturing. Every UniFixture is manufactured to those exact custom specifications. All UniFixtures and especially Tombstones® are available in standard type tolerances, Series II and loose tolerances, Series I. UniFixtures decrease tooling costs and increase productivity, quality and profitability.

TOLERANCES

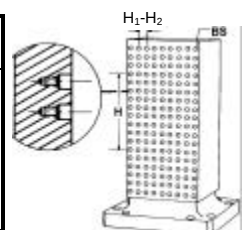


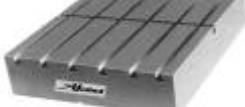
PLAIN — NO HOLES

UNITED PREFIX NO. UCC-TxP	TOLERANCES STANDARD	LOOSE
A SIZE	±.002	+.010 -.000 OR OVERSIZE
✓ FINISH	63 RMS	125 RMS
⊥ PERPENDICULAR-	.001/FT.	.002/FT.

QUALIFIED HOLES BORED AND TAPPED

UNITED PREFIX NO. UCC-TxQ	TOLERANCES STANDARD	LOOSE
H ₁ - H ₂ HOLE to Adjacent Hole	±.0005	HOLES Available in Conventional Tolerances Only
H HOLE to Any Hole on Grid	±.0015	
BS BORE Size Location from Datum	±.0005 ±.002	



UCC-TWP PLAIN No Holes  TYPE VII PAGE E8	UCC-TWQ QUALIFIED HOLES  PAGE E8	UCC-TWTS T-SLOTS  PAGE E8	UCC-TWT TAPPED HOLES  PAGE E8	UCC-TWS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE VII WINDOWS WITH BASE
UCC-TTFP  VIII PAGE E8	UCC-TTFQ  PAGE E8	UCC-TTFTS  PAGE E8	UCC-TTFT  PAGE E8	UCC-TTFS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE VIII T-FIXTURES WITH BASE
UCC-TAPP  IX PAGE E9	UCC-TAPQ  PAGE E9	UCC-TAPTS  PAGE E9	UCC-TAPT  PAGE E9	UCC-TAPS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE IX ANGLE PLATES WITH BASE
UCC-TRP  X PAGE E10	UCC-TRQ  PAGE E10	UCC-TRTS  PAGE E10	UCC-TRT  PAGE E10	UCC-TRS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE X ROUND RISERS NO BASE
UCC-TSP  XI PAGE E11	UCC-TSQ  PAGE E11	UCC-TSTS  PAGE E11	UCC-TST  PAGE E11	UCC-TSS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE XI SQUARE RISERS NO BASE
UCC-TSPP  XII PAGE E12	UCC-TSPQ  PAGE E12	UCC-TSPTS  PAGE E12	UCC-TSPT  PAGE E12	UCC-TSPS ANY SPECIAL COMBINATION OR CONFIGURATION OF TYPE XII SUB-PLATES NO BASE

UNITED provides Tombstones® and UniFixtures in Cubes, Silos, Columns and whatever design you require. Bases are milled to your machining center with hold down and location holes that fit. Approval drawings are always provided for your assurance of fit. We maximize travel and minimize lost center space. Single piece construction from superior quality Meehanite, cast iron or aluminum. UNITED's cost-effective low volume UniFixtures and high production tools lower your costs.



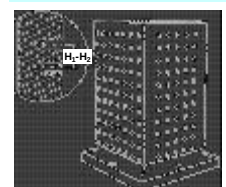
T-SLOTS

UNITED PREFIX NO. UCC-TxTS	TOLERANCES	
TS T-SLOT SIZE	STANDARD	LOOSE
L LOCATION	±.0008	±.010
	±.0015	±.010

TAPPED HOLES

UNITED PREFIX NO. UCC-TxT	TOLERANCES	
H ₁ - H ₂ HOLE to Adjacent Hole	STANDARD	LOOSE
	±.005	±.005

TOLERANCES



UNITED POLICY

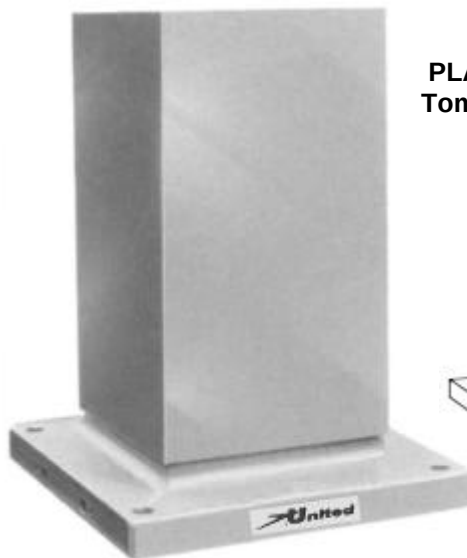
To provide you cost-effective UniFixtures pricing with superior quality, service and value.

Tombstone® With Base Type I

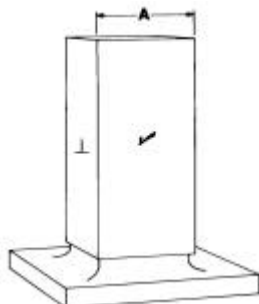
Tombstone® Tooling Blocks With Base FOUR FACES TO INCREASE YOUR INVESTMENT RETURN

TYPE I

Refer to Dimensions for each
Style of TYPE I on Next Page.



UCC-TBP
PLAIN — NO HOLES
Tombstone with Base

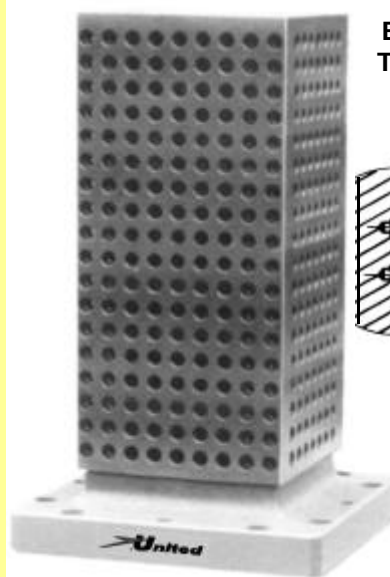


**NO HOLES DO IT
YOURSELF!
CUSTOMIZE TO FIT
YOUR NEEDS.**

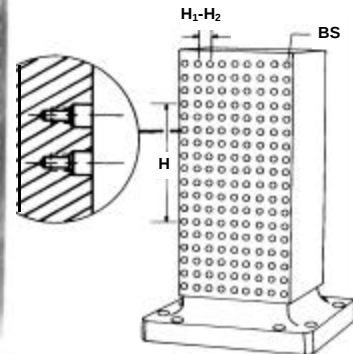
UNITED PREFIX NO. UCC-TBP	TOLERANCES STANDARD LOOSE	
A SIZE	±.002	+.010 -.000 OR OVERSIZE
✓ FINISH	63 RMS	125 RMS
⊥ PERPENDICULAR-	.001/FT.	.002/FT.

Tolerances for overall size,
finish and perpendicularity
are shown for Style
UCC-TBP only.

The same tolerances apply
to all styles.



UCC-TBQ
QUALIFIED HOLES
BORED and TAPPED
Tombstone with Base



SELF-LUBRICATING

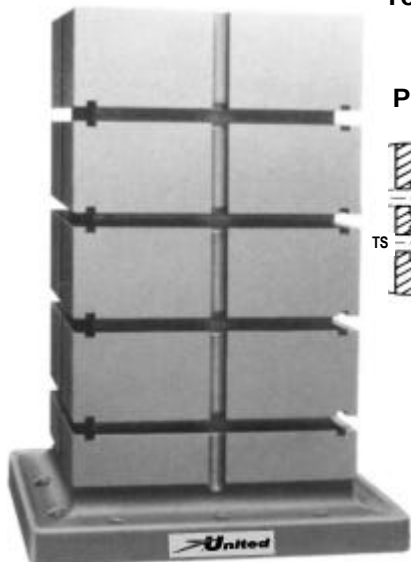
UNITED PREFIX NO. UCC-TBQ	TOLERANCES STANDARD LOOSE	
H ₁ - H ₂ HOLE to Adja- cent Hole	±.0005	HOLES Available in Conventional Tolerances Only
H HOLE to Any Hole on Grid	±.0015	
BS BORE Size Location from Datum	±.0005 ±.002	

**BORED AT THE TOP
AND TAPPED AT THE
BOTTOM ON 1" OR 2"
GRID.**

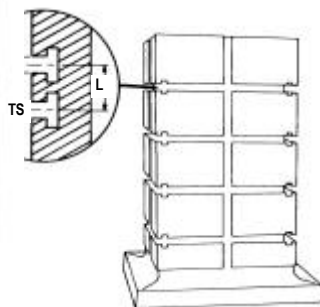
5/8 BORE HAS 1/2 - 13 TAP.
3/4 BORE HAS 5/8 TO TAP.
7/8 BORE HAS 3/4 TO TAP.

ACCURATE LOCATING

UCC-TBTS
T-SLOTS NO HOLES
Tombstone with Base



PRECISION DESIGNED



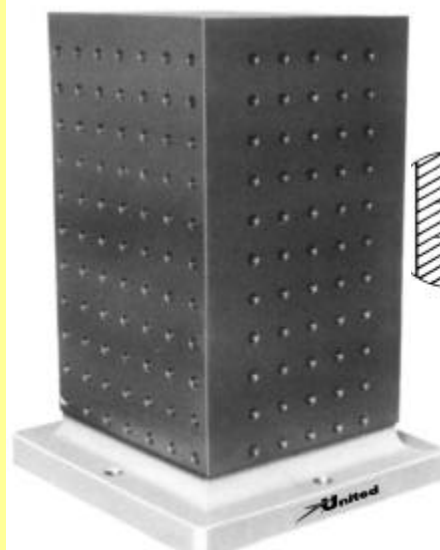
**DIMENSIONAL
STABILITY
WITH HIGH
COMPRESSION
STRENGTH**

UNITED PREFIX NO. UCC-TBTS	TOLERANCES STANDARD LOOSE	
TS T-SLOT SIZE	±.0008	±.010
L LOCATION	±.0015	±.010

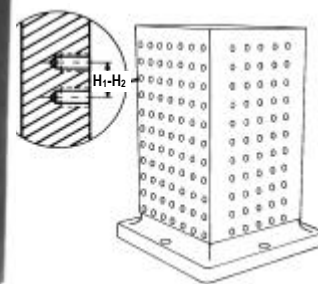
Refer to Diagram of your
required style of Type I and see
Dimensions on Next Page.

WEAR RESISTANT

UCC-TBT
TAPPED HOLES
Tombstone with Base



**ANY SIZE 2"
GRID SPACING**



VIBRATION DAMPING CAPACITY

UNITED PREFIX NO. UCC-TBT	TOLERANCES STANDARD LOOSE	
H ₁ - H ₂ HOLE to Adjacent Hole	±.005	±.005

**AND
UCC-TBS
SPECIAL
IS ANY COMBO
OF THESE**

Sizes Available Tombstone® Tooling Blocks

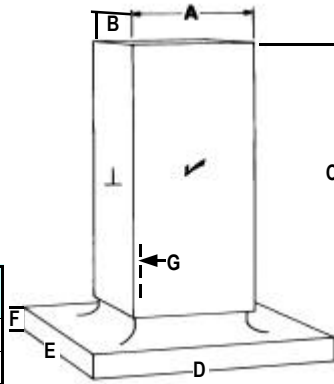
For Available Part
Numbers, Add Prefix

SELECT YOUR TOMBSTONE® HERE!

Use the dimensions of the various surfaces shown in the Table, and refer to the diagram on the right.

Part Numbers in the left columns require **UNITED S PREFIX** when you select your required size. Other sizes available on request.

UNITED PREFIX	DESCRIPTION
UCC-TBP	Plain
UCC-TBQ	Qualified Bored Tapped
UCC-TBTS	T-Slots
UCC-TBT	Tapped
UCC-TBS	Any Combo of Above



FINISH FACE DIMENSIONS

ADD UNITED S PREFIX TO PART NO.	FRONT FACE A	SIDE FACE B	FINISH HEIGHT C	FRONT BASE D	SIDE BASE E	HEIGHT FLANGE F	THICKNESS WALL
4825-16	4	8.25	25	16	16	1.75	SOLID
4188-8x18	3.75	18	8.375	7.5	17.5	1.5	SOLID
558-10	5.25	5.25	8.75	10	10	0.75	0.75
5511-10	5.25	5.25	11.625	10	10	1	SOLID
5514-12	4.75	4.75	13.75	12	12	0.875	0.875
5517-9	5	5	17.75	9 DIA	9 DIA	1	1
5525-9	5	5	25.25	9 DIA	9 DIA	1	1
6612-12	6	6	12	12	12	1.5	1.25
61222-14x16	6	12	22	16	16	2	SOLID
61622-16	6	16	22	16	16	1.5	1.5
7710-10	7.625	7.625	10.75	10	10	0.75	0.75
8814-13	8	8	14	13	13	0.75	0.75
8815-12	8	8	15	12	12	1.375	1.25
8822-18	8	8	22	18	18	1.75	1.75
8822-18-3	8	8	22	18	18	1.75	2
8829-18	8	8	29	18	18	1.625	1.75
81024-14	8	10	24	14	18	1.5	1.75
81024-18	8	10	24	18	18	1.5	1.75
81224-16	8	12	24	16	16	1.75	2
81426-18	8	14	26	18	18	1.75	2
81520-15	8	15.75	20	15	15	1.75	1.375
81629-18	8	16	29	18	18	1.625	1.75
81824-18	8	18	24	18	18	1.75	2
82037-24	8	20	37	24	24	2	1.5
9922-13	9	9	22	13	13	1.75	1.75
9922-16	9	9	22	16	16	1.75	1.75
9922-18	9	9	22	18	18	1.75	1.75
91522-16X21	9	15	22	16	21	1.75	2
91530-18	9	15	30	18	18	1.75	1.75
92010-14x20	9	20	10	14	20	1.75	2
92020-14x20	9	20	20	14	20	1.75	2
92032-17x24	9	20	32	17	24	2.25	2
101018-16	10	10	18	16	16	1	1.75

ORDERING EXAMPLE WITH PREFIX AND TYPE: UCC-TBQ-101018-16

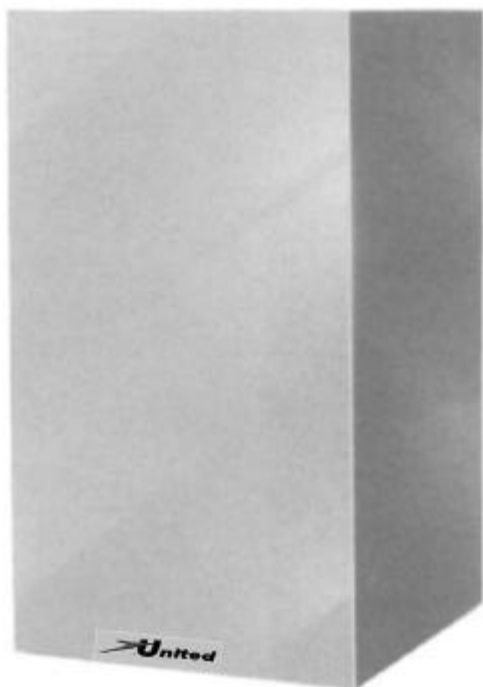
ADD UNITED S PREFIX TO PART NO.	FRONT FACE A	SIDE FACE B	FINISH HEIGHT C	FRONT BASE D	SIDE BASE E	HEIGHT FLANGE F	THICKNESS WALL G
101024-16	10	10	24	16	16	1.75	1.75
101024-18	10	10	24	18	18	1.75	1.75
101024T-18	10	10	24	18.25	18.25	1.5	1.25
101024-25	10	10	24	25	25	1.75	1.75
101025-18	10	10	25.25	18	18	2	1.75
101030-18	10	10	30	18	18	1.75	1.75
102424-32	10	23.25	24.5	32	32	1.5	1.5
102534-25	10	25	34	25	25	2	2
102633-31	10	26	33	31	31	1.5	1.25
103036-16x30	10	30	36	16	30	2	2
103036-22x30	10	30	36	22	30	2	2
121212-16	12	12	12	16	16	0.75	1
121216-14	12	12	16	14	14	1.5	1.5
121224-16	12	12	24	16	16	1.75	2
121224-18	12	12	24	18	18	1.75	2
121229-20	12	12	29.75	20	20	1.75	1.625
121229-25	12	12	29.75	25	25	1.75	1.625
122031-20	12	20	31.5	20	20	1.5	1.5
122430-24	12	24	30	24	24	1.75	2
122436-24	12	24	36	24	24	1.75	2
131322-18	13.25	13.25	22.5	18	18	1.75	2
141424-16	14	14	24	16	16	1.75	2
141426-18	14	14	26	18	18	1.75	2
141426-25	14	14	26	25	25	1.75	2
141632-25	14	16	32	25	25	2	2
141824-18	14	18	24	18	18.25	2	2
151519-18	15	15	19	18	18	1.75	1.75
153052-30	15	30	52	29.5	30.25	2	2
161616-18	16	16	16	18	18	1.25	2
161620-20	16	16	20	20	20	1.75	2
161633-25	16	16	33	25	25	2	2
161832-25	16	18	32	25	25	2	2
162230-20x25	16	22	30	20	25	2	2
163238-24x32	16	32	38	24	32	2	2
163247-24x32	16	32	47	34	32	2	2
181820-24	18	18	20	24	24	1.75	2
181830T-22	18	18	30	22	22	1.75	1.75
181830S-22	18	18	30	22	22	1.625	1.25
181830-28	18	18	30	28	28	1.75	1.75
181836-22	18	18	35.875	22	22	2	2
181824-25	18.5	18.5	24.5	25	25	1.75	2
202030-30	20	20	30	30	30	2	2
202032-20x27	20	20	31.5	20	27	2	2
232325-32	23	23	25.5	32	32	1.5	1.5
242436-28	24	24	35.875	28	28	2.25	2
243235-32	24	32	35	31	32	2	2
245262-52	24	52	62	49	52	4	3.625
303048-40	30	30	47.875	40	40	2.375	2
363660-48	36	36	60	48	48	2.75	2

Tooling Cubes Type II

Tombstone® Tooling Cubes

FOUR STYLES FOR YOUR REQUIREMENTS

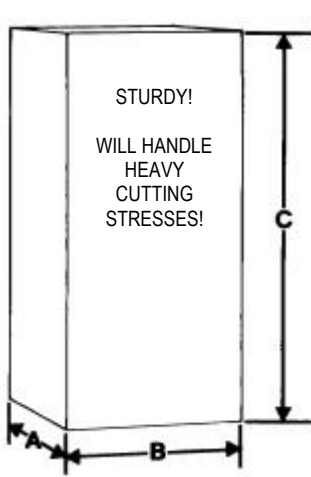
UCC-TCP PLAIN



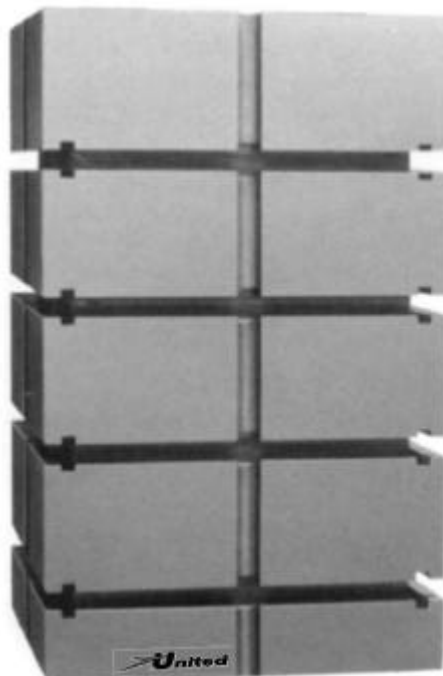
TYPE II CUBE

HEAVY DUTY
PRODUCTIVITY WITH
LIGHTER WEIGHT
TOOLING CUBES

REFER TO THE DIAGRAM
BELOW FOR DIMENSIONS OF
THE VARIOUS SURFACE
STYLES.



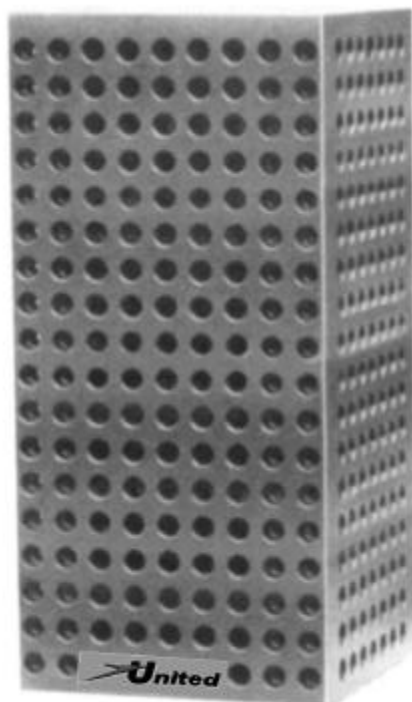
UCC-TCTS T-SLOTS



HOLLOW CENTERS

UCC-TCT TAPPED HOLES

UCC-TCQ QUALIFIED HOLES BORED AND TAPPED

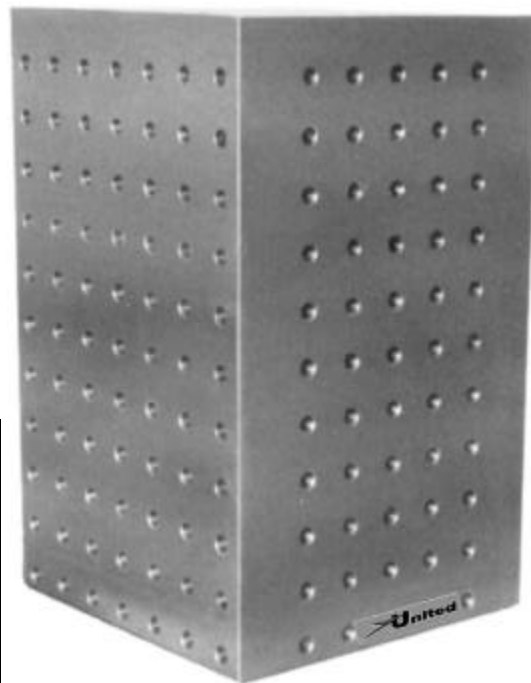


ONE PIECE CASTINGS

ADD UNITED S PREFIX
TO THE PART NUMBERS!

