

# Repair Kits

# UniSert Kit Assortments

## UniSert Kit Assortments



Each assortment contains the insert tools you need. The convenient durable case permits super clear storage and organization.

### Threaded Inserts



Convenient UniSert Kits – the right Insert and the correct Installation Tool for your repairs.

| UNITED<br>KIT NO.                | INSERTS INCLUDED IN KIT |               |                    | TOOLS<br>INCLUDED |
|----------------------------------|-------------------------|---------------|--------------------|-------------------|
|                                  | QTY                     | ID<br>THD     | UNITED<br>PART NO. |                   |
| <b>UNF FINE KIT</b>              |                         |               |                    |                   |
| <b>UDB-1-US-F</b>                | 5                       | #10-32        | UDB-1032-US        | UDB-10-UST        |
|                                  | 10                      | 1/4-28        | UDB-1428-US        | UDB-14-UST        |
|                                  | 10                      | 5/16-24       | UDB-51624-US       | UDB-516-UST       |
|                                  | 10                      | 3/8-24        | UDB-3824-US        | UDB-38-UST        |
|                                  | 10                      | 1/2-20        | UDB-1220-US        | UDB-12-UST        |
|                                  | 10                      | 5/8-18        | UDB-5818-US        | UDB-58-UST        |
|                                  | 5                       | 3/4-16        | UDB-3416-US        | UDB-34-UST        |
| <b>UNC COARSE KIT</b>            |                         |               |                    |                   |
| <b>UDB-1-US-C</b>                | 5                       | #10-24        | UDB-1024-US        | UDB-10-UST        |
|                                  | 10                      | 1/4-20        | UDB-1420-US        | UDB-14-UST        |
|                                  | 10                      | 5/16-18       | UDB-51618-US       | UDB-516-UST       |
|                                  | 10                      | 3/8-16        | UDB-3816-US        | UDB-38-UST        |
|                                  | 10                      | 1/2-13        | UDB-1213-US        | UDB-12-UST        |
|                                  | 10                      | 5/8-11        | UDB-5811-US        | UDB-58-UST        |
|                                  | 5                       | 3/4-10        | UDB-3410-US        | UDB-34-UST        |
| <b>UNC COARSE STAINLESS KIT</b>  |                         |               |                    |                   |
| <b>UDB-1-SUS-C</b>               | 5                       | #10-24        | UDB-1024-SUS       | UDB-10-UST        |
|                                  | 10                      | 1/4-20        | UDB-1420-SUS       | UDB-14-UST        |
|                                  | 10                      | 5/16-18       | UDB-51618-SUS      | UDB-516-UST       |
|                                  | 10                      | 3/8-16        | UDB-3816-SUS       | UDB-38-UST        |
|                                  | 10                      | 1/2-13        | UDB-1213-SUS       | UDB-12-UST        |
|                                  | 10                      | 5/8-11        | UDB-5811-SUS       | UDB-58-UST        |
|                                  | 5                       | 3/4-10        | UDB-3410-SUS       | UDB-34-UST        |
| <b>METRIC COARSE KIT</b>         |                         |               |                    |                   |
| <b>UDB-M-1-USM-C</b>             | 5                       | M5            | UDB-M-58-USM       | UDB-M-58-USMT     |
|                                  | 10                      | M6            | UDB-M-61-USM       | UDB-M-61-USMT     |
|                                  | 10                      | M8            | UDB-M-8125-USM     | UDB-516-UST       |
|                                  | 10                      | M10           | UDB-M-1015-USM     | UDB-38-UST        |
|                                  | 10                      | M12           | UDB-M-12175-USM    | UDB-M-12175-USMT  |
|                                  | 10                      | M16           | UDB-M-162-USM      | UDB-58-UST        |
|                                  | 5                       | M20           | UDB-M-2025-USM     | UDB-M-2015-USMT   |
| <b>SOLID STAINLESS STEEL KIT</b> |                         |               |                    |                   |
| <b>UDB-1-USS-S</b>               | QTY                     | O.D. THD      | PART NO.           | TOOLS             |
|                                  | 5                       | 5/16-18       | UDB-51618-USS      | UDB-51618-USST    |
|                                  | 10                      | 3/8-16        | UDB-3816-USS       | UDB-3816-USST     |
|                                  