PART PREFIX	DESCRIPTION
UCC-TCP	Plain
UCC-TCQ	Qualified Bored Tapped
UCC-TCTS	T-Slots
UCC-TCT	Tapped
UCC-TCS	Any Combo of Above

Add PREFIX to PART NO.	A	B	C
9918	9	9	18
101020	10	10	20
121222	12	12	22
141424	14	14	24
161626	16	16	26
181828	18	18	28
202030	20	20	30
242434	24	24	34



LIGHTER WEIGHT

INSIDES NECKED DOWN BOTH ENDS

Tombstone® Tooling Blocks With Base

FOUR SHAPE TYPES FOR YOUR REQUIREMENTS

Triangles-Hexagonals
Quadruples-Octagonals

TYPE III

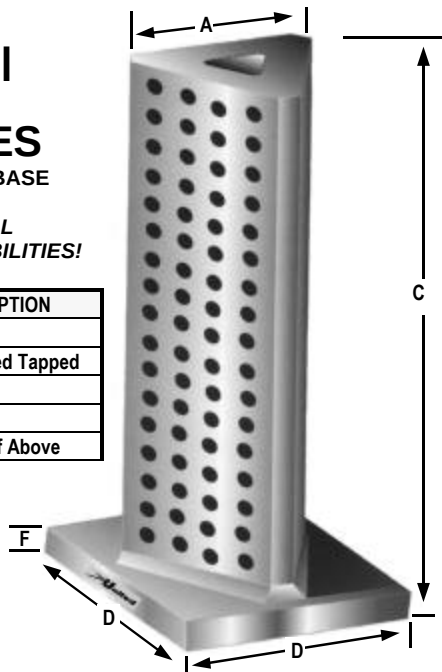
TRIANGLES

TOMBSTONE® WITH BASE
THREE FACES

THESE FOUR TYPES WILL
MULTIPLY YOUR POSSIBILITIES!

PART PREFIX	DESCRIPTION
UCC-TTP	Plain
UCC-TTQ	Qualified Bored Tapped
UCC-TTTS	T-Slots
UCC-TTT	Tapped
UCC-TTS	Any Combo of Above

One-piece #40
Meehanite, cast iron
or aluminum
casting. We provide
approved drawings
before we
manufacture.



PART NO.	WT.LBS.	A	C	D	F
1032-16	575	10	32	16	2.00
11.7522 - 16	525	11.75	22	16	1.50
1636 - 25	863	16	36	25	2.00
1940 - 20	1176	19	40	20	1.75

REMEMBER
TO ADD
UNITED S
PREFIX TO
THE PART
NUMBERS

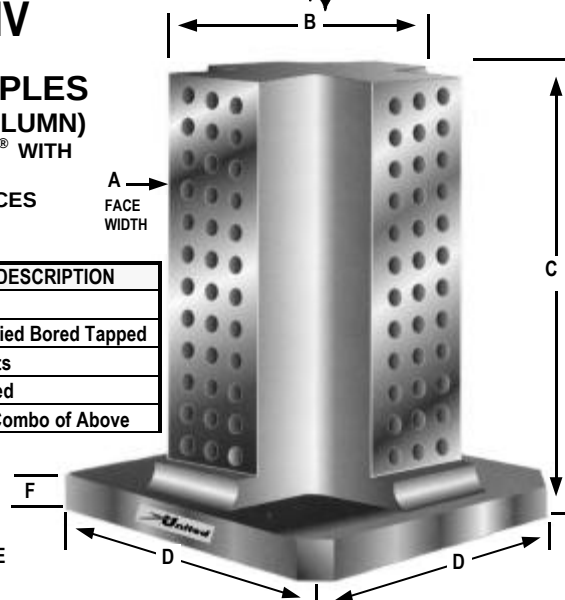
TYPE IV

QUADRUPLES (CROSS COLUMN)

TOMBSTONE® WITH
BASE
FOUR FACES

PREFIX	DESCRIPTION
UCC-TQP	Plain
UCC-TQQ	Qualified Bored Tapped
UCC-TQTS	T-Slots
UCC-TQT	Tapped
UCC-TQS	Any Combo of Above

ADD UNITED S
PREFIX TO THE
PART NO.



PART NO.	WT.LBS.	A	B	C	D	F
61224	819	6	24	24	12	1.75
61628	1075	6	20	28	16	1.75
81628	1231	8	20	28	16	2.00
81826	1802	8	20	26	18	2.00
122444	4074	12	28	44	24	2.00

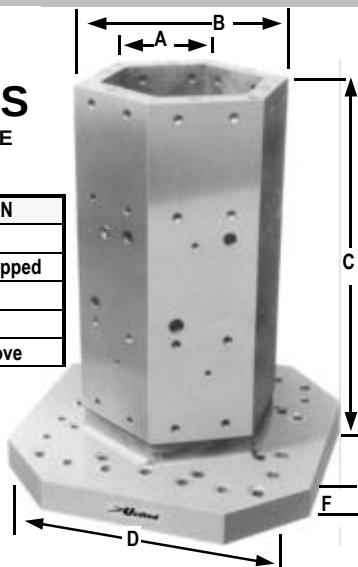
TYPE V

HEXAGONALS

TOMBSTONE® WITH BASE
SIX FACES

PART PREFIX	DESCRIPTION
UCC-THP	Plain
UCC-THQ	Qualified Bored Tapped
UCC-THTS	T-Slots
UCC-THT	Tapped
UCC-THS	Any Combo of Above

HEXAGONALS
MOUNT SIX FACES
VS FOUR TO
INCREASE
PRODUCTION!



PART NO.	WT.LBS.	A	B	C	D	F
4.2525 - 16	345	4.25	8	25	16	1.50
5.526 - 18	412	5.5	10	26	18	1.75
6.527 - 16	478	6.5	12	27	16	1.50
7.518 - 18	483	7.5	13.25	18	18	1.75
7.527 - 18	504	7.5	13.25	27	18	1.75
826 - 22	820	8	14	26	22	1.75
918 - 25	840	9	16	18	25	2
923 - 25	910	9	16	23	20	1.75
927 - 25	945	9	16	27	25	1.75
1035 - 25	1512	10	17	35	25	2
12.528 - 32	1953	12.5	21.5	28	32	2

TYPE VI

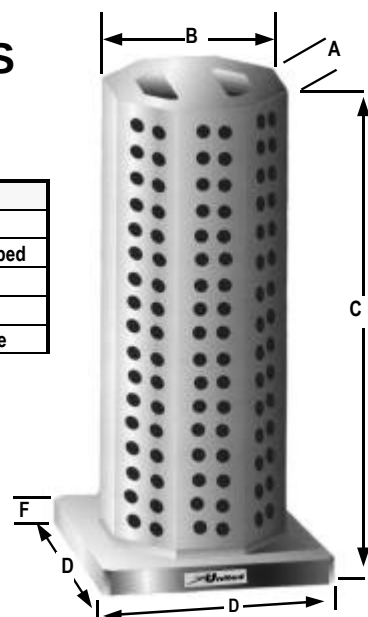
OCTAGONALS

TOMBSTONE® WITH BASE
EIGHT FACES

PART PREFIX	DESCRIPTION
UCC-TOP	Plain
UCC-TOQ	Qualified Bored Tapped
UCC-TOTS	T-Slots
UCC-TOT	Tapped
UCC-TOS	Any Combo of Above

OCTAGONALS ARE
IDEAL FOR HIGH
VOLUME
PRODUCTION AND
MULTIPLY YOUR
POSSIBILITIES!

REMEMBER TO ADD UNITED S
PREFIX TO THE PART NUMBERS!



PART NO.	WT.LBS.	A	B	C	D	F
55526 - 18	710	5.55	13	26	18	1.75
55532 - 25	1122	5.55	13	32	25	2.00
824-25	1151	8	20	24	25	1.75
932-32	1412	9	22	32	31.5	2.00
1032-32	1727	10	25.5	32	31.5	2.00

All Bases are Milled to Fit Your Machining Center with Your Hold Down and Locations.

Window Frames and T-Fixtures

Tombstone® Window Frame Fixtures WITH BASES and T-FIXTURES WITH BASES

WINDOW FRAMES — Manufactured to Fit Individual Machines



IDEAL FOR
MACHINING
BACK SIDES
OF PARTS

UCC-TWP

TYPE VII

PART PREFIX	DESCRIPTION
UCC-TWP	Plain
UCC-TWQ	Qualified Bored Tapped
UCC-TWTS	Tapped Slots
UCC-TWT	Tapped Angle
UCC-TWS	Any Combo of Above

TWO TOLERANCES AVAILABLE
MOUNT PART ON 2 SIDES RATHER THAN 4
DESIGNED FOR HORIZONTAL MACHINE CENTERS

Add Prefix to PART NO.	WINDOW SIZE	BASE SIZE Depth x Width	OVERALL HEIGHT	UPRIGHT Thickness x	BASE Thickness	GUSSETS
121818-2	12 X 8	12 X 18	18	2 X 18	2	4*
122132-2	12 X 24	12 X 21**	32	2 X 21	2	4*
122832-2	19 X 24	12 X 28**	32	2 X 28	2	4*
162523-2.5	20 X 15	16 X 25	23	2.5 X 25	2	NONE
163230-2	26.5 X 25	16 X 31.75	30.375	2.125 X 31.75	2	2*
182028-3.5	12 X 18	18 X 20	28	3.5 X 20	2	NONE
161620-4	9.75 X 12	16 X 16	20	4 X 16	2	NONE
242436-6	15 X 23	24 X 24	36	6 X 24	2	NONE

* 4 GUSSETS (2 ON EACH SIDE); 2 GUSSETS (1 ON EACH SIDE)
** DIMENSION FINISHES AS CAST

T-FIXTURES — Designed for Horizontal Machining Centers

FOR TWO-SIDED MACHINING



TYPE VIII

UCC-TTFP

ADD UNITED S
PREFIX TO PART
NUMBER TO
DETERMINE YOUR
DESIRED STYLE.

Add Prefix to PART NO.	BASE SIZE Depth x Width	OVERALL HEIGHT	UPRIGHT Thickness x	BASE Thickness	GUSSETS
111726-2.5***	10.5X16.5	26	2.5 X 17	2	NONE
121216-1.75	12 X 12	16.25	1 X 12	1	NONE
121818-6	12 X 18	18	6 X 18	2	NONE
121819-3	12.5 X 18.5	18.875	2.25 X 18.5	1.625	NONE
121826-3	12.5 X 18	26	2.75 X 18	1.75	NONE
131826-3	12.75X18	26	3 X 18	1.75	NONE
141622-6	14 X 16	22	6 X 12	2	NONE
141818-3	14 X 18	18	2.75 X 18	2	NONE
152026-4.7	15 X 20	26	4.75 X 20	2.5	NONE
161614-3	16 X 16	14	3 X 12	2	NONE
161620-4	16 X 16	20	4 X 16	2	NONE
181822-4	18 X 18	22	4 X 18	2	NONE
182512-3	18 X 25	12.25	2.75 X 25	2	NONE
182036-1.5	18 X 20**	36.5	1.875 X 20	1.5	2*
203030-4	20 X 30	30	4 X 30	2	NONE
212631-4	21 X 26	31	4 X 26	2	NONE
242436-6	24 X 24	36	6 X 24	2	NONE
252526-4	25 X 25	26	4 X 25	2	NONE
252530-4	25 X 25	30	4 X 25	1.75	NONE
243140-6	24 X 31.5	40	6 X 31.5	2	NONE

* 2 GUSSETS (1 ON EACH SIDE)

** DIMENSION FINISHES AS CAST

*** OFFSET COLUMN

ALLOWS

MORE Z AXIS
TRAVEL

PART PREFIX	DESCRIPTION	UCC-TTFTS	T-Slots
UCC-TTFP	Plain	UCC-TTFT	Tapped
UCC-TTFQ	Qualified Bored Tapped	UCC-TTFS	Any Combo of Above

Tombstone® Vertical Angle Plates

HOLDS WORK IN THE VERTICAL POSITION

Angle Plates

TYPE IX

UCC-TAPTS TAPPED SLOTS



IDEAL FOR FRONT MOUNTED FIXTURES

FOR
COST-EFFECTIVE
LOW VOLUME
SETUPS

WORKS FOR
THICK PARTS
USING MOST OF
THE PALLET

UCC-TAPP PLAIN



PART PREFIX	DESCRIPTION
UCC-TAPP	Plain
UCC-TAPQ	Qualified Bored Tapped
UCC-TAPTS	Tapped Slots
UCC-TAPT	Tapped Angle
UCC-TAPS	Any Combo of Above

ADD UNITED S PREFIX TO
PART NUMBERS

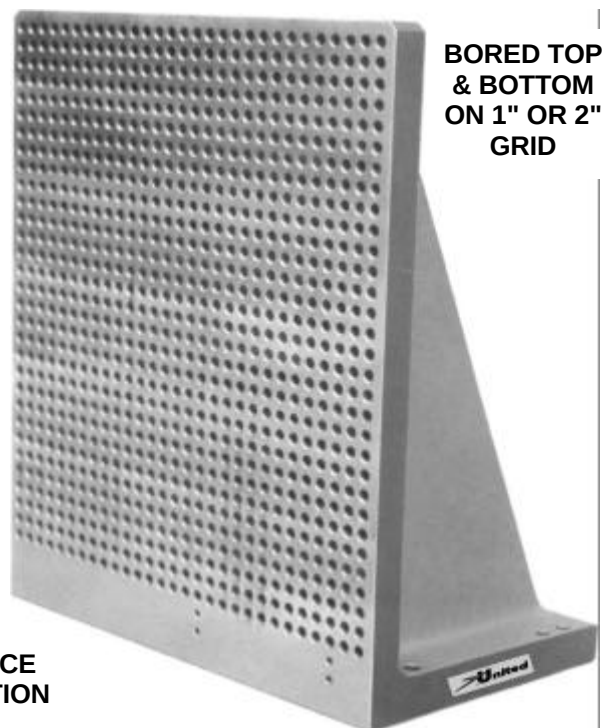
Add Prefix to PART NO.	DEPTH of TAIL	WIDTH of ANGLE	OVERALL HEIGHT	BASE Thickness	FACE Thickness
81617	8	16	17	1.625	1.625
121212	12	12	12	1.375	1.375
121218	12	12	18	1.75	2
121424	12	14	24	2	2
121512	11.75	14.5	11.75	1.5	1.5
121522	12	15	22	2	2
121818	12	18	18	2	2
122212	12	22	12	1.5	2
122424	12	24	24	1.5	2.25
131423*	13	14	23	1.5	1.5
181818	18	18	18	2	2
181836	18	18	36	2	2
182436	18	24	36	2	2
182448	18	24	48	2	2
183036	18	30	36	2	2
183224	18	32	24	2	2
183230	18	32	30	2	2
202420	20	24	20	1.75	1.75
203432*	19.75	34	32	1	1
242424	24	24	24	2	2
242448	24	24	48	2	2
242460	24	24	60	3	2
182424	18	24	24	1.875	2

* Denotes special base configuration, lip extending on front edge of face.

SUPERIOR STRENGTH FOR THICK PARTS

UCC-TAPQ QUALIFIED BORED and TAPPED

VERTICAL
ANGLE
PLATES
STAND UP
TO THE
TASK!



BORED TOP
& BOTTOM
ON 1" OR 2"
GRID

SINGLE PIECE
CONSTRUCTION

Tombstone®
Round Risers Type X

Tombstone® Round Riser Blocks

GAIN THE EDGE USE THAT CENTER SPACE!

UCC-TRP
PLAIN NO HOLES

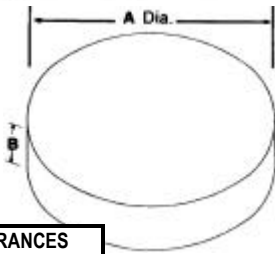
TYPE X

UCC-TRQ
QUALIFIED HOLES
BORED and TAPPED

PART PREFIX	DESCRIPTION
UCC-TRP	Plain
UCC-TRQ	Qualified Bored Tapped
UCC-TRTS	T-Slots
UCC-TRT	Tapped
UCC-TRS	Any Combo of Above



**ONE-PIECE HEAVY
DUTY
CONSTRUCTION
ENSURES
DURABILITY**



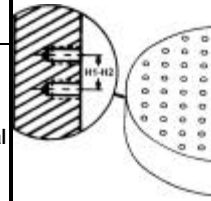
UNITED PREFIX NO.	TOLERANCES		
UCC-TRP	STANDARD	LOOSE	
A & B SIZE	±.002	AS CAST	
✓ FINISH	63 RMS	125 RMS	
== PARALLELISM	±.002	±.003	

CUSTOMIZE
TO YOUR
NEEDS.

Bored at top and tapped at bottom on a 1" or 2" grid: 5/8 bore with 1/2-13 tap; 3/4 bore with 5/8-11 tap; 7/8 bore with 3/4-10 tap

**ROUNDS CAN BE MOUNTED SQUARELY IN
THE CENTER OF THE PALLET**

UNITED PREFIX NO.	TOLERANCES		
UCC-TRQ	STANDARD	LOOSE	
H ₁ -H ₂ HOLE to Adjacent Hole	±.0005	HOLES Available in Conventional Tolerances Only	
H HOLE to Any Hole on Grid	±.0015		
BS BORE Size Location from Datum	±.0005 ±.002		

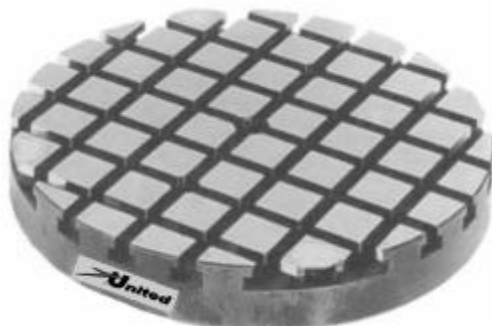


**ADD PREFIX TO
PART NUMBERS.**

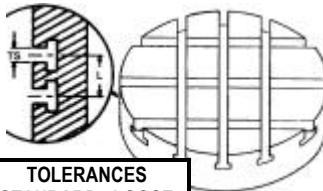
PART NO.	A	B
14144	14	4
14145	14	5
14146	14	6
14147	14	7
16164	16	4
16165	16	5
16166	16	6
16167	16	7
18184	18	4
18185	18	5
18186	18	6
18187	18	7
20204	20	4
20205	20	5
20206	20	6
20207	20	7
22224	22	4
22225	22	5
22226	22	6
22227	22	7
24244	24	4
24245	24	5
24246	24	6
24247	24	7
30304	30	4
30305	30	5
30306	30	6
30307	30	7
32324	32	4
32325	32	5
32326	32	6
32327	32	7

UCC-TRTS
T-SLOTS NO HOLES

UCC-TRT
TAPPED HOLES



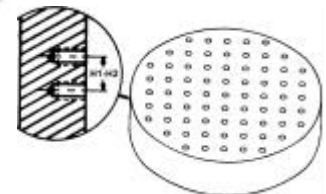
**QUICK, EASY
AND
DEPENDABLE
SETUPS EVERY
TIME**



UNITED PREFIX NO.	TOLERANCES		
UCC-TRTS	STANDARD	LOOSE	
TS T-SLOT SIZE	±.0008	±.010	
L LOCATION	±.0015	±.010	

SLOTTED
TO YOUR
DIMENSIONS

TAPPED HOLES WITH ANY SIZE ON A 1" or 2" GRID SPACING GIVES YOU PRECISION EVERY TIME IN LESS TIME



UNITED PREFIX NO.	TOLERANCES		
UCC-TRT	STANDARD	LOOSE	
H ₁ -H ₂ HOLE to Adjacent Hole	±.005	±.005	

**FOR HIGH VOLUME JOBS
WITH OPERATIONS
PERFORMED REPEATEDLY**

Tombstone® Square Riser Blocks

FOUR FACES AND STYLES TO GET HIGH VOLUME,
LOW COST & INCREASED PROFITS

Tombstone®
Squares Type XI

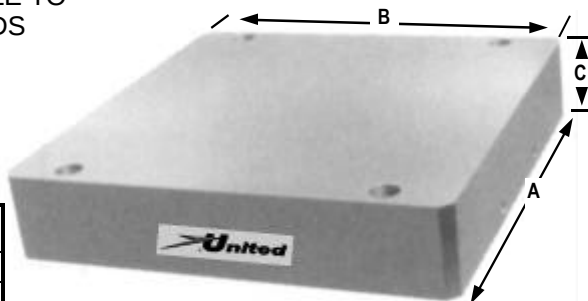
TYPE XI

SQUARE AND
RECTANGULAR
RISER BLOCKS YOU
CAN CUSTOMIZE TO
FIT YOUR NEEDS

ADD UNITED'S
PREFIX TO THE
FOLLOWING
PART NUMBERS

PART NO.	A	B	C
14144	14	14	4
14145	14	14	5
14146	14	14	6
14147	14	14	7
14205	14	20	5
15304	15	30	4
15404	15	40	4
16164	16	16	4
16165	16	16	5
16166	16	16	6
16167	16	16	7
16783	16	78	3
18184	18	18	4
18185	18	18	5
18186	18	18	6
18187	18	18	7
18244	18	24	4
18304	18	30	4
18364	18	36	4
1843.54	18	43.5	4
20204	20	20	4
20205	20	20	5
20206	20	20	6
20207	20	20	7
20444	20	44	4
21.5556	21.5	55	6
22224	22	22	4
22225	22	22	5
22226	22	22	6
22227	22	22	7
24244	24	24	4
24245	24	24	5
24246	24	24	6
24247	24	24	7
24326	24	32	6
30304	30	30	4
30305	30	30	5
30306	30	30	6
30307	30	30	7
32324	32	32	4
32325	32	32	5
32326	32	32	6
32327	32	32	7

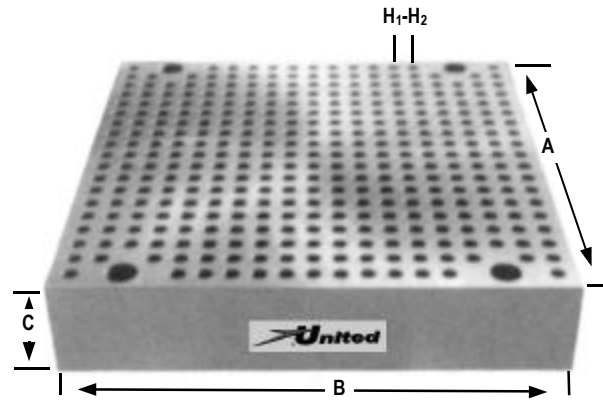
UCC-TSP PLAIN NO HOLES



PART PREFIX	DESCRIPTION
UCC-TSP	Plain
UCC-TSQ	Qualified Bored Tapped
UCC-TSTS	T-Slots
UCC-TST	Tapped
UCC-TSS	Any Combo of Above

UNITED PREFIX NO.	UCC-TSP	TOLERANCES	STANDARD	LOOSE
A & B SIZE		±.002		AS CAST
✓ FINISH		63 RMS		125 RMS
== PARALLELISM		±.002		±.003

UCC-TSQ QUALIFIED HOLES BORED AND TAPPED



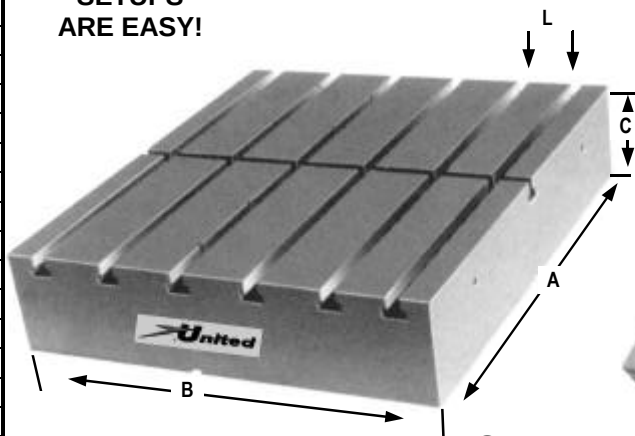
USE THAT
WASTED
CENTER
SPACE TO
YOUR
ADVANTAGE!

LESS SETUP TIME

UNITED PREFIX NO.	UCC-TSQ	TOLERANCES	STANDARD	LOOSE
H1-H2 HOLE to Adjacent Hole		±.0005		HOLES Available in Conventional Tolerances Only
H HOLE to Any Hole on Grid		±.0015		
BS BORE Size Location from Datum		±.0005		
		±.002		

UCC-TSTS T-SLOTS NO HOLES

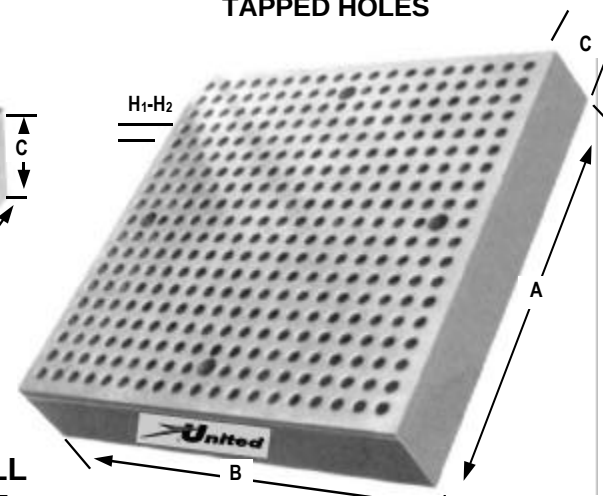
REPEATED
SETUPS
ARE EASY!



HEAVY
DUTY

UNITED PREFIX NO.	UCC-TSTS	TOLERANCES	STANDARD	LOOSE
TS T-SLOT SIZE		±.0008		±.010
L LOCATION		±.0015		±.010

UCC-TST TAPPED HOLES



GET FULL
USE OF
YOUR
MACHINE'S
INDEXING
CAPACITY

CAN BE MOUNTED SQUARELY
IN THE CENTER OF THE PALLET

UNITED PREFIX NO.	UCC-TST	TOLERANCES	STANDARD	LOOSE
H1-H2 HOLE to Adjacent Hole		±.005		±.005

UNITED LETS YOU WORK SMACK DAB CENTER TO EXPAND YOUR CAPACITY!

12200 WOODRUFF AVE. DOWNEY, CA 90241-5608 TELEPHONE (562) 803-1521 / (800) 421-3466 IN CA / (800) 486-3466 FAX (562) 803-6898 / (800) 486-3466
EMAIL united@ucc-udb.com WEBSITE www.ucc-udb.com

TYPE XII

UCC-TSPP PLAIN NO HOLES

UCC-TSPQ QUALIFIED HOLES BORED and TAPPED

Refer to Page E11 for sizes.

VERSATILE
APPLICATIONS

ENHANCE THE
ACCURACY OF
PART AND
FIXTURE
LOCATION

LESS SET-UP
TIME
REQUIRED

ADD UNITED'S PREFIX
TO THE RELEVANT
PART NUMBERS

PART PREFIX	DESCRIPTION
UCC-TSPP	Plain
UCC-TSPQ	Qualified Bored Tapped
UCC-TSPTS	T-Slots
UCC-TSPT	Tapped
UCC-TSPS	Any Combo of Above

PLAIN WITH HOLD
DOWN HOLES
TO SET UP
AS YOU SEE FIT

PART PREFIX	DESCRIPTION
UCC-TSPP	Plain
UCC-TSPQ	Qualified Bored Tapped
UCC-TSPTS	T-Slots
UCC-TSPT	Tapped
UCC-TSPS	Any Combo of Above

BETTER HOLDING POINTS

SINGLE PIECE STRESS-RELIEVED
MEEHANITE, CAST IRON,
ALUMINUM OR STEEL PLATES
ALL SIZES ARE IN INCHES.

UCC-TSPTS T-SLOTS NO HOLES

A LOW COST WAY
TO INCREASE
YOUR
PRODUCTIVITY

PART PREFIX	DESCRIPTION
UCC-TSPP	Plain
UCC-TSPQ	Qualified Bored Tapped
UCC-TSPTS	T-Slots
UCC-TSPT	Tapped
UCC-TSPS	Any Combo of Above

Refer to Riser Block Page E11 for Tolerances,
Parallelism and Material Finish. Select sizes
you require and use desired Prefix listed here.

EXPAND THE NUMBER OF
LOCATING POINTS

UCC-TSPT TAPPED HOLES

USE WITHOUT
SPECIAL FIXTURES

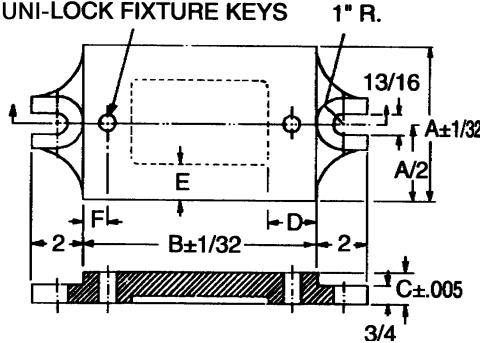
PRECISION SLOTS

Available in Standard or Loose Tolerances shown
on Riser Block Page E11.

UNITED's Ideal Mill Fixture Bases

Mill Fixture Bases

.625 BORE - 2 HOLES FOR
UNI-LOCK FIXTURE KEYS



UDB-990431 Series MILL FIXTURE BASE

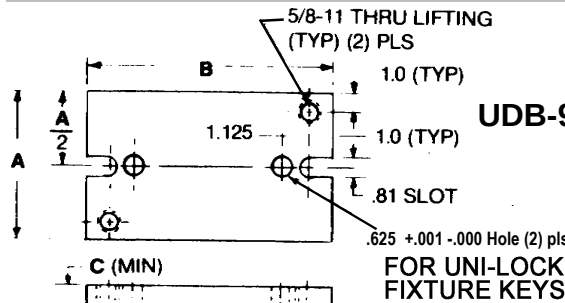
**IDEAL FOR
MOST MILL
FIXTURES!**

Refer to page E22 for
UNI-LOCK FIXTURE
KEYS



PART NO.	A	B	C	D	E	F
UDB-990431	6	9	1-1/4	1-7/8	1-3/8	15/16
UDB-990433	8	12	1-3/8	2	1-5/8	1
UDB-990435	10	15	1-1/2	2	1-3/4	1
UDB-990437	12	18	1-3/4	2-1/4	2	1-1/8

CAST IRON ASTM CLASS 40 NORMALIZED. FACE IS GROUND
FLAT AND PARALLEL TO BASE WITHIN .002 INCHES.
UNI-LOCK FIXTURE KEY HOLES ARE JIG BORED .0625.
REFER TO PAGE E22. TANGS ARE SLOTTED FOR MACHINE
TABLE MOUNTING.



GENERAL PURPOSE MILL FIXTURE BASE PLATE

UDB-990401 Series

REFERENCE
UT-904

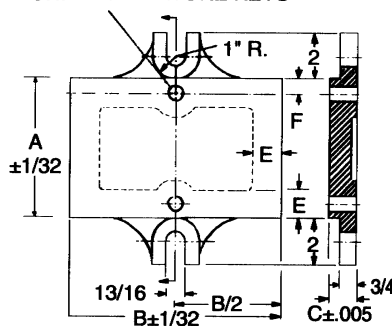
Refer to page E22
for UNI-LOCK
FIXTURE KEYS



PART NO.	A	B	C	MATERIAL THICKNESS
UDB-990401	10	16.0	0.8	1.0
UDB-990402	10	16.0	1.3	1.5
UDB-990403	12	20.0	0.8	1.0
UDB-990404	12	20.0	1.3	1.5
UDB-990405	14	24.0	0.8	1.0
UDB-990406	14	24.0	1.3	1.5
UDB-990407	18	36.0	1.3	1.5
UDB-990408	18	36.0	1.6	1.75

JIG BORED FOR .625 UNI-LOCK FIXTURE KEYS. SLOTTED
HOLES FOR MOUNTING TOP AND BOTTOM. PRECISION
GROUND FLAT AND PARALLEL.
ADD "S" TO PART NUMBER FOR STEEL. ADD "A" FOR
ALUMINUM. STEEL ASTM-36, ALUM 6061-T6/T57.

.625 BORE - 2 HOLES FOR
UNI-LOCK FIXTURE KEYS



UDB-990421 Series GANG MILL FIXTURE BASE

PRECISION GROUND
.002 PARALLELISM

Refer to page E22 for
UNI-LOCK FIXTURE
KEYS

SAME I.D. FACE
CHARACTERISTICS AS THE
CAST IRON MILL FIXTURE
BASE, EXCEPT
THE LONGEST BASE
DIMENSION IS
PERPENDICULAR TO THE
MACHINE TABLE SLOTS.

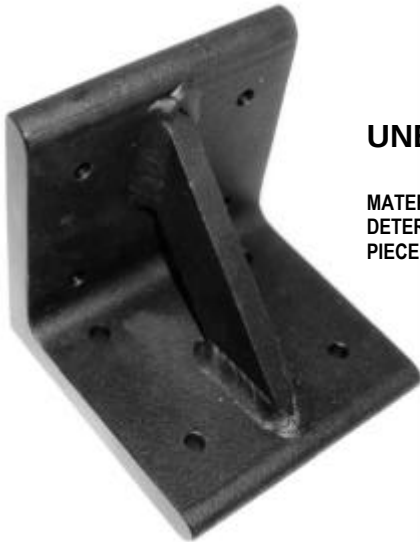


ASTM CLASS 35 CAST IRON

PART NO.	A	B	C	D	E	F
UDB-990421	6	9	1-1/4	1-1/4	1-1/4	5/8
UDB-990423	8	12	1-3/8	1-1/4	1-1/4	5/8
UDB-990425	10	15	1-1/2	1-3/8	1-3/8	11/16

Pre-Drilled Angles Standard Support

UDB-750200 Series



Add "A" for
Aluminum.

UNEQUAL LEGS

MATERIAL AVAILABILITY
DETERMINES ONE OR TWO
PIECE ANGLE CONSTRUCTION.

REF UT-7502

This Pre-Drilled Unequal Leg Support
Angle is provided in Hot Rolled Steel. Add
"A" for Aluminum AL 6061-T6 to Part
Number. Example: UDB-750201-A

The mating material structure's tolerances
are critical to continuous accurate function
of this tool. Black Oxide protective finish.

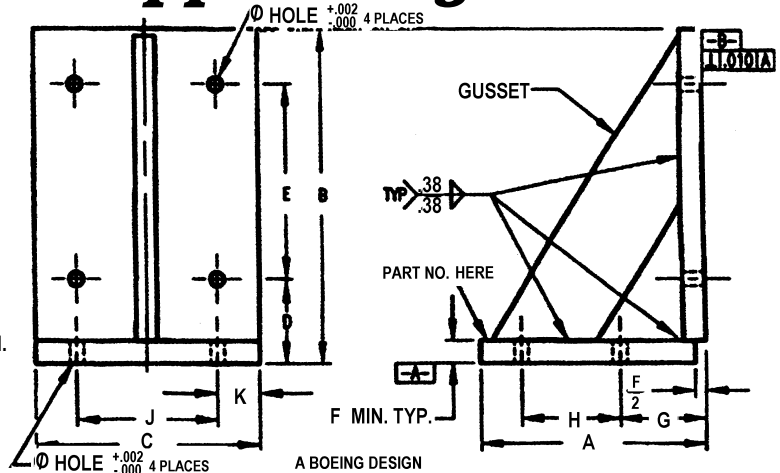
Gusset Thickness:

3/8" for UDB-750201 thru UDB-750208

1/2" for UDB-750209 thru UDB-750216

3/4" for UDB-750217 thru UDB-750224

Pre-Drilled Standard Support Angles



UNITED PART NO.	A	B	C	D	E	F MIN.	G	H	HOLE DIA.	J	K
UDB-750201	4.0	6.0	4.0	1.5	3.500	.40	1.5	1.750	.250	2.500	.7
UDB-750202	4.0	6.0	6.0	1.5	3.500	.40	1.5	1.750	.250	4.500	.7
UDB-750203	4.0	6.0	8.0	1.5	3.500	.40	1.5	1.750	.250	6.500	.7
UDB-750204	4.0	6.0	10.0	1.5	3.500	.40	1.5	1.750	.250	8.500	.7
UDB-750205	4.0	8.0	4.0	2.0	5.000	.65	1.5	1.750	.375	2.500	.7
UDB-750206	4.0	8.0	6.0	2.0	5.000	.65	1.5	1.750	.375	4.500	.7
UDB-750207	4.0	8.0	8.0	2.0	5.000	.65	1.5	1.750	.375	6.500	.7
UDB-750208	4.0	8.0	10.0	2.0	5.000	.65	1.5	1.750	.375	8.500	.7
UDB-750209	4.0	10.0	4.0	4.0	5.000	.90	1.8	1.500	.375	2.500	.7
UDB-750210	4.0	10.0	6.0	4.0	5.000	.90	1.8	1.500	.375	4.500	.7
UDB-750211	4.0	10.0	8.0	4.0	5.000	.90	1.8	1.500	.375	6.500	.7
UDB-750212	4.0	10.0	10.0	4.0	5.000	.90	1.8	1.500	.375	8.500	.7
UDB-750213	6.0	8.0	4.0	2.0	5.000	.90	2.0	3.000	.500	2.000	1.0
UDB-750214	6.0	8.0	6.0	2.0	5.000	.90	2.0	3.000	.500	4.000	1.0
UDB-750215	6.0	8.0	8.0	2.0	5.000	.90	2.0	3.000	.500	6.000	1.0
UDB-750216	6.0	8.0	10.0	2.0	5.000	.90	2.0	3.000	.500	8.000	1.0
UDB-750217	8.0	10.0	4.0	4.0	5.000	.90	2.0	5.000	.500	2.000	1.0
UDB-750218	8.0	10.0	6.0	4.0	5.000	.90	2.0	5.000	.500	4.000	1.0
UDB-750219	8.0	10.0	8.0	4.0	5.000	.90	2.0	5.000	.500	6.000	1.0
UDB-750220	8.0	10.0	10.0	4.0	5.000	.90	2.0	5.000	.500	8.000	1.0
UDB-750222	10.0	12.0	6.0	6.0	5.000	.90	2.0	6.000	.625	3.500	1.2
UDB-750223	10.0	12.0	8.0	6.0	5.000	.90	2.0	6.000	.625	5.500	1.2
UDB-750224	10.0	12.0	10.0	6.0	5.000	.90	2.0	6.000	.625	7.500	1.2

UDB-750300 Gusseted Series

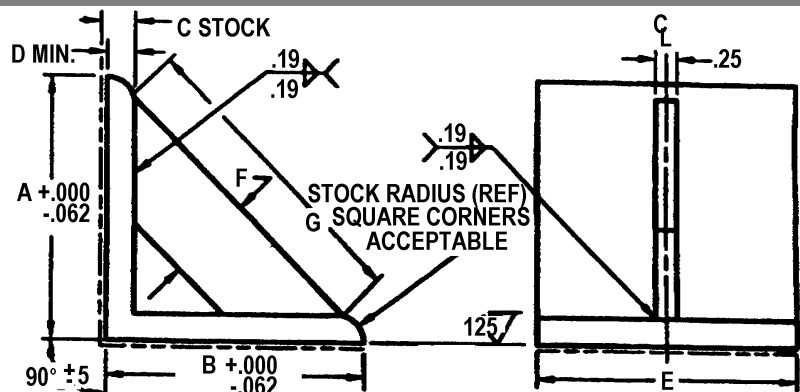
Material is ASTM A36 steel. Aluminum
when specified is A6061-T6.



Add "A" for
Aluminum.

EXAMPLE:
UDB-750301-A

REF UT-7503



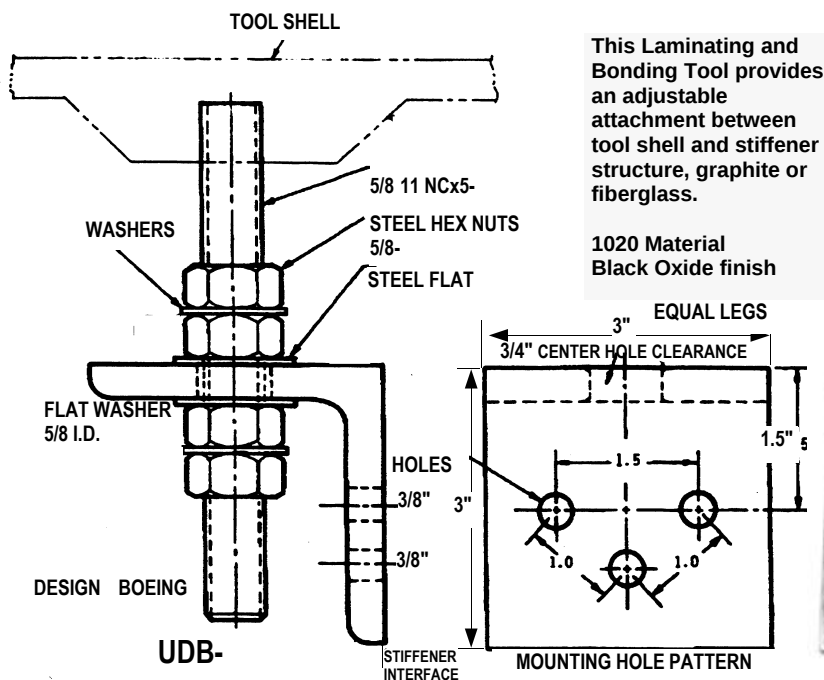
UNITED PART NO.	A	B	C	D MIN	E	F	G
UDB-750301	2	3	.38	.312	2	.88	2.75
UDB-750302	2	3	.38	.312	3	.88	2.75
UDB-750303	3	3	.38	.312	2	1.0	3.44
UDB-750304	3	3	.38	.312	3	1.0	3.44
UDB-750305	3	3	.38	.312	4	1.0	3.44
UDB-750306	4	4	.38	.312	3	1.0	4.81
UDB-750307	4	4	.38	.312	4	1.0	4.81
UDB-750308	4	4	.38	.312	5	1.0	4.81
UDB-750309	3	3	.50	.438	2	1.0	3.25
UDB-750310	3	3	.50	.438	3	1.0	3.25
UDB-750311	3	3	.50	.438	4	1.0	3.25

UNITED PART NO.	A	B	C	D MIN	E	F	G
UDB-750312	3	4	.50	.438	2	1.25	3.86
UDB-750313	3	4	.50	.438	3	1.25	3.86
UDB-750314	4	4	.50	.438	3	1.00	4.62
UDB-750315	4	4	.50	.438	4	1.00	4.62
UDB-750316	4	4	.50	.438	5	1.00	4.62
UDB-750317	6	4	.50	.438	4	1.50	6.25
UDB-750318	6	4	.50	.438	5	1.50	6.25
UDB-750319	6	4	.50	.438	6	1.50	6.25
UDB-750320	6	6	.50	.438	4	1.50	7.44
UDB-750321	6	6	.50	.438	5	1.50	7.44
UDB-750322	6	6	.50	.438	6	1.50	7.44

Stress Relieved — Black Oxide finish

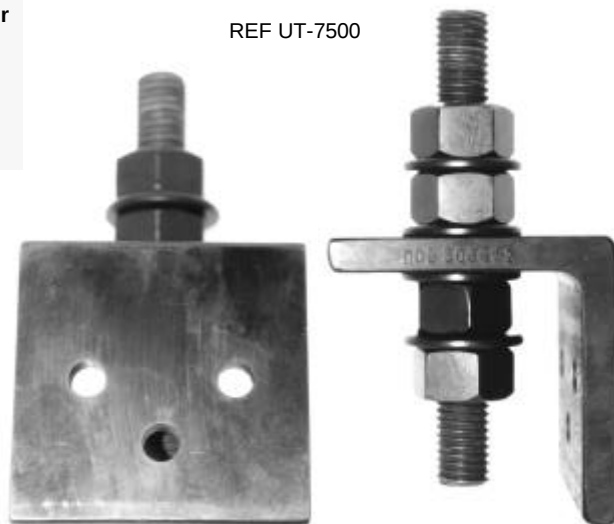
Support With the Best Angles

Attachment and Support Angles



ADJUSTABLE ATTACHMENT ASSEMBLY For Laminating and Bonding Tools

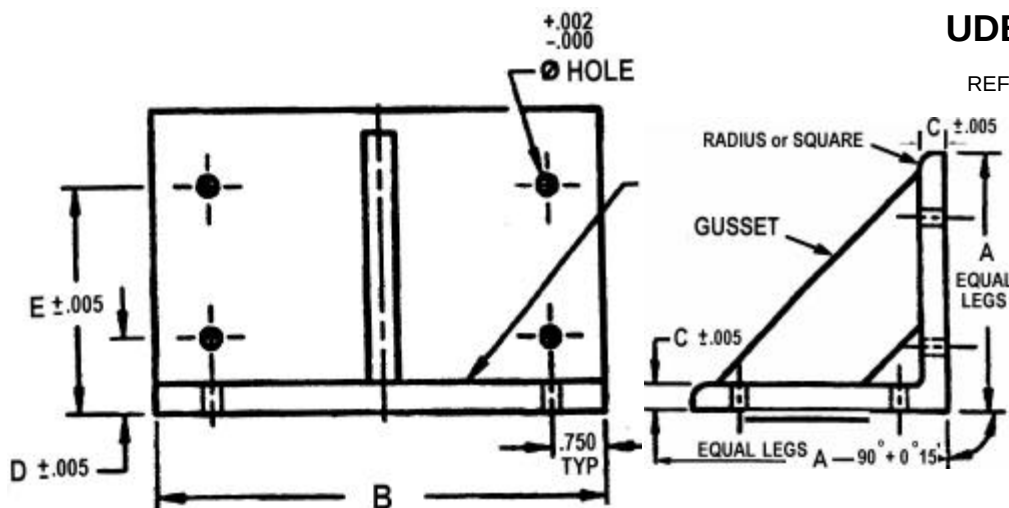
REF UT-7500



SUPPORT ANGLE - EQUAL LEGS - OPTIONAL GUSSET - STEEL/ALUMINUM

UDB-750100 SERIES

REF UT-7501



UNITED PART NO.	A	B	C (MIN.)	D	E	HOLE DIA.
UDB-750101	4.0	4.0	.400	1.000	3.000	.250
UDB-750102	4.0	6.0	.400	1.000	3.000	.250
UDB-750103	4.0	8.0	.400	1.000	3.000	.250
UDB-750104	4.0	10.0	.400	1.000	3.000	.250
UDB-750105	6.0	4.0	.400	2.000	4.500	.375
UDB-750106	6.0	6.0	.400	2.000	4.500	.375
UDB-750107	6.0	8.0	.400	2.000	4.500	.375
UDB-750108	6.0	10.0	.400	2.000	4.500	.375
UDB-750109	8.0	4.0	.900	2.000	6.500	.500
UDB-750110	8.0	6.0	.900	2.000	6.500	.500
UDB-750111	8.0	8.0	.900	2.000	6.500	.500
UDB-750112	8.0	10.0	.900	2.000	6.500	.500

Material is Hot Rolled Steel or Aluminum. Add "A" to Part Number for aluminum. Steel will be provided unless "A" is specified.

The machine surfaces and holes are CNC manufactured on machining centers.

Gusset thickness:

3/8" for UDB-750101 thru UDB-750108

1/2" for UDB-750109 thru UDB-750112

Add "G" to Part Number for Gusset.

Black Oxide preservative finish.

Mating structure tolerances are critical to the continuous accurate function of this tool.

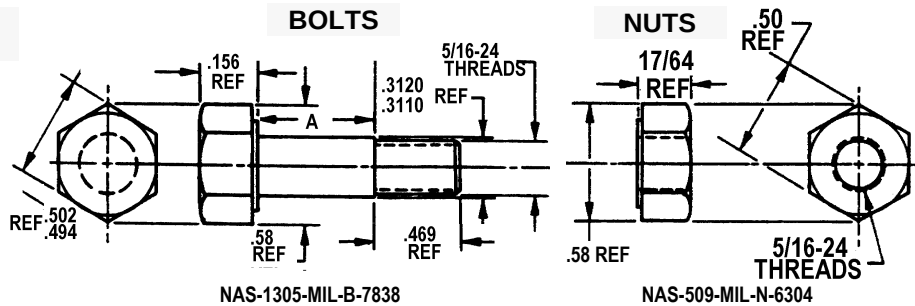
Bolts & Nuts-Close Tolerances for CADT Erector Sets-Angles

CADT CLOSE TOLERANCES—PLAIN and with LOCK WIRE HOLES

UDB-130510 PLAIN Series

Computer Aided Design
Tools (CADT) REF CTS-174A

For Inspection and Check
Fixtures



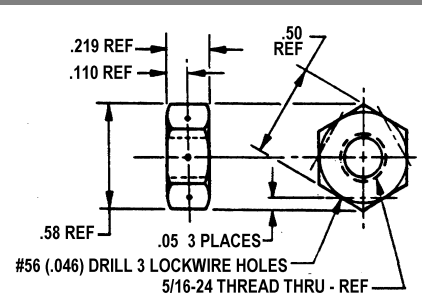
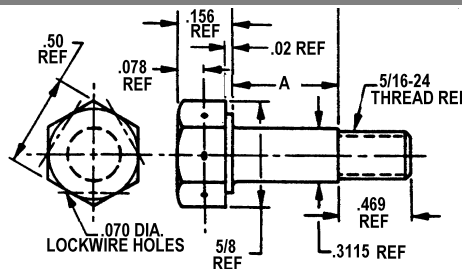
UCC-130510H HOLE Series

With Lockwire Holes

REF CTS-174B

Use with CADT Angles
Close Tolerance

ALL BOLTS PROVIDED WITH NUTS



PLAIN PART NO.	HOLE PART NO.	A REF
UCC-130506	UCC-130506H	.375
UCC-130508	UCC-130508H	.500
UCC-130510	UCC-130510H	.625
UCC-130512	UCC-130512H	.750
UCC-130514	UCC-130514H	.875

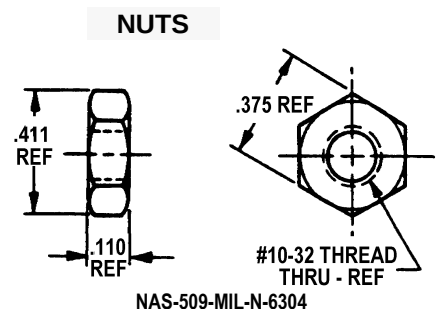
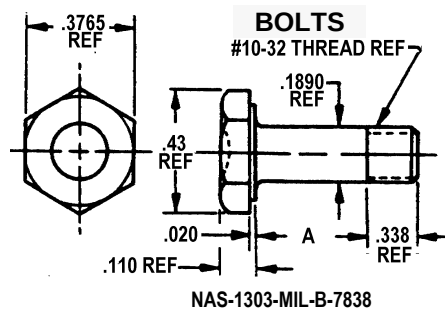
PLAIN PART NO.	HOLE PART NO.	A REF
UCC-130516	UCC-130516H	1.000
UCC-130518	UCC-130518H	1.125
UCC-130520	UCC-130520H	1.250
UCC-130522	UCC-130522H	1.375
UCC-130524	UCC-130524H	1.500

PLAIN PART NO.	HOLE PART NO.	A REF
UCC-130526	UCC-130526H	1.625
UCC-130528	UCC-130528H	1.750
UCC-130530	UCC-130530H	1.875
UCC-130532	UCC-130532H	2.000
UCC-130536	UCC-130536H	2.250

UCC-130303 PLAIN Series

NAS-1303-MIL-B-7838

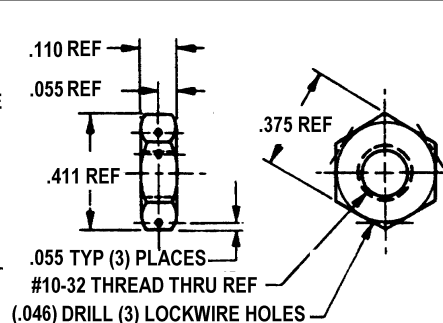
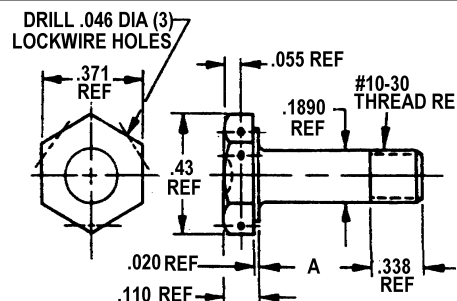
Computer Aided Design Tools
(CADT) REF CTS-174D



UCC-130303H HOLE Series

For Inspection and Check
Fixtures
Close Tolerance REF CTS-174E

ALL BOLTS PROVIDED WITH NUTS



PLAIN PART NO.	HOLE PART NO.	A REF
UCC-130303	UCC-130303H	.188
UCC-130304	UCC-130304H	.250
UCC-130305	UCC-130305H	.312
UCC-130306	UCC-130306H	.375

PLAIN PART NO.	HOLE PART NO.	A REF
UCC-130307	UCC-130307H	.438
UCC-130308	UCC-130308H	.500
UCC-130314	UCC-130314H	.875

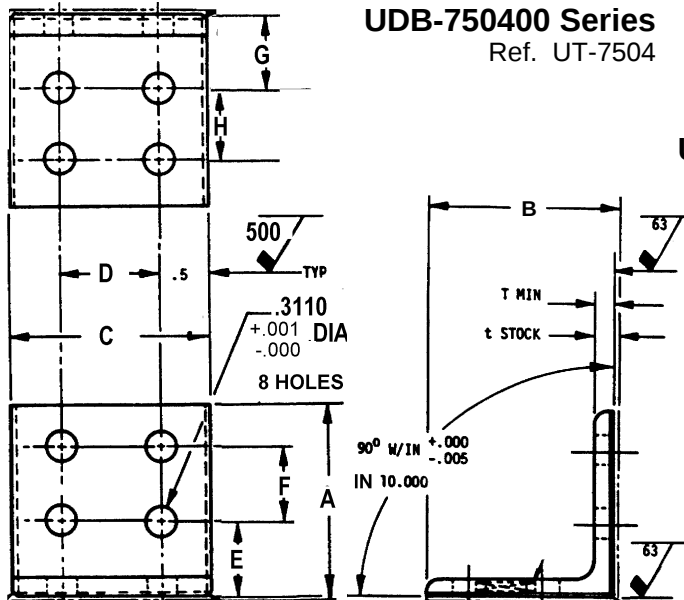
CADT Precision Angles

Precision Angles

UDB-750400 Series Ref. UT-7504

WITH LOCATING HOLES FOR ERECTOR SET
CADT ULTRA PRECISION ANGLES

Used with NAS Bolts, Screws & Nuts
See page E16.



ALL CENTER LINES ARE HELD
WITHIN $\pm .0015$.

PROTECTIVE PACKAGING.
BLACK OXIDE FINISH.
PER MIL-C-13924A.
Manufactured in A36 Steel.

TOLERANCES: X = $\pm .1$
XX = $\pm .030$
XXX = $\pm .010$
ANGLES ARE $\pm .5^\circ$

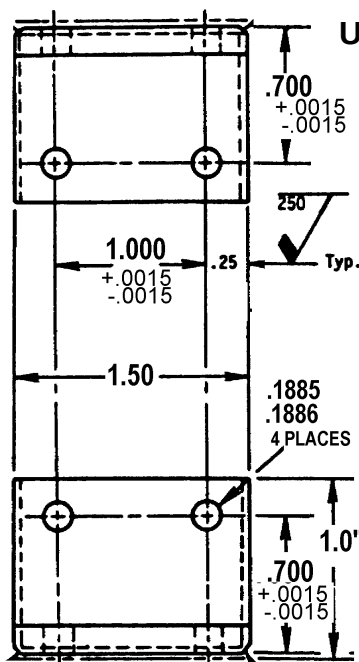


UNITED-BAC NO.	MDC NO.	t	T	A	B	C	D $\pm .0025$	E $\pm .0025$	F $\pm .0025$	G $\pm .0025$	H $\pm .0025$
UDB-750401	CTS-153-1	5/16	1/4	2	2	2	1.000	.750	.750	.750	.750
UDB-750402	CTS-153-5	5/16	1/4	2	2	4	3.000	.750	.750	.750	.750
UDB-750403	CTS-153-2	5/16	1/4	3	2	2	1.000	.750	1.500	.750	.750
UDB-750404	CTS-153-9	1/2	3/8	3	3	3	2.000	1.125	1.250	1.125	1.250
UDB-750405	CTS-153-3	1/2	3/8	4	4	3	2.000	1.000	2.000	1.000	2.000
UDB-750406	CTS-153-10	1/2	3/8	4	4	4	3.000	1.125	2.000	1.125	2.000
UDB-750407	CTS-153-4	1/2	3/8	6	4	4	3.000	1.500	3.500	1.500	1.500
UDB-750408	CTS-153-6	1/2	3/8	6	6	4	3.000	1.500	3.500	1.500	3.500
UDB-750409	CTS-153-8	5/8	1/2	6	4	6	5.000	1.500	3.500	1.500	1.500
UDB-750410	CTS-153-7	5/8	1/2	6	6	6	5.000	1.500	3.500	1.500	3.500

ULTRA PRECISION ANGLES

* THIS SAME ANGLE IS ALSO MANUFACTURED FOR McDONNELL DOUGLAS FOR MDC TOLERANCES. "DEFGH" DIMENSIONS ARE ALL $\pm .0015$.

When ordering this part for MDC, add suffix "MDC" to Part Number.



UDB-751532

CADT PRECISION SMALL ANGLE BRACKETS

MACHINED ON CNC MACHINING CENTERS. ALL CORNERS AND EDGES HAVE .010 x 45° CHAMFERS. BLACK OXIDE PROTECTION TO MIL 13924A.

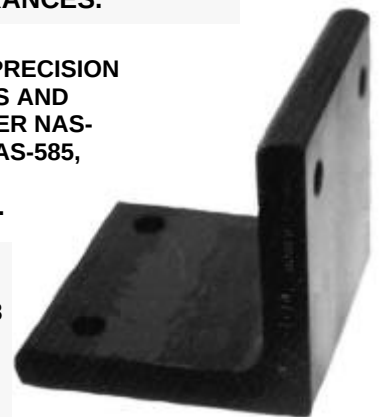
IDEAL FOR BOLTING TOGETHER AS AN ERECTOR SET

THE 90° ANGLE AND 8 LOCATING HOLES ARE MACHINED TO CLOSER TOLERANCES. REF CTS-153M

USE WITH HIGH PRECISION LOCATING BOLTS AND NUTS (Pg.E16) PER NAS-509, NAS-1305, NAS-585, AND NAS-1303 SPECIFICATIONS.

UDB-751532 is used with UDB-130510 thru 130536, UDB-130510W, UDB-585008 BOLTS and NUTS to NAS-498 and NAS-1303 SPECIFICATIONS.

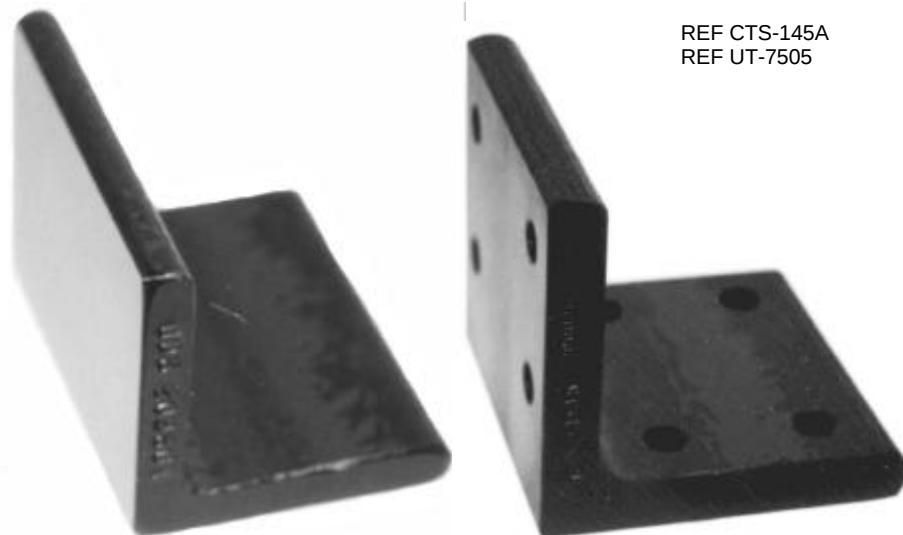
See Catalog Page E16 for Bolts and Nuts.



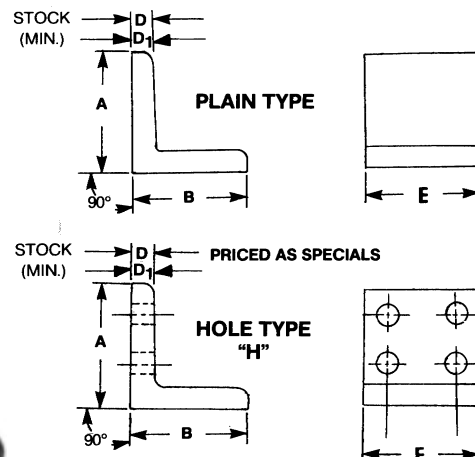
Angle Clips

Fixture It With UNITED Angle Clips

UNITED ANGLE CLIPS — PLAIN and HOLE TYPES



REF CTS-145A
REF UT-7505



Standard UDB mounting holes and dimensions supplied unless otherwise specified.

MACHINED SQUARE AND PARALLEL — CADT DIMENSIONS HELD — BLACK OXIDE FINISH

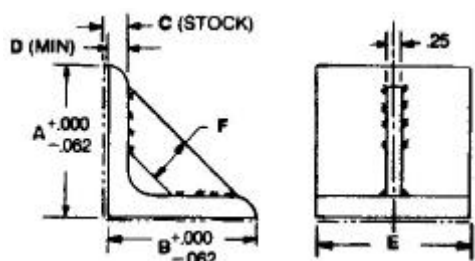
UNITED's strong machined steel Angles are ideal for Drill Fixtures and Jigs.
Angle Clips are available in a full range of sizes. 1020 Steel Mil Spec C-13924A.

ADD 'H' AFTER PART NO. FOR **HOLE STYLE**. — ADD 'A' AFTER PART NO. FOR **ALUMINUM ANGLES**.

PART NO.	A	B	D ₁ Min.	E	D STOCK	PART NO.	A	B	D ₁ Min.	E	D STOCK
UDB-209601	1-1/2	1-1/2	7/32	2	1/4	UDB-209650	4	4	5/16	4	3/8
UDB-209603	1-1/2	1-1/2	7/32	3	1/4	UDB-209651	4	4	7/16	3	1/2
UDB-209605	1-1/2	1-1/2	7/32	4	1/4	UDB-209652	3	3	7/16	2	1/2
UDB-209607	1-1/2	1-1/2	7/32	5	1/4	UDB-209653	4	4	7/16	4	1/2
UDB-209609	1-1/2	1-1/2	7/32	6	1/4	UDB-209654	3	3	7/16	3	1/2
UDB-209611	2	2	5/16	2	3/8	UDB-209655	4	4	7/16	5	1/2
UDB-209613	2	2	5/16	3	3/8	UDB-209656	3	3	7/16	4	1/2
UDB-209615	2	2	5/16	4	3/8	UDB-209657	4	4	7/16	6	1/2
UDB-209617	2	2	5/16	5	3/8	UDB-209658	3	4	7/16	2	1/2
UDB-209619	2	2	5/16	6	3/8	UDB-209659	6	4	7/16	3	1/2
UDB-209621	2	2	7/323	2	1/4	UDB-209660	3	4	7/16	3	1/2
UDB-209623	2	2	7/323	3	1/4	UDB-209661	6	4	7/16	4	1/2
UDB-209625	2	2	7/323	4	1/4	UDB-209663	6	4	7/16	5	1/2
UDB-209627	2	2	7/323	5	1/4	UDB-209665	6	4	7/16	6	1/2
UDB-209629	2	2	7/323	6	1/4	UDB-209667	6	6	7/16	3	1/2
UDB-209630	2	2-1/2	7/323	1-1/2	1/4	UDB-209669	6	6	7/16	4	1/2
UDB-209631	3	2	5/16	2	3/8	UDB-209671	6	6	7/16	5	1/2
UDB-209633	3	2	5/16	3	3/8	UDB-209673	6	6	7/16	6	1/2
UDB-209635	3	2	5/16	4	3/8	UDB-209675	3	3	1/2	3	9/16
UDB-209637	3	2	5/16	5	3/8	UDB-209677	4	4	1/2	3	9/16
UDB-209639	3	2	5/16	6	3/8	UDB-209679	4	4	1/2	4	9/16
UDB-209641	3	3	5/16	2	3/8	UDB-209681	6	4	1/2	4	9/16
UDB-209643	3	3	5/16	3	3/8	UDB-209683	6	6	1/2	4	9/16
UDB-209645	3	3	5/16	4	3/8	UDB-209685	6	4	5/8	6	11/16
UDB-209647	3	3	5/16	5	3/8	UDB-209687	6	6	5/8	6	11/16
UDB-209649	3	3	5/16	6	3/8	HOLE MOUNTING DIMENSIONS SUPPLIED ON REQUEST					

Angles and Trunnions

Gusseted Angles And Trunnions

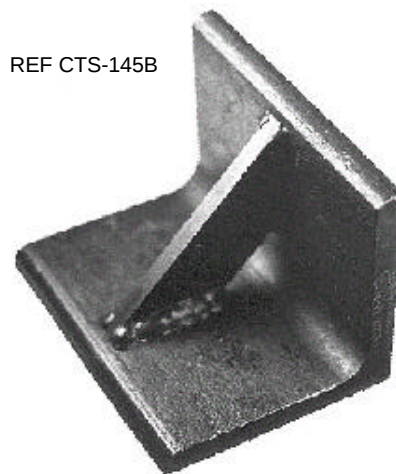


BLACK OXIDE FINISH

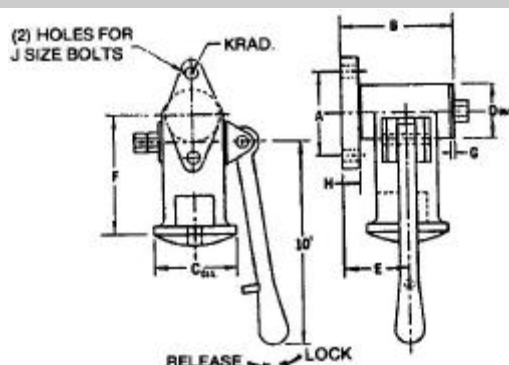
Add suffix 'A' to Part No. for ALUMINUM Gusseted Angles.

GUSSETED ANGLE BRACKETS

REF CTS-145B

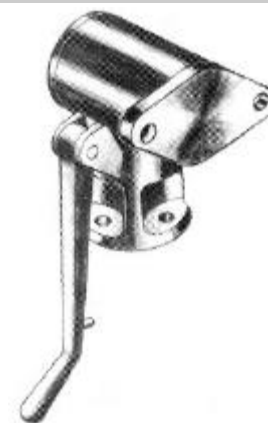


PART NO.	A	B	C	D Min.	E	F	PART NO.	A	B	C	D Min.	E	F
UDB-209804	2	3	3/8	.312	2	.88	UDB-209810	4	3	1/2	.438	2	1.25
UDB-209805	2	3	3/8	.312	3	.88	UDB-209811	4	3	1/2	.438	3	1.25
UDB-209801	3	3	3/8	.312	2	1.00	UDB-209814	4	4	1/2	.438	3	1.00
UDB-209802	3	3	3/8	.312	3	1.00	UDB-209815	4	4	1/2	.438	4	1.00
UDB-209803	3	3	3/8	.312	4	1.00	UDB-209816	4	4	1/2	.438	5	1.00
UDB-209806	4	4	3/8	.312	3	1.00	UDB-209817	6	4	1/2	.438	4	1.50
UDB-209807	4	4	3/8	.312	4	1.00	UDB-209818	6	4	1/2	.438	5	1.50
UDB-209808	4	4	3/8	.312	5	1.00	UDB-209819	6	4	1/2	.438	6	1.50
UDB-209809	3	3	1/2	.438	2	1.00	UDB-209820	6	6	1/2	.438	4	1.50
UDB-209812	3	3	1/2	.438	3	1.00	UDB-209821	6	6	1/2	.438	5	1.50
UDB-209813	3	3	1/2	.438	4	1.00	UDB-209822	6	6	1/2	.438	6	1.60



IDEAL FOR MOUNTING ON PIPE FRAMES.

LOCK BY LOWERING HANDLE

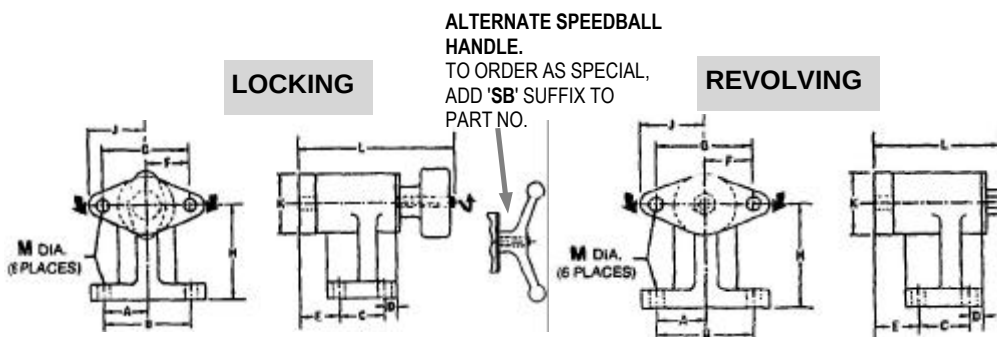


SPHERICAL TRUNNIONS

PART NO.	A	B	C	D	E	F	G	H	J	K
UDB-910008	4	4-13/16	3-5/8	2-3/4	3	4-3/16	5/16	7/8	3/8	1/2
UDB-910010	5-5/8	6-11/16	5-1/8	4-1/16	4	5-5/8	1/2	1	5/8	1

TRUNNIONS are USED IN PAIRS, ONE REVOLVING and ONE LOCKING.
TOUGH, STRONG MOUNTINGS FOR REVOLVING TOOLS.

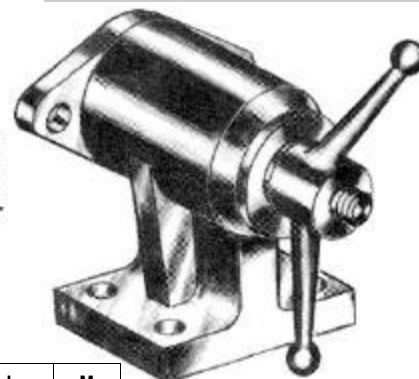
REVOLVING and LOCKING TRUNNIONS



LOCKING

REVOLVING

ALTERNATE SPEEDBALL HANDLE.
TO ORDER AS SPECIAL, ADD 'SB' SUFFIX TO PART NO.



PART NO.	TYPE	A	B	C	D	E	F	G	H	J	K	L	M
UDB-910000L	LOCKING	2	4	2-3/8	1/2	1-7/8	2	4	4	2-5/8	3-1/4	7	13/32
UDB-910000R	REVOLVING	2	4	2-3/8	1/2	1-7/8	2	4	4	2-5/8	3-1/4	5-15/32	13/32
UDB-9100006L	LOCKING	2-7/8	5-3/4	3-3/8	3/4	2-5/8	2-13/16	5-5/8	5-1/4	3-3/4	4-1/4	7-5/8	21/32
UDB-9100006R	REVOLVING	2-7/8	5-3/4	3-3/8	3/4	2-5/8	2-13/16	5-5/8	5-1/4	3-3/4	4-1/4	9	21/32

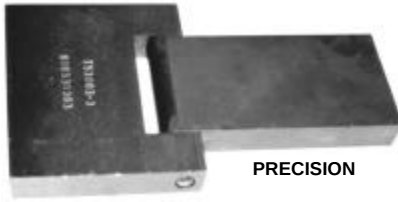
12200 WOODRUFF AVE. DOWNEY, CA 90241-5608 TELEPHONE (562) 803-1521 / (800) 421-3466 IN CA / (800) 486-3466 FAX (562) 803-6898 / (800) 486-3465
EMAIL united@ucc-udb.com WEBSITE www.ucc-udb.com

Adjustable Angles

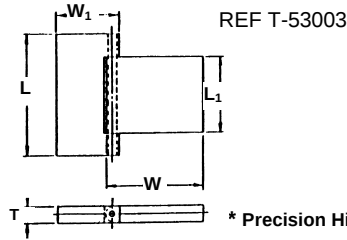
Adjustable & Hinged Angles

FOR PLATFORMS-GENERAL PURPOSE-
TEMPORARY and PERMANENT LOCATORS

DRILL PLATE HINGES



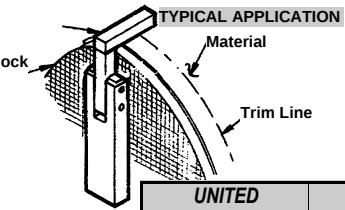
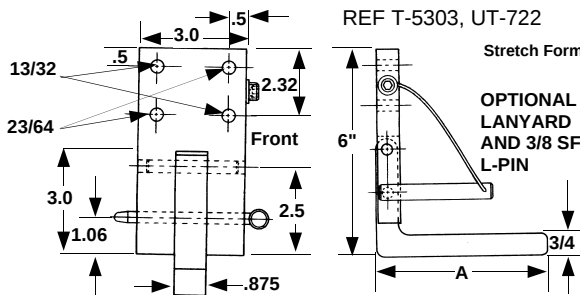
UDB-530303 Series



UNITED PART NO.	L	L ₁ NOM	W	W ₁	T
UDB-530303	3-1/2	2	4	3	5/8
*UDB-530305	3-1/2	2	4	3	5/8
UDB-530307	2-1/2	1-1/2	3	2	1/2
*UDB-530309	2-1/2	1-1/2	3	2	1/2
UDB-530311	1-3/4	1	2-1/2	1-3/4	3/8
*UDB-530313	1-3/4	1	2-1/2	1-3/4	3/8
UDB-530315	1-3/4	1	6	4	3/8
*UDB-530317	1-3/4	1	6	4	3/8

* Precision Hinges have .0025 max. clearance between tongue & clevis.

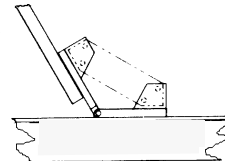
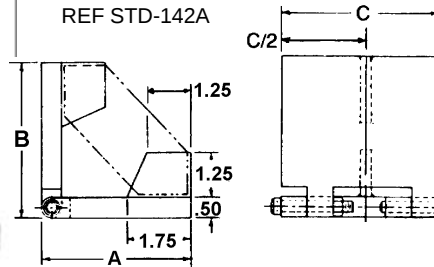
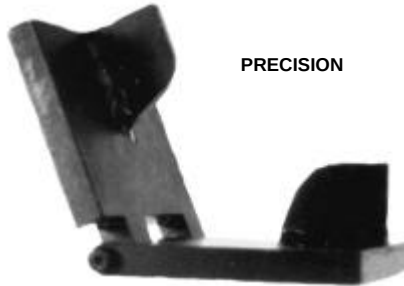
SWING ARM DRILL PLATES FOR STRETCH BLOCKS UDB-530304 Series



UNITED PART NO.	A ARM DIM.
UDB-530304	4
UDB-530306	6
UDB-530308	8

PROTECTIVE BLACK OXIDE FINISH

ADJUSTABLE GUSSETED LOCATORS UDB-530331 Series

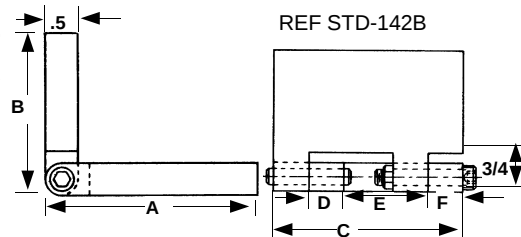


UNITED PART NO.	A	B	C	D	E	F
UDB-530331	3	3	3	5/8	1-1/8	5/8
UDB-530332	3	3	4	3/4	1-3/4	3/4
UDB-530333	4	3	4	3/4	1-3/4	3/4
UDB-530334	4	4	4	3/4	1-3/4	3/4

ADJUSTABLE PRECISION ANGLES-Permanent Pin



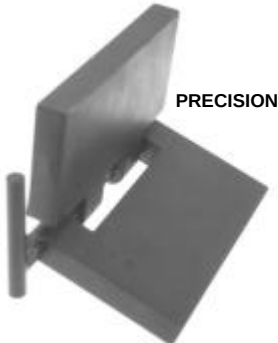
UDB-530340 Series



Accurately machined ends. Hinge has close tolerance. Available Plain or with Tabs for welding on gussets or with a Removable Pin.

UNITED PART NO.	A	B	C	D	E	F
UDB-530340	3	3	3	5/8	1-1/8	5/8
UDB-530341	3	3	4	3/4	1-3/4	3/4
UDB-530342	4	3	4	3/4	1-3/4	3/4
UDB-530343	4	4	4	3/4	1-3/4	3/4

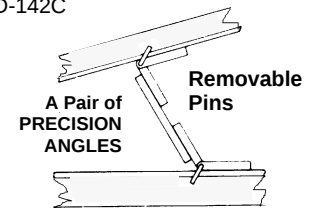
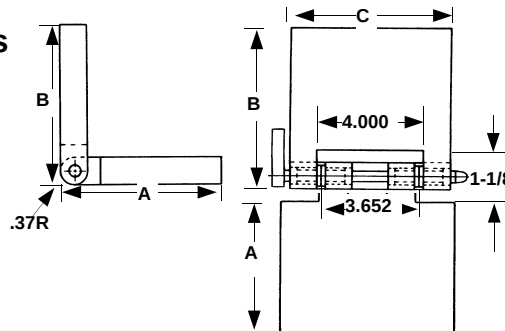
ADJUSTABLE PRECISION ANGLES-Removable Pin



UDB-530344 Series

Use to remove control boards and other locators.

Pull pins to remove quickly with ease.



UNITED PART NO.	A	B	C
UDB-530344	4.0	4.0	6.0
UDB-530346	6.0	6.0	6.0

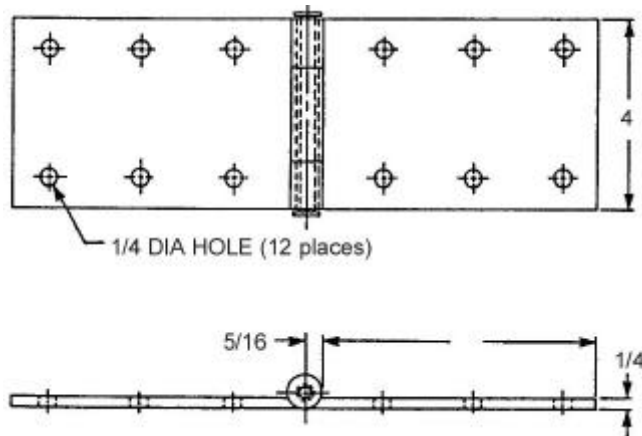
Swing With UNITED

Precision Hinges

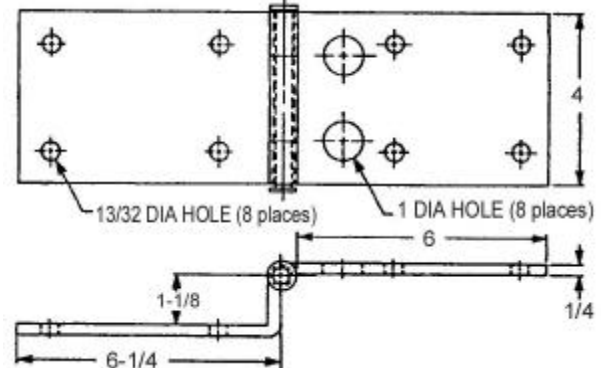
PLATFORM HINGES

MANUFACTURED AS ORDERED FROM SEMI FINISHED

TYPE I UDB-516501

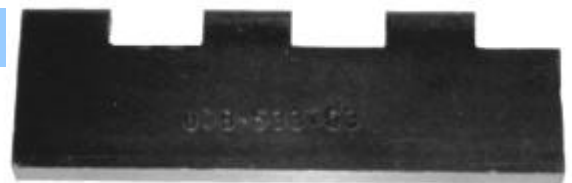


TYPE II UDB-516521

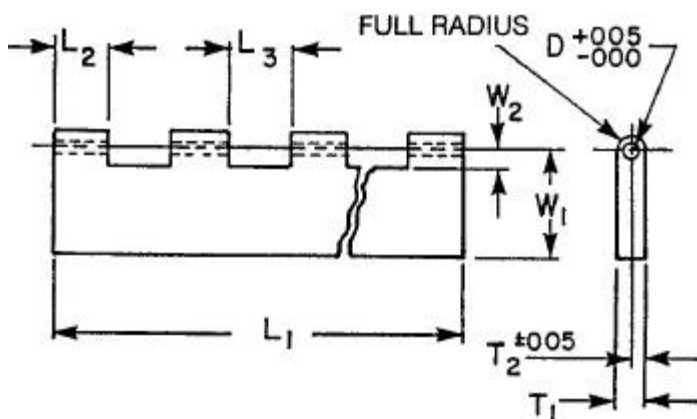


INDEXING HINGES

DURABLE STEEL — BLACK OXIDE FINISH



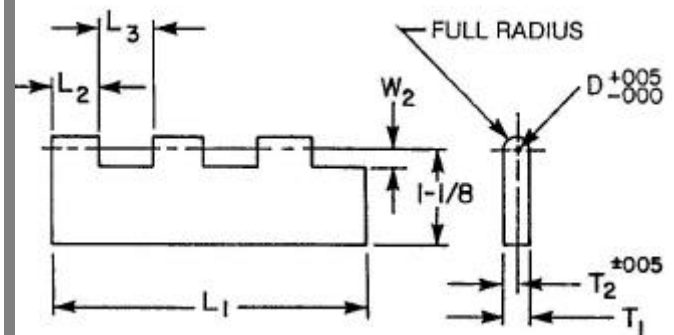
INDEXING HINGES — STANDARD



Provides Precision Centerline location only.

PART NO.	MAX. L ₁	L ₂	L ₃	W ₁	W ₂	T ₁	T ₂	D
UDB-533603	11-7/8	.605	.645	1-1/8	3/16	1/4	.125	.133
UDB-533605	11-7/8	.605	.645	1-1/8	3/16	1/4	.125	.123
UDB-533607	11-7/8	.605	.645	1-5/32	1/8	3/16	.093	.093
UDB-533609	12-1/2	.480	.520	1-1/8	3/16	1/4	.125	.133
UDB-533611	12-1/2	.480	.520	1-1/8	3/16	1/4	.125	.123
UDB-533613	12-1/2	.480	.520	1-5/32	1/8	3/16	.093	.093

INDEXING HINGES — PRECISION



Provides Both Precision Centerline and Linear Indexing.

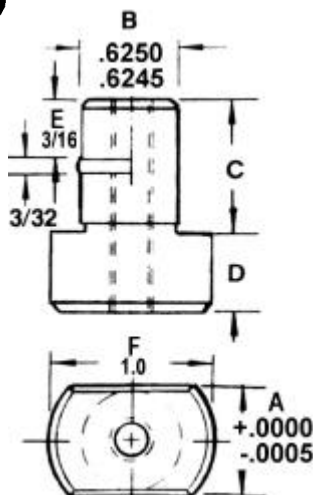
PART NO.	MAX. L ₁	L ₂	L ₃	W ₂	T ₁	T ₂	D
UDB-533703	3-11/16	.620	.630	3/16	1/4	.125	.133
UDB-533705	3-11/16	.620	.630	3/16	1/4	.125	.123
UDB-533707	3-11/16	.620	.630	1/8	3/16	.093	.093
UDB-533709	2-15/16	.495	.505	3/16	1/4	.125	.133
UDB-533711	2-15/16	.495	.505	3/16	1/4	.125	.123
UDB-533713	2-15/16	.495	.505	1/8	3/16	.093	.093

Uni-Lock and Long Mill Fixture Keys

UNITED Offers You the Key



Uni-Lock Fixture Key Removable--Locking



C1144 CARBONIZED STEEL
BLACK OXIDE FINISH
HARDENED and GROUND
.0005 T.I.R.

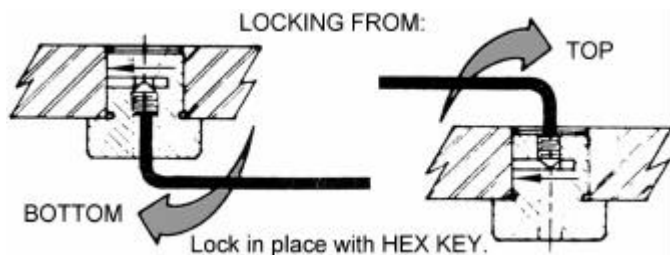
* Uni-Lock Fixture Keys eliminate the need to slot fixture bases, to make step fixture keys or to drill and tap keys. Just drill and ream! A single operation allows you to locate jig and fixtures on a machine tool table and position the part.

* On medium and small milling fixtures where welded or mounted fixture details prevent the drilling of thru-holes, UNITED's wide variety of Uni-Lock Fixture Keys solves the problem. Just drill and ream two 5/8 or 3/4 inch holes depending on table size.

* Precise alignment from either top or bottom is assured. The set screw can be tightened from the top of fixture, or the Uni-Lock Fixture Keys allow removal of the set screw and replacement in the opposite tapped hole for tightening from the bottom of the fixture.

SINE FIXTURE KEY

LOCKING FROM:

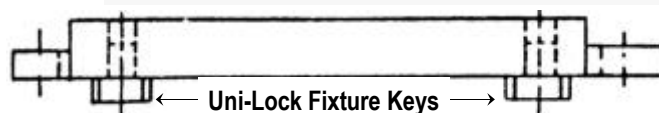


Lock in place with HEX KEY.

* A simple twist of an Allen-type wrench makes any fixture immediately available to any milling machine in your shop having 3/8 or 1-1/16 inch T-Slots.

* Left and right hand fixtures can be incorporated into one fixture by drilling and reaming four holes instead of two.

* When angular milled surfaces are required on finished parts, Uni-Lock Fixture Keys makes the savings incredible!



Uni-Lock Fixture Keys

UNITED PART NO.	A +.0000 -.0005	B +.0000 -.0005	C	D	E	F
UDB-946951	.3750	.6250	15/32	11/32	3/16	1"
UDB-946953	.4375	.6250	15/32	11/32	3/16	1"
UDB-946955	.5000	.6250	15/32	11/32	3/16	1"
UDB-946957	.5625	.6250	15/32	11/32	3/16	1"
UDB-946959	.6250	.6250	15/32	11/32	3/16	1"
UDB-946961	.6875	.6250	15/32	11/32	3/16	1"
UDB-946963	.5000	.6250	23/32	7/16	3/8	1"
UDB-946965	.5625	.6250	23/32	7/16	3/8	1"
UDB-946967	.6250	.6250	23/32	7/16	3/8	1"
UDB-946969	.6875	.6250	23/32	7/16	3/8	1"
UDB-946971	.7500	.6250	23/32	7/16	3/8	1"
UDB-946973	.8125	.6250	23/32	7/16	3/8	1"
UDB-946975	.8750	.6250	3/4	7/16	3/8	1-1/8
UDB-946977	1.0000	.7500	3/4	7/16	3/8	1-3/8
UDB-946979	1.0625	.7500	3/4	7/16	3/8	1-3/8

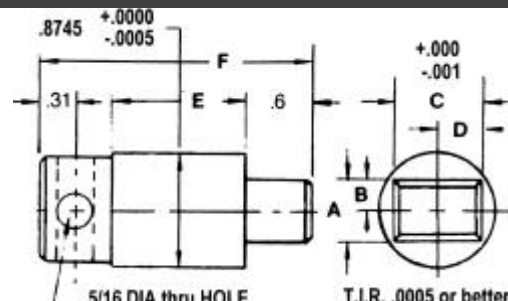
Fits 11/16 or 13/16 inch table slots by turning 90°



Long Mill Fixture Key Type VI

METRIC SIZES
NOW AVAILABLE

INSTALL IN A 7/8"
ROUND HOLE.



UNITED PART NO.	A +.0000 -.0010	B ± .0005	C +.0000 -.0010	D ± .0005	E	F
UDB-946630	.6873	.3437	.8123	.4061	1.0	2.2
UDB-946632	.6873	.3437	.8123	.4061	3.2	4.4

The Key to Your Fixture

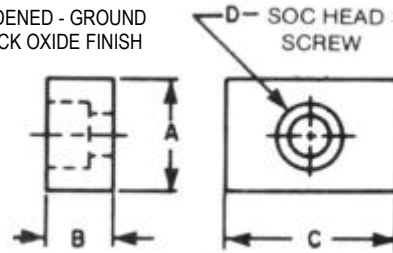
Plain and Mill Fixture Keys

SOFT PART NO.	HARD PART NO.	A +.000 .001	B	C	D SCREW
UDB-946700	UDB-946750	.5000	3/8	3/4	10-24
UDB-946701	UDB-946751	.5000	1/2	3/4	1/4-20
UDB-946705	UDB-946755	.5625	1/2	3/4	1/4-20
UDB-946709	UDB-946759	.6250	1/2	3/4	5/16-18
UDB-946710	UDB-946760	.6250	1/2	7/8	1/4-20
UDB-946715	UDB-946765	.6875	1/2	1"	5/16-18
UDB-946720	UDB-946770	.7500	1/2	1"	1/4-20
UDB-946721	UDB-946771	.7500	1/2	1-1/4	5/16-18
UDB-946725	UDB-946775	.8125	1/2	1-1/8	5/16-18
UDB-946726	UDB-946776	.8125	1/2	1-1/4	5/16-18
UDB-946730	UDB-946780	1.0625	5/8	1-1/2	3/8-16

This Key is for fixtures slotted to mount on specific machine tables.

PLAIN FIXTURE KEY TYPE I

HARDENED - GROUND
BLACK OXIDE FINISH



NIJFCM STANDARD



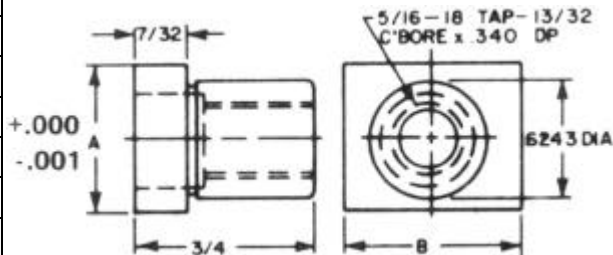
SPECIFY HARD OR SOFT

For Slotted Fixtures to mount on machine tables.
Fixture Slot Depth should be 1/2 of B dimension.

METRIC SIZES
AVAILABLE

UNITED PART NO.	A	B	FITS TABLE SLOTS
UDB-946800	.6250	.6875	5/8 - 11/16
UDB-946802	.6250	.7500	5/8 - 3/4
UDB-946805	.6250	.8125	5/8 - 13/16
UDB-946807	.6875	.7500	11/16 - 3/4
UDB-946810	.6875	.8125	11/16 - 13/16
UDB-946812	.7500	.8125	3/4 - 13/16

HARDENED - GROUND
BLACK OXIDE FINISH

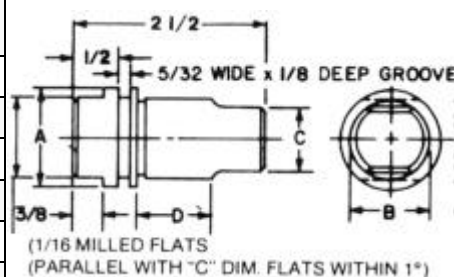


Use for two different table slot sizes by rotating Key 90°. Fasten from top with 5/16-18 Socket Head Cap Screw or from base with a 1/4-20 Socket Head Cap Screw. Install in 5/8" reamed hole. T.I.R. .0005

HARDENED - GROUND
BLACK OXIDE FINISH

MILL FIXTURE KEY TYPE III

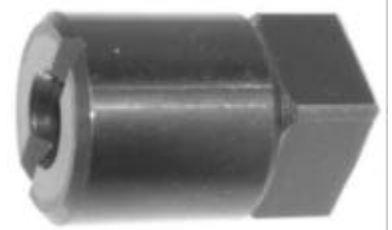
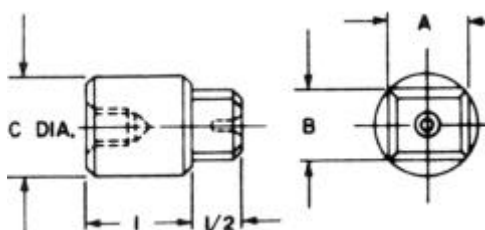
UNITED PART NO.	A	B	C	D
UDB-946641	1-1/4	1.0000 / .9995	.812 / .811	15/16
UDB-946643	1-1/2	1.3750 / 1.3745	1.062 / 1.061	15/16
UDB-946645	1-1/4	1.0000 / .9995	.687 / .686	11/16
UDB-946647	1-1/2	1.3750 / 1.3745	.812 / .811	15/16
UDB-946649	1-1/2	1.3750 / 1.3745	.687 / .686	15/16
UDB-946651	1-1/4	1.0000 / .9995	.687 / .686	15/16



HARDENED - GROUND
BLACK OXIDE FINISH

SHORT MILL FIXTURE KEY TYPE IV

UNITED PART NO.	A	B	C
UDB-946661	.687 / .686	.812 / .811	.9995 / 9990
UDB-946663	.562 / .561	.687 / .686	.9995 / 9990



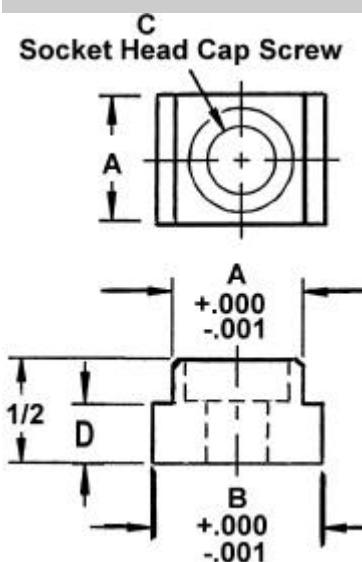
Step Fixture Keys Types V and VI

UNITED Fixture Keys



Type
VI

STEP FIXTURE KEY TYPE VI NEW Expanded Version



Top and Bottom of Fixture Keys
are central to each other
within .0005.

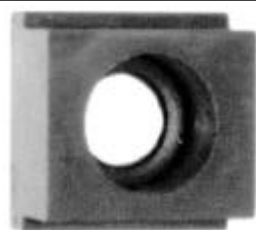
DESIGNED TO WEAR LONGER!

Step Fixture Keys adapt machine tables
with key slots to tools, fixtures and vises

UNITED Fixture Keys fit machine tables
which are larger or smaller than a given

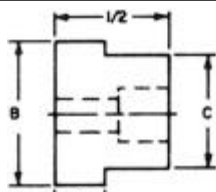
Available for U.S.A. or Metric Slots.
Durable Steel – Hardened and Ground
Black Oxide Finish

TYPE VI FIXTURE SLOTS — U.S.A.						
TYPE VI PART NO.	FIXTURE SLOT SIZE	A	TABLE SLOT SIZE	B SLOT ACTUAL	C SOCKET HD CAP SCREW	D STEP
UCC-108437	1/2	.5000	7/16	.4375	1/4 OR M6	9/32
UCC-108562			9/16	.5625		7/32
UCC-108625			5/8	.6250		
UCC-108687			11/16	.6875		
UCC-108472	1/2	.5000	12MM	.4724	1/4 OR M6	9/32
UCC-108551			14MM	.5512		7/32
UCC-108629			16MM	.6299		
UCC-108708			18MM	.7087		
UCC-109437	9/16	.5625	7/16	.4375	1/4 OR M6	9/32
UCC-109500			1/2	.5000		7/32
UCC-109625			5/8	.6250		
UCC-109472	9/16	.5625	12MM	.4724	1/4 OR M6	9/32
UCC-109551			14MM	.5512		7/32
UCC-109629			16MM	.6299		
UCC-110500	5/8	.6250	1/2	.5000	5/16 OR M8	9/32
UCC-110562			9/16	.5625		7/32
UCC-110687			11/16	.6875		
UCC-110750			3/4	.7500		
UCC-110812			13/16	.8125		
UCC-110474	5/8	.6250	12MM	.4724	5/16 OR M8	9/32
UCC-110551			14MM	.5512		7/32
UCC-110629			16MM	.6299		
UCC-110708			18MM	.7087		
UCC-110787			20MM	.7874		
UCC-111562	11/16	.6875	9/16	.5625	5/16 OR M8	9/32
UCC-111625			5/8	.6250		7/32
UCC-111750			3/4	.7500		
UCC-111812			13/16	.8125		
UCC-111629	11/16	.6875	16MM	.6299	5/16 OR M8	9/32
UCC-111708			18MM	.7087		7/32
UCC-111787			20MM	.7874		
UCC-120625	3/4	.7500	5/8	.6250	5/16 OR M8	9/32
UCC-120687			11/16	.6875		7/32
UCC-120812			13/16	.8125		
UCC-120708	3/4	.7500	18MM	.7087	5/16 OR M8	9/32
UCC-120787			20MM	.7874	7/32	
UCC-130687	13/16	.8125	11/16	.6875	5/16 OR M8	9/32
UCC-130750	13/16	.8125	3/4	.7500	5/16 OR M8	9/32
UCC-130708			18MM	.7087		
UCC-130787			20MM	.7874		
TYPE VI FIXTURE SLOTS METRIC						
UCC-125500	20MM	.7874	1/2	.5000	1/4 OR M6	9/32
UCC-125562			9/16	.5625		
UCC-125625			5/8	.6250		
UCC-125687			11/16	.6875		
UCC-125750			3/4	.7500		
UCC-125812	20MM	.7874	13/16	.8125	1/4 OR M6	7/32
UCC-125629			16MM	.6299		9/32
UCC-125700			18MM	.7087		



Type
V

STANDARD Version TYPE V



S.H. CAP SCREW

TYPE V PART NO.	A +.000 .001	B +.000 .001	C +.000 .001	D
UDB-946900	.5625	.5625	.4375	#10
UDB-946905	.625	.625	.500	1/4
UDB-946910	.6875	.6875	.5625	1/4
UDB-946912	.6875	.6875	.625	5/16
UDB-946915	.750	.750	.625	5/16
UDB-946920	.8125	.8125	.6875	5/16

Sub-Plate Pallet and Locating Fixture Keys

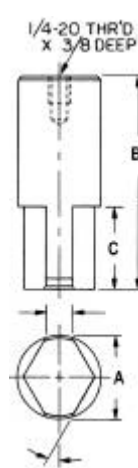
Sub-Plate Pallet Locating Keys

Sub-Plate Locating Keys mount quick-change fixture plates on a sub-plate. Diamond Keys are scribed on top to orient correctly in the hole.

The standard diameters match our standard fixture holes. These two standard O.D.s allow mounting the same fixture plate on a sub-plate (3 axis loc.) or a machine table (2 axis loc.). They fit the same holes as our Uni-Lock Key on page E22.

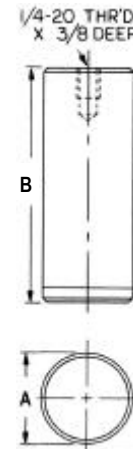
Round and Diamond Keys are used simultaneously for accurate location and to avoid binding.

ROUND STANDARD FIXTURE HOLES				
UNITED PART NO.	A DIAMETER NOMINAL	A DIAMETER ACTUAL	B	C
UCC-100625R	5/8	.6250 / .6244	2-1/4	
UCC-101187R	1-3/16	1.1875/1.1869	2-7/8	
DIAMOND RELIEVED				
UCC-100625D	5/8	.6250 / .6244	2-1/4	1
UCC-100875D	1-3/16	1.1875/1.1869	2-7/8	1



DIAMOND RELIEVED

SUB-PLATE LOCATING KEYS



ROUND

1144 Hardened and Ground
Black Oxide Finish

Mount this Removable Key from above plate on any combination of rectangular tooling plates, blocks or riser blocks on standard and DIN pallets.

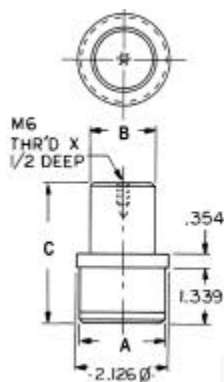
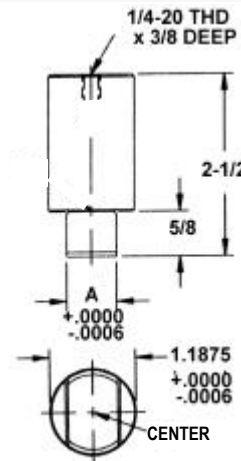
REMOVABLE TYPE LOCATING KEYS

UNITED PART NO.	TABLE SLOT SIZE	A
UCC-104562D	9/16	.5625
UCC-104625D	5/8	.6250
UCC-104687D	11/16	.6875
UCC-104750D	3/4	.7500
UCC-104812D	13/16	.8125
UCC-104875D	7/8	.8750
METRIC		
UCC-104551D	14MM	.5512
UCC-104629D	16MM	.6299
UCC-104708D	18MM	.7087
UCC-104787D	20MM	.7874
UCC-104866D	22MM	.8661

EASY OPERATION:

- ① Place fixture on machine.
- ② Install removable key into a 1-3/16 reamed hole. Hold .0005 true position.
- ③ Fasten fixture. Remove Key if needed.
- ④ Parts are now mounted to pallet.

Key keeps fixture free of any bottom obstruction.



CENTER PINS

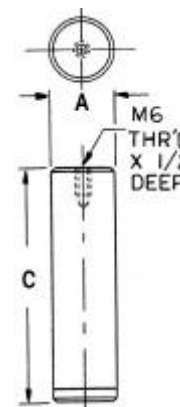
PALLET FIXTURE KEYS

Pallet Fixture Keys mount Tooling Plates and Blocks onto standard DIN Pallets.

Pallets require one each Center Pin and one each Radial Pin for orientation.

The Radial Pin can be removed after fastening the plates or blocks to the pallet and the machine.

Also used in conjunction with UDB-946630 Long Mill Fixture Key, page E22.



RADIAL PINS

UNITED PART NO.	A DIAMETER NOMINAL	A DIAMETER ACTUAL	B DIAMETER NOMINAL	B DIAMETER ACTUAL	C
UCC-100983	50MM	1.9681 / 1.9676	25MM	.9839 / .9835	2.874
UCC-101808	50MM	1.9681 / 1.9676	30MM	1.1808 / 1.1804	3.425
UCC-101968	50MM	1.9681 / 1.9676	50MM	1.9681 / 1.9676	3.425

Hardened and Ground
Black Oxide Finish

UNITED PART NO.	A DIAMETER NOMINAL	A DIAMETER ACTUAL	C
UCC-100787	20MM	.7871 / .7867	3.504
UCC-100984	25MM	.9839 / .9835	4.921

Cam Action Edge Clamps Positive Lock

Cam Action Edge Clamps Locks Positively Within 180° Throw

CAM ACTION EDGE MINI CLAMP

Fixed Base Mounting

Clamp nose pivots to exert force while clamping down and forward simultaneously.

LOCKS CLOCKWISE OR COUNTERCLOCKWISE

UDB-950290 – 5/16-18 Stud

UDB-950295 – 5/16-18 Stud

Smooth efficient pivoting nose edge clamp locks positively with a cam handle anywhere within its 180° throw.

Two bases are available with either a standard base for fixed positioning or the larger slotted base for adjustable mounting. You have a choice of clockwise or counter-clockwise handle rotation in order to clamp.

Holds parts that vary slightly in dimension with its pivotal clamping nose.

CAM ACTION EDGE STANDARD CLAMP

Slotted Base Mounting

HANDLE BALL IS BLACK PHENOLIC PLASTIC.

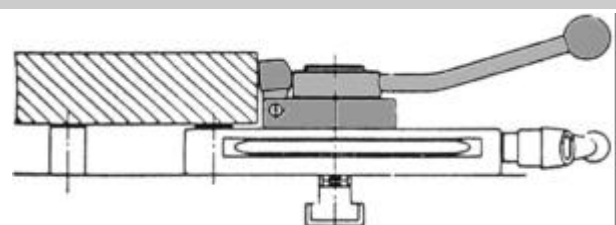
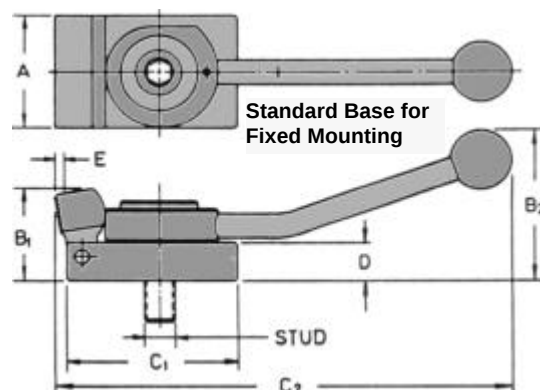
UDB-950300 – 1/2-13 Stud

UDB-950305 – 1/2-13 Stud

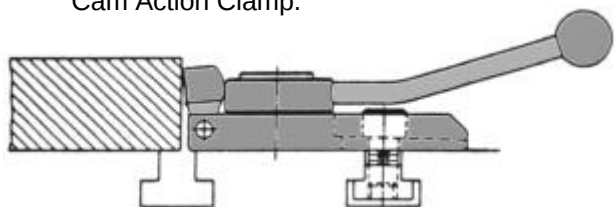
LOCKS CLOCKWISE OR COUNTERCLOCKWISE

Special spiral cam locks positively anywhere within its 180° throw.

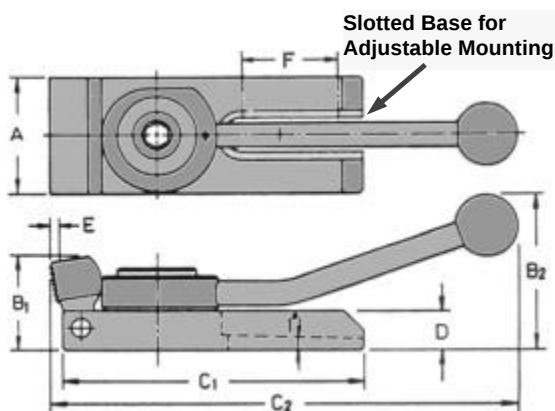
HANDLE BAR IS HARDENED AND GROUND WITH BLACK OXIDE FINISH.



Clamp and Bedding Support can be used with Cam Action Clamp.



Extended base Cam Action Clamp can be



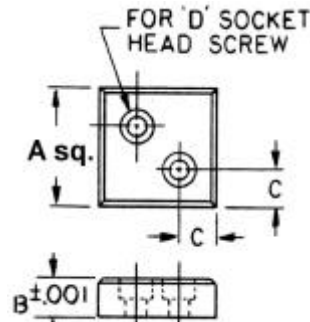
MINI CAM ACTION CLAMPS										
PART NO.	BASE	STUD	A	B ₁	B ₂	C ₁	C ₂	D	E	F
UDB-950290	MINI	5/16 18	1-1/4	1"	1-5/8	1-3/4	5"	7/16	1/8	
UDB-950295	EXTENDED	5/16 18	1-1/4	1"	1-5/8	3-1/8	5"	7/16	1/8	1"
STANDARD CAM ACTION CLAMPS										
UDB-950300	STANDARD	1/2 13	1-7/8	1-1/2	2-1/2	2-3/4	7-1/2	5/8	5/32	
UDB-950305	EXTENDED	1/2 13	1-7/8	1-1/2	2-1/2	4-3/4	7-1/2	5/8	5/32	1-1/2

Jig Leg Plate Pads, Feet and Rests

Jig Legs — Pads
Feet — Rests

Large solid contact Pad. Precision ground.
Serves as Rest Pad or Jig Foot. This double pad
handles heavy loads. Tapped for socket head
screws.

PART NO.	A	B	C	D
UDB-546565	1"	.3125	5/16	#10-32 or M5
UDB-546567	1-1/4	.3750	3/8	1/4-20 or M6
UDB-546569	1-1/2	.4375	7/16	1/4-20 or M6



JIG LEG PLATE PAD



Carborized and Hardened 1018 Steel — Black Oxide finish

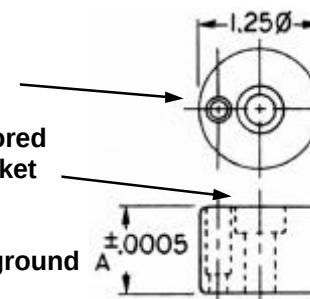
PART NO.	A
UDB-546575	.5000
UDB-546577	1.000
UDB-546579	2.000
UDB-546581	3.000

Carborized and
hardened 12L14 steel
Black Oxide finish

To prevent rotation:
Dowel in place.
Use 3/16 inch dowel.

Drilled and counterbored
for 5/16-18 or M8 Socket
Head Cap Screw.

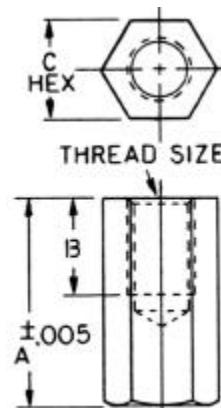
Length is precision ground
to $\pm .0005$



DRILL JIG FEET



UNITED PART NO.	THREAD SIZE	A LEN ± .0005	B THD DEPTH	C HEX
UDB-547061	USA 5/8 - 11	1.000	5/8	1"
UDB-547062		1.250	7/8	
UDB-547063		1.500	1"	
UDB-547064		1.750	1-1/4	
UDB-547065		2.000	1-1/2	
UDB-547066		2.500		
UDB-547067		3.000		
UDB-547068		3.500		
UDB-547069		4.000		
UDB-547070		6.000		
UDB-547071		8.000		
UDB-547080	METRIC M16	1.181 (30MM)	.63	24MM
UDB-547082		1.3781 (35MM)	.87	
UDB-547084		1.575 (40MM)	.98	
UDB-547086		1.772 (45MM)	1.26	
UDB-547088		1.969 (50MM)	1.50	
UDB-547090		2.953 (75MM)		
UDB-547092		3.937 (100MM)		



Generally
used in
pairs or
sets of 4

Carborized and
hardened 12L14 steel
Black Oxide finish

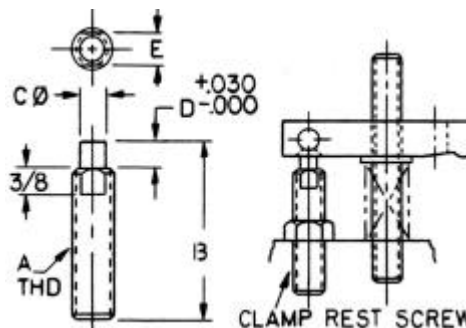
DOUBLE END JIG FEET



Designed for rear support.
For Drill - Spot - Heel, Swivel Heel, Tapped Heel Clamps

PART NO.	A	B	C	D	E
UDB-932261	3/8-16	2"	.250	.313	1/4
UDB-932262		2-1/2			
UDB-932263		3"			
UDB-932264	1/2-13	2"	.344	.313	3/8
UDB-932265		2-1/2			
UDB-932266		3"			

Carborized and hardened 12L14 steel
Black Oxide finish



CLAMP REST SCREWS



Low Profile Support Clamps

Bedding Work Support Clamps

LOW PROFILE ADJUSTABLE SERIES

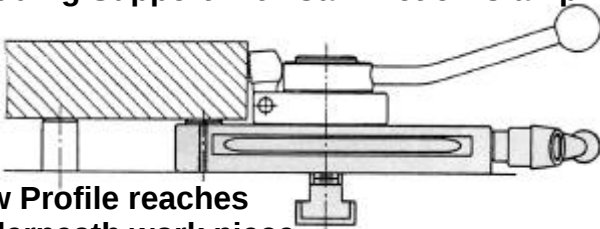


Use **UNITED's Low Profile Bedding Work Support Clamp** in conjunction with three point fixed supports in difficult to reach positioning locations. Always position to allow for handle access, using these simple steps:

- ① Place under the workpiece.
- ② Position where cutters may create vibration.
- ③ Use the locking handle to depress the spring-loaded plunger and hold down.
- ④ Position at the desired location
- ⑤ Release the handle. The plunger will pop up to contact the part.
- ⑥ Turn the handle to lock the plunger to support loads of 110 to 1100 pounds, depending upon the model selected.
- ⑦ Release to remove work piece.
- ⑧ Re-tighten to secure a new part. Reset adjustable handle to current required angle.

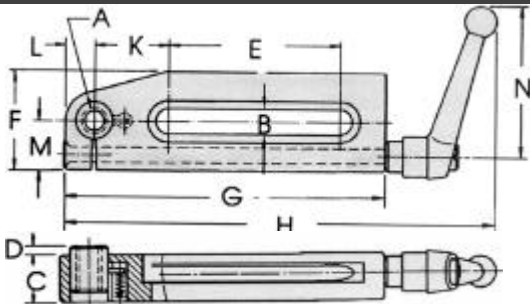
Threaded Studs, Rest Pads, Adjustable Screws, and Threaded Rest Buttons can be screwed into the female plunger support pin to adjust the height.

Bedding Support with Cam Action Clamp



Low Profile reaches underneath work piece

SEE DRAWING, PAGE E30.



UNITED MODEL NO.	A THD	B SLOT	C THICK	D MAX STROKE	E SLOT LENGTH	F WIDTH	G BODY LENGTH	H OAL	K SLOT TO A	L THD TO END	M THD TO SIDE	N LEN HANDLE	LOAD CAPACITY
UDB-650201	5/16-18	.33	.71	.11	1-13/32	1-3/16	3-3/8	5-3/16	1-1/16	13/32	25/32	2-9/16	110 LBS
UDB-650202	1/2-13	.53	.95	.23	3-9/16	2	6-1/2	8-13/16	1-17/32	19/32	1	3-1/8	550 LBS
UDB-650203	5/8-11	.67	1.34	.43	4-1/16	2-3/8	7-1/2	10-5/8	1-3/4	13/16	1-9/16	4-5/16	1100 LBS

Select the right Pad, Button or Rest to satisfy your requirements:



JACK
SCREW
PAGE I-15



CLAMP REST
PAGE G12



STUD
PAGE F26



HEX LEVEL
SCREW
PAGE H4



JIG LEG
PAGE H5



ADJUSTABLE
SCREW
PAGE I-15



SCREW
REST PAD
PAGE E30

Heavy Duty Jack Screws and Tips

Jack Screws and Jack Screw Tips

HEAVY DUTY ADJUSTABLE MANUAL JACK SCREWS have HIGH LOAD CAPACITY.

CONICAL TIP



UCC-921137

RADIUS TIP



UCC-921139

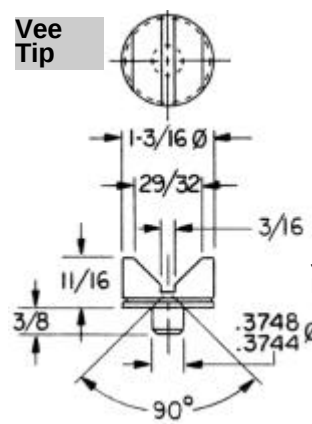
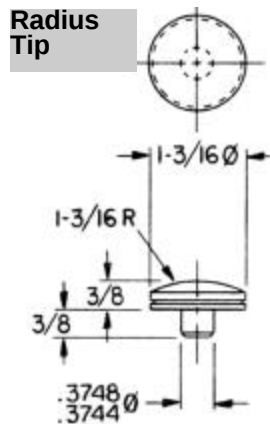
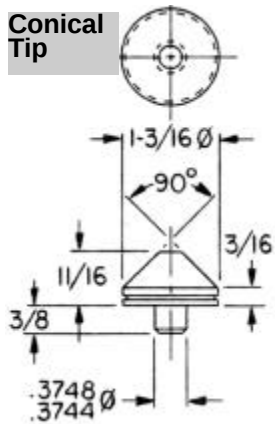
V - SHAPED TIP



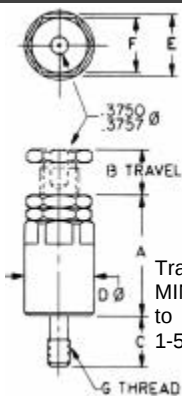
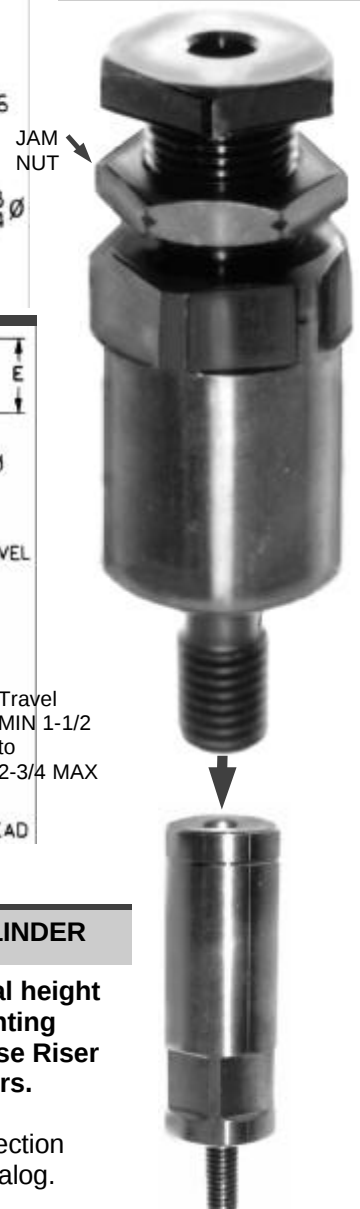
UCC-921141

NUT design moves
UP or DOWN
with infinite adjustment.

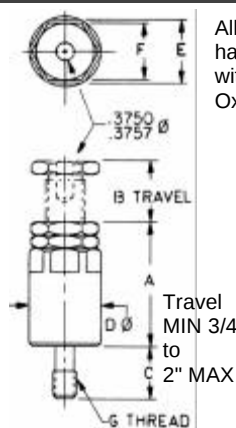
TOP LOCATING HOLE
is + .3750 - .0007
to CENTER
Plates,
Spherical V-Caps
and Tips.



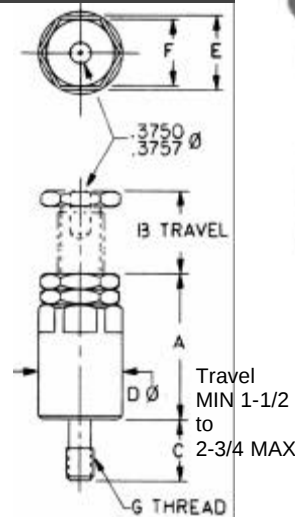
JACK SCREW



Heights
listed for
each Jack
Screw are
our complete
travel
adjustments.



All parts are
hardened
with Black
Oxide finish.



Jack Screw Height varies from
1-5/8" Base to 2-3/4" with additional travel up to 1-1/2".
See chart below.

UNITED JACK SCREW	MOUNTING SCREW SIZE	A RETRACTED HEIGHT	B TRAVEL	C THD LENGTH	D DIA. O.D.	E ADJ. BOLT	F JAM NUT	G THD
UCC-921125	STANDARD	1-5/8	3/8	1-1/4	1-9/16	1-7/16	1-5/16	1/2-13
UCC-921127		2"	3/4					
UCC-921129		2-3/4	1-1/2					
UCC-921131	HEAVY	1-5/8	3/8	1-3/8	1-9/16	1-7/16	1-5/16	5/8-11
UCC-921133		2"	3/4					
UCC-921135		2-3/4	1-1/2					

RISER CYLINDER

For additional height
and mounting
variations, use Riser
Cylinders.

See this Section
of our Catalog.

Rest Pads, Bolts and Riser Cylinders

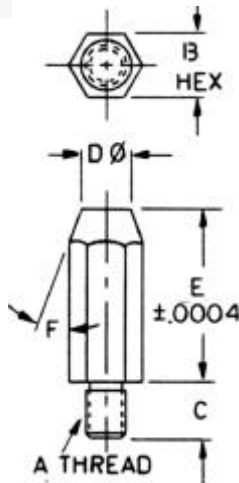
Screw Rest Pads - Swivel Contact Bolts - Riser Cylinders

SCREW REST PADS



Lengths from 1/4 to 2"

Increase your reach and pick a winner!



CAN BE USED TO SUPPORT WORKPIECE OR REVERSE AND USE AS A FOOT FOR JIG OR FIXTURE.

REVERSIBLE SMALL SCREW REST LOCATOR PAD WITH SPACE SAVING SUPPORT.

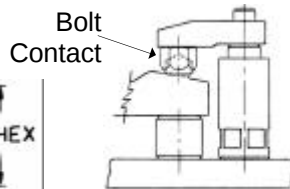
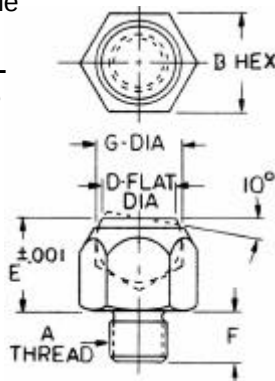
UNITED SCREW REST PADS	A THD	B HEX	C THD LEN	D O.D. DIA	E HT.	F ANGLE
UCC-700001	5/16-18	3/4	5/8	5/16	.2500	75°
UCC-700002					.3750	60°
UCC-700003					.5000	35°
UCC-700004					.7500	25°
UCC-700005					1.0000	20°
UCC-700006					1.2500	15°
UCC-700007					1.5000	15°
UCC-700011	1/2-13	7/8	15/16	1/2	.2500	75°
UCC-700012					.3750	60°
UCC-700013					.5000	35°
UCC-700014					.7500	25°
UCC-700015					1.0000	20°
UCC-700016					1.2500	15°
UCC-700017					1.5000	15°
UCC-700018					2.0000	15°
UCC-700021	5/8-11	1"	1-1/4	5/8	.2500	75°
UCC-700022					.3750	60°
UCC-700023					.5000	35°
UCC-700024					.7500	25°
UCC-700025					1.0000	20°
UCC-700026					1.2500	15°
UCC-700027					1.5000	15°
UCC-700028					2.0000	15°

HEX SWIVEL CONTACT BOLTS



Reversible
HEX SWIVEL BOLTS

Levels
Up or
Down



DISTRIBUTES CLAMPING EVENLY ON IRREGULAR SURFACES.

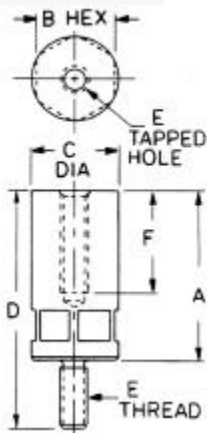
Precision Ground to insure height locations.

Use with Riser Cylinders.

UNITED SWIVEL BOLTS	A THD	B HEX	D DIA FLAT	E HEIGHT NOM.	E HEIGHT ACTUAL	F THD LEN	G BASE DIA
UCC-700041	5/16-18	9/16	13/32	1/2	.5000	5/16	15/32
UCC-700042	3/8-16	13/16	19/32	13/16	.8125	1/2	23/32
UCC-700043	1/2-13	7/8	19/32	13/16	.8125	7/16	23/32
UCC-700044	5/8-11	1-1/16	25/32	1"	1.0000	5/8	29/32

RISER CYLINDERS

ADJUSTS HEIGHT from 2" to 5-1/4". Uses minimal fixture or plate space. Use for additional height and mounting variations.



Can be used with Jack Screws, Hook Clamps, Adjustable Screws, Swivel Contact Bolts, Screw Rest Pads.

UNITED RISER CYLINDERS	SIZE	A	B	C DIA	D	E	F / G THD LEN
UCC-921140	SMALL	1-1/4	7/8	1"	2"	5/16-18	3/4
UCC-921142		1-1/2			2-1/4		
UCC-921144		2"			2-3/4		
UCC-921146	MEDIUM	2"	1-7/16	1-9/16	3-1/4	1/2-13	1-1/4
UCC-921148		3-1/8			4-3/8		
UCC-921150		4"			5-1/4		
UCC-921152	LARGE	2"	1-13/16	2"	3-1/4	5/8-11	1-1/4
UCC-921154		3-1/8			4-3/8		
UCC-921156		4"			5-1/4		

Spindles - Bolts - Shims

LOCATE and EXTEND WITH PRECISION

Adjustable Spindles,
Contact Bolts & Shims

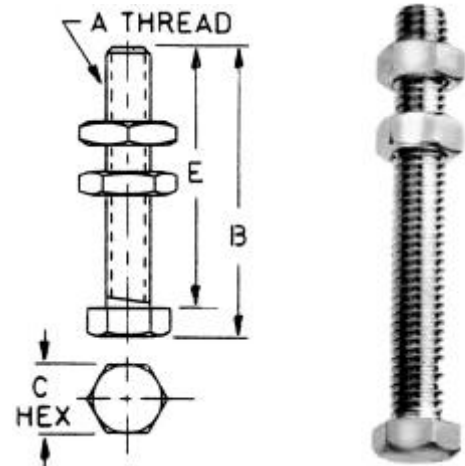
Bolt fully threaded for maximum adjustment.

Tough Durable multi-purpose Spindle
also used with Toggle Clamps.

UNITED ADJUSTABLE SPINDLES	SIZE	A THD	B OAL	C HEX	E LENGTH UNDER HEAD
UCC-700050	SMALL	5/16-18	2-11/16	1/2	2-1/2
UCC-700052	MEDIUM	3/8-16	3-1/4	9/16	3
UCC-700054	STANDARD	1/2-13	3-5/16	3/4	3
UCC-700056	HEAVY	5/8-11	4-3/8	15/16	4

CARBON STEEL - ZINC PLATED

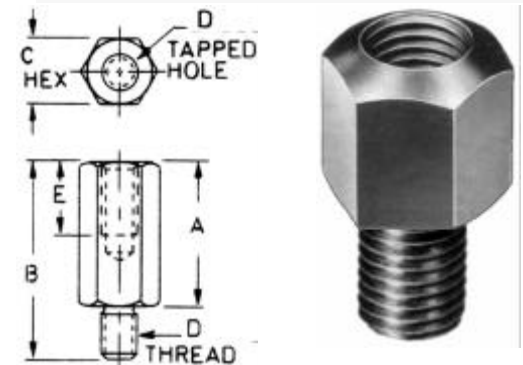
ADJUSTABLE SPINDLES



Used with Swivel Contact Bolts for Extending Length.
Stack to further Increase Length.

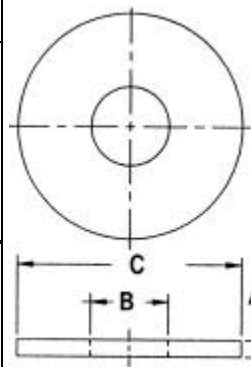
UNITED BOLT EXTENSIONS	SIZE	A HEIGHT	B OVERALL LENGTH	C HEX	D THD	E THD LEN
UCC-700060	SMALL	1/2	13/16	9/16	5/16-18	5/16
UCC-700062		3/4	1-1/16			
UCC-700064		1	1-5/16			
UCC-700066	MEDIUM	1-1/4	2	7/8	1/2-13	3/4
UCC-700068		2	2-3/4			
UCC-700070		3	3-3/4			
UCC-700072	LARGE	1-1/2	2-1/2	1-1/16	5/8-11	1
UCC-700074		2	3			
UCC-700076		3	4			

CONTACT BOLT EXTENSIONS



12L14 STEEL - BLACK OXIDE FINISH

UNITED SHIMS	SIZE	A Thickness	B I.D. DIA	C O.D. DIA
UCC-700882	SMALL	.002	9/16	15/16
UCC-700883		.003		
UCC-700884		.004		
UCC-700885		.005		
UCC-700886		.010		
UCC-700887		.020		
UCC-700888		.062		
UCC-700889		.125		
UCC-700891	MEDIUM	.002	9/16	1-5/8
UCC-700892		.003		
UCC-700893		.004		
UCC-700894		.005		
UCC-700895		.010		
UCC-700896		.020		
UCC-700897		.062		
UCC-700898		.125		
UCC-700901	LARGE	.002	11/16	1-7/8
UCC-700902		.003		
UCC-700903		.004		
UCC-700904		.005		
UCC-700905		.010		
UCC-700906		.020		
UCC-700907		.062		
UCC-700908		.125		



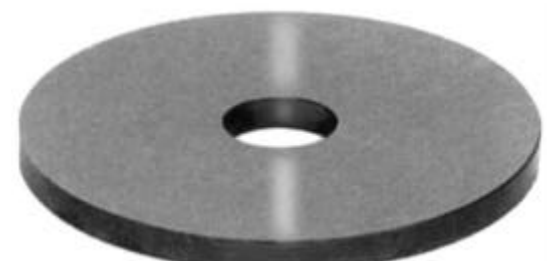
Precision Shim Spacers Control your workpiece Heights
with precise .001 increments.

Tolerances are $\pm .0003$ on .062 and .125 sizes
and 10% on Small Sizes.

1144 STEEL - HEAT TREATED

PRECISION SHIM SPACERS

Shim or Raise workpiece.
Stack to size required.



Long Arm Hook Clamps

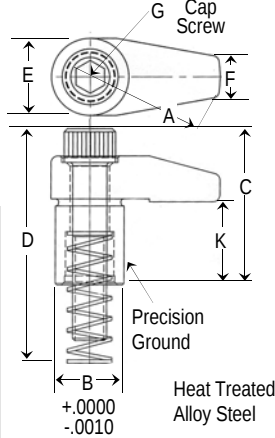
Hook Clamps

Long Arm-Plain & Tapped

HOOK CLAMPS



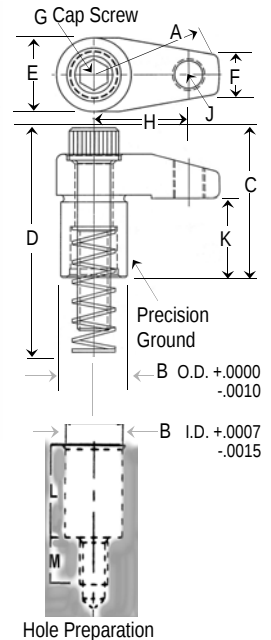
**LONG
ARM
HOOK
CLAMPS
SOCKET
HEAD**



UNITED'S VERY VERSATILE HOOK CLAMPS



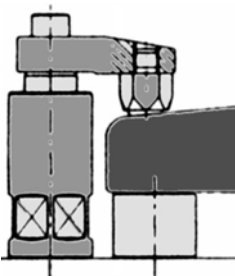
**TAPPED
LONG ARM
HOOK
CLAMPS
SOCKET
HEAD**



UNITED HOOK CLAMPS ARE AVAILABLE WITH PLAIN OR TAPPED ARMS. The TAPPED ARM CLAMPS are slightly larger than the Plain Arm type and utilize many different threaded contact bolts and spindles. Shown below are other holders such as Riser Cylinders and Screw Pads.

The ideal Clamp for work where space is severely limited.

'A' dimension is precision for reamed hole mounting.



Hook is spring loaded for quick release and swing away from work piece.

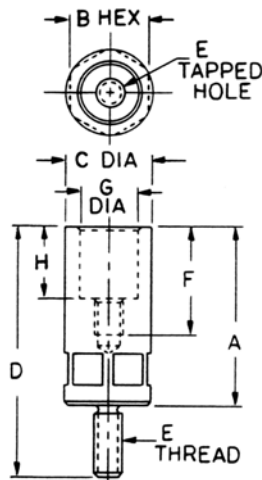
LONG ARM — SOCKET HEAD														
PART NO.	SIZE	THD DIA	A	B +.0000 -.0100	C	D	E	F	G	H	J	K	L	M
UDB-921176	SMALL	5/16-18	1"	.7500	1-7/16	2-5/16	7/8	3/8	5/16-18x2.00	—	—	29/32	15/16	15/16
UDB-921178	MEDIUM	1/2-13	2"	1.0000	2-1/2	3-1/2	1-1/4	11/16	1/2-13x3.00	—	—	1-17/32	1-9/16	1"
UDB-921180	LARGE	5/8-11	2"	1.2500	2-7/8	3-7/8	1-7/16	7/8	5/8-11x3.25	—	—	1-17/32	1-9/16	1"
TAPPED LONG ARM — SOCKET HEAD														
UDB-921182	SMALL	5/16-18	1-3/16	.7500	1-7/16	2-5/16	7/8	3/8	5/16-18x2.00	15/16	5/16-18	29/32	15/16	15/16
UDB-921184	MEDIUM	1/2-13	2-3/8	1.0000	2-1/2	3-1/2	1-1/4	11/16	1/2-13x3.00	1-13/16	1/2-13	1-17/32	1-9/16	1"
UDB-921186	LARGE	5/8-11	2-3/8	1.2500	2-7/8	3-7/8	1-7/16	7/8	5/8-11x3.25	1-13/16	5/8-11	1-17/32	1-9/16	1"

Black Oxide finish

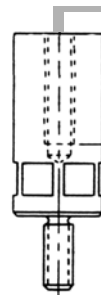
HOOK CLAMP HOLDERS



HOLDER

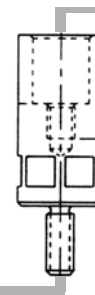


Hook Clamps are used with Support Cylinders, Holders and Screw Pads.

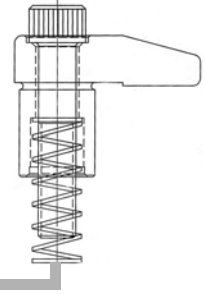


RISER

Refer To Page E29.



HOLDER



HOOK CLAMP

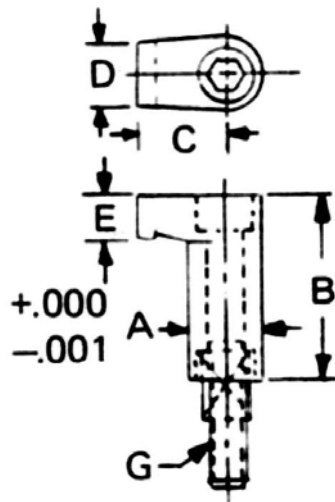
HOOK CLAMP HOLDERS									
PART NO.	SIZE	A	B HEX	C O.D.	D OAL	E THD	F THD DEEP	G +.0008 +.0015	H
UDB-921164	SMALL	2-1/4	7/8	1"	3"	5/16-18	2"	.7500	15/16
UDB-921166	MEDIUM	3-1/8	1-7/16	1-9/16	4-3/8	1/2-13	2-5/8	1.0000	1-9/16
UDB-921168	MEDIUM	4"	1-7/16	1-9/16	5-1/4	1/2-13	2-5/8	1.0000	1-9/16
UDB-921170	LARGE	3-1/8	1-3/4	2"	4-3/8	5/8-11	2-5/8	1.2500	1-9/16
UDB-921172	LARGE	4"	1-3/4	2"	5-1/4	5/8-11	2-5/8	1.2500	1-9/16

Easy Access Clamps

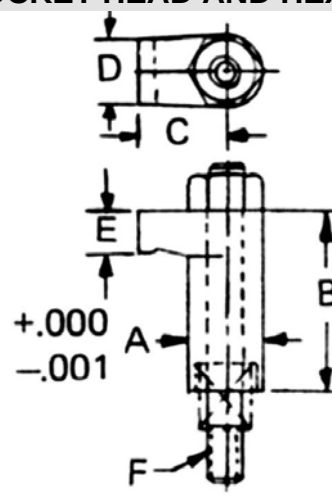
Hook and Swing Clamps

Hook is spring-loaded, releases quickly and swings away from work piece.

SOCKET HEAD AND HEX NUT HOOK CLAMPS



SOCKET HEAD



HEX NUT

SOCKET HEAD CAP SCREW STYLE

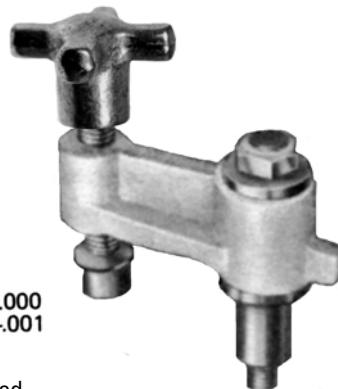
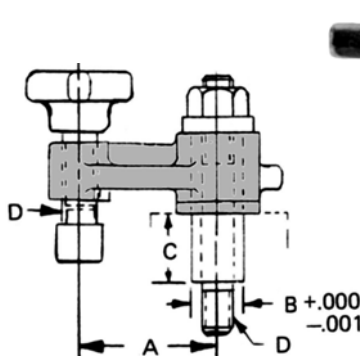
SOCKET HD PART NO.	HEX NUT PART NO.	A +.000 -.001	B HT	C JAW LENGTH	D JAW WIDTH	E JAW THICKNESS	F STUD	G CAP SCREW
UDB-921107	UDB-921105	.625	1-3/8	11/16	7/16	1/2	5/16-18 x 2-1/2	5/16-18 x 1-3/4
UDB-921113	UDB-921110	.874	2-1/4	1"	9/16	19/32	1/2-13 x 4	3/8-16 x 3
UDB-921117	UDB-921115	.999	2-9/16	1-3/16	3/4	13/16	1/2-13 x 4-1/2	1/2-13 x 3-1/2
UDB-921122	UDB-921120	1.124	2-9/16	1-7/16	7/8	7/8	5/8-11 x 5	1/2-13 x 3-1/2

HEX NUT STYLE

Heat Treated Alloy Steel

Black Oxide finish

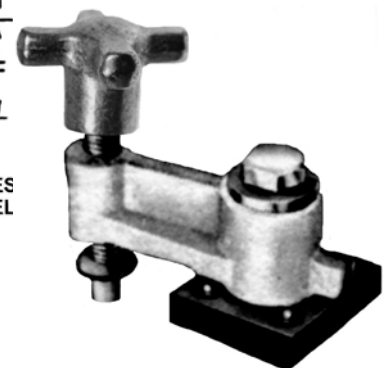
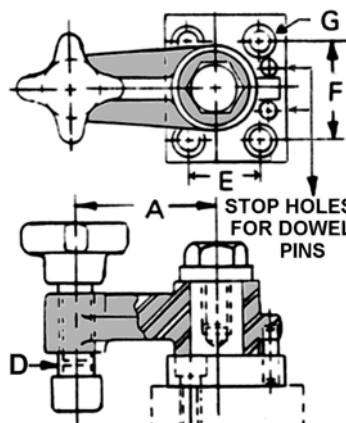
POST MOUNT SWING



Add 'N' for Delrin® Clamping Pad.

KNOB HANDLE POST MOUNT

FLANGE BASE SWING



KNOB HANDLE FLANGE BASE MOUNT

SWING CLAMPS

Knob swings for quick clamp assemblies. Post Mount is ideal for limited spaces. Swings 360°. Dowel Pin mount holes are provided in Flange Base to establish stop holes. Swivel screw pads stop turning with pressure and prevent marring of work piece.

POST MOUNT PART NO.	FLANGE MOUNT PART NO.	A 360° SWING	B MOUNT POST	C POST LEN	D SPINDLE THD	E HOLE ALIGN	F HOLE ALIGN	G CAP SCREW
UDB-921200	UDB-921202	1-1/2	.561	5/8	5/16-18	3/4	1"	#10
UDB-921205	UDB-921211	2"	.874	1-1/8	1/2-13	1-1/8	1-3/8	1/4
UDB-921207	UDB-921213	2-1/2	.874	1-1/8	1/2-13	1-1/8	1-3/8	1/4
UDB-921219	UDB-921223	4"	1.124	1-3/8	5/8-11	1-1/4	1-1/2	3/8

SWIVEL STOPS ROTATION ON CONTACT.

SWIVEL FOOT COMPENSATES FOR IRREGULAR SURFACES.

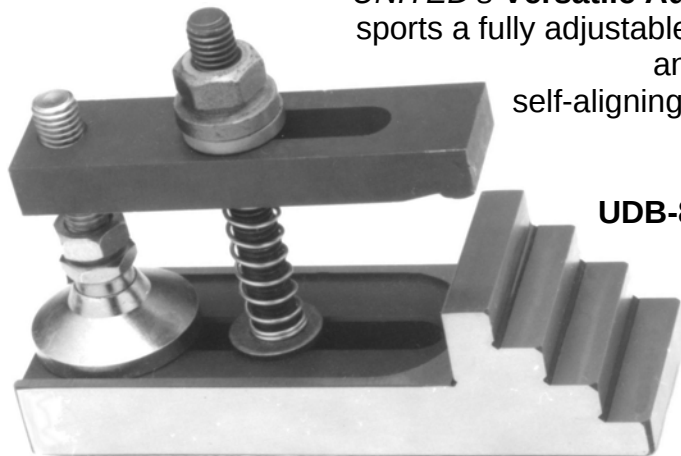
SWINGS 360° LEFT OR RIGHT.

Adjustable Leveling Clamps

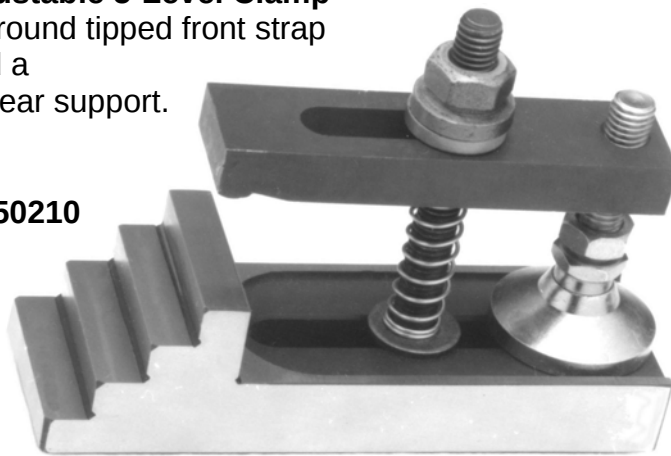
Adjustable 5-Level Clamps

STAY-TOGETHER ADJUSTABLE SERIES

UNITED's Versatile Adjustable 5-Level Clamp sports a fully adjustable round tipped front strap and a self-aligning rear support.

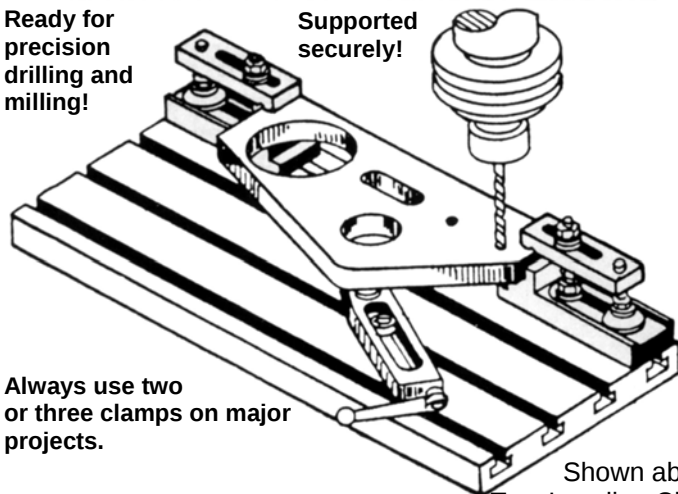


UDB-850210



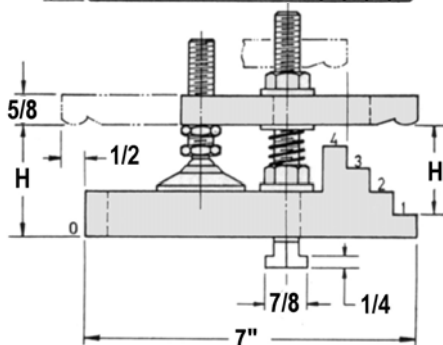
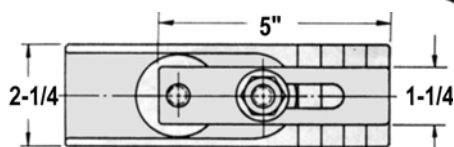
Ready for precision drilling and milling!

Supported securely!



Always use two or three clamps on major projects.

Shown above:
Two Leveling Clamp Assemblies and one Low Profile Bedding Support Clamp (See page E28).



Order as
UDB-850210

LEVEL (THICKNESS)	0	1	2	3	4
HEIGHT ± .0005	0	.500	1.000	1.500	2.000
H MINIMUM	2"	1-9/16	1-1/16	9/16	0
H MAXIMUM	3"	2-1/2	2"	1-1/2	1"

FEATURES

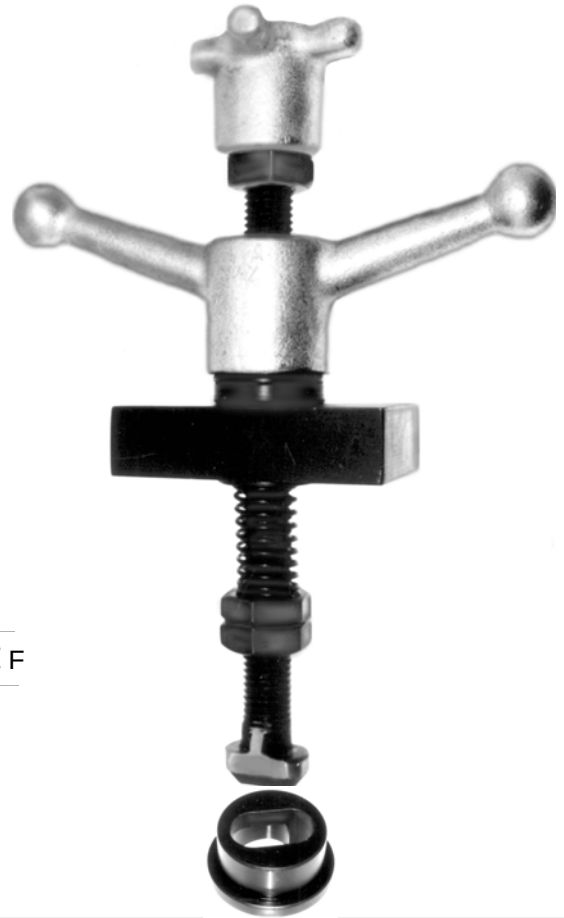
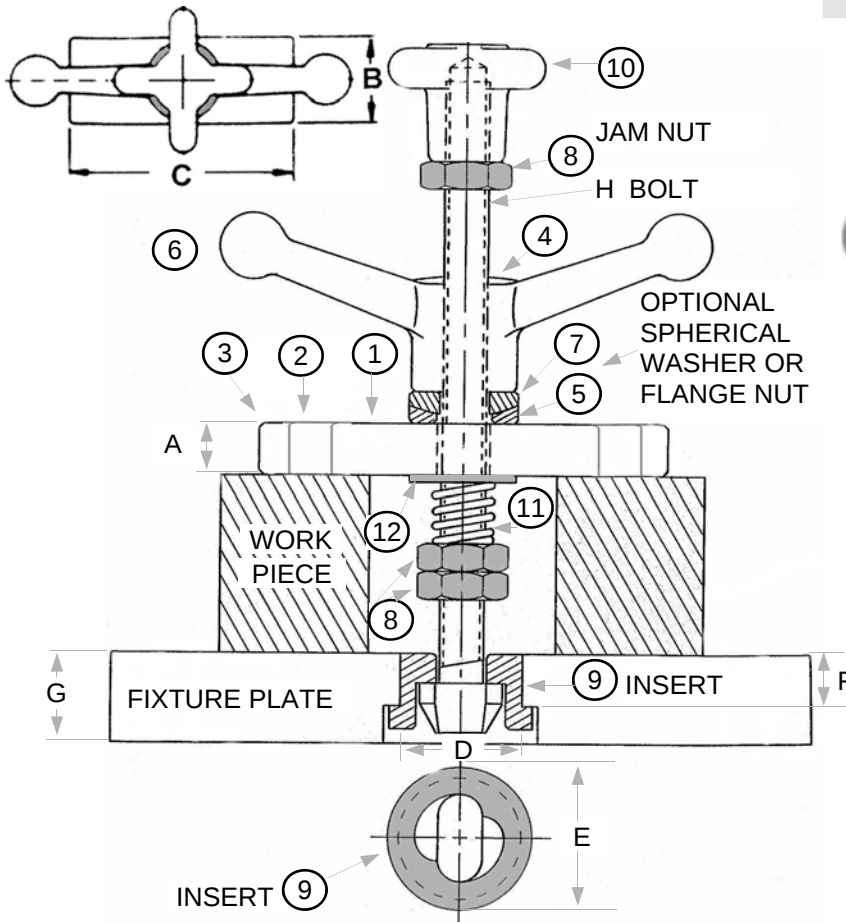
- 1 Fast Set-Up.
- 2 Clamps on even work surfaces.
- 3 All Clamp parts stay together.
- 4 Position at 5 different levels.
- 5 Levels: 0, 1/2, 1", 1-1/2, and 2".
- 6 Multi-functional one-step clamping, leveling and locating.
- 7 Convenient and easy to use.
- 8 Tighten either the Flange Nut or the Rear Support.
- 9 Allows clamping of slightly uneven work pieces.
- 10 Strong enough for most applications yet soft enough to avoid cutter damage.
- 11 The T-Slot Bolt and Clamp Strap are heat treated and hardened.
- 12 The hardened Level Steps are ground to ± .0005 inch accuracy.
- 13 The Clamp unit is complete as shown. No additional parts needed.

Removable Speed Clamp Assembly

Speed Clamp Assembly
Removable Type

SECURE, SPEEDY, EFFICIENT and PRACTICAL CLAMPING!

REMOVABLE CLAMP ASSEMBLIES



TO USE the ASSEMBLY:

- ❶ Press the hardened steel insert into the fixture plate.
- ❷ Place the bayonet T-Bolt thru the bushing and turn the knob one quarter turn to clamp lock the assembly.
- ❸ Tighten the speed handle or flange nut to secure work piece in place.

UNITED's REMOVABLE SPEED CLAMP ASSEMBLY features:

- ❶ A speed ball handle for faster more efficient and secure clamping adjustments.
- ❷ Our spherical washers or flange nuts compensate for differences in work piece.
- ❸ Quick release by the spring loaded clamp strap assembly.
- ❹ All parts are black oxide finish except the cadmium plated cast iron hand knob and speed handle.
- ❺ Add 'SFN' to Part No. for optional Spherical Flange Nut and Washer.

REPLACEMENT PARTS LIST

1	UDB-948800	4 INCH STRAP
2	UDB-948805	5-1/2 INCH STRAP
3	UDB-948810	7 INCH STRAP
4	UDB-942220	5/8-11 x 8 BOLT
5	UDB-926270	SPHERICAL WASHER
6	UDB-945375	SPEED HANDLE
7	UDB-925170	FLANGE NUT
8	UDB-925420	JAM NUT
9	UDB-949120	INSERT
10	UDB-945635	HAND KNOB
11	UDB-936025	SPRING
12	UDB-926650	WASHER

CLAMP ASSY PART NO.	A	B	C	D	E	F	G	*H	OPTIONAL FLANGE NUT
INCLUDES UDB-945375 6" SPEED HANDLE									
UDB-921050	3/4	1/2	4"	1.626	1-7/8	5/8	1"	5/8-11x8	UDB-925170
UDB-921052	3/4	1/2	5-1/2	1.626	1-7/8	5/8	1"	5/8-11x8	UDB-925170
UDB-921054	3/4	1/2	7"	1.626	1-7/8	5/8	1"	5/8-11x8	THREAD
INCLUDES UDB-945390 8" SPEED HANDLE									
UDB-921060	1"	2"	4"	1.876	2-1/4	13/16	1-1/8	3/4-10x10	UDB-925175
UDB-921064	1"	2"	7"	1.876	2-1/4	13/16	1-1/8	3/4-10x10	3/4-10 THD

* Other lengths available on quotation.

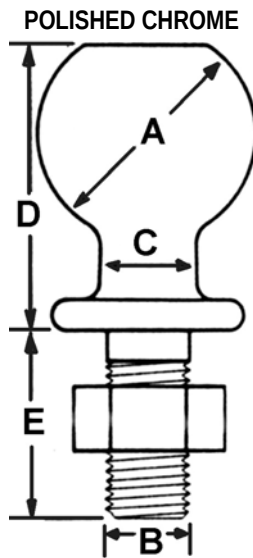
Hitch Balls & Adapter Tooling Ball Holders

Hitch Balls and Adapter Tooling Ball Holders

HITCH BALLS



Nut and Lock Washer included.



USE the STRONGEST!

One piece construction
Cold formed Hitch Ball

Accurate threads provide secure and safe fastening.

WARRANTY

UNITED HITCH BALLS have been certified by AAMVA in compliance with Government regulations. Specifications are certified to meet or surpass the Standards set forth in Vehicle Safety Regulations as shown in the chart below.

If part should prove defective in materials or workmanship (except for plating) within one year, it may be returned for replacement at no charge. *UNITED* limits responsibility to replacement of part found defective.

HITCH BALL PART NO.	RATING	A	B	C	D	E
UDB-183401	CLASS 1 2,000 LBS.	1-7/8	3/4	29/32	2-5/8	1-1/2
UDB-183402	CLASS 2 3,500 LBS.	2	3/4	31/32	2-3/4	2
UDB-183403	CLASS 3 5,000 LBS.	2	1	1-1/8	2-3/4	2
UDB-183404	CLASS 4 6,000 LBS.	2-5/16	1	1-1/4	3-1/8	2
UDB-183405	CLASS 5 10,000 LBS.	2-5/16	1-1/4	1-1/4	3-1/8	2-1/4

All dimensions shown are nominal.

Finished and Stocked in Polished Chrome.

Available in Zinc plated or Oil Finish as Specials.

ADAPTER TOOLING BALL HOLDERS



UNITED Adapter Tooling Ball Holders were designed for easy handling of tooling balls.

The Tooling Ball Holder is adjusted to the exact position required and then held securely in place without marring the shank of the tooling ball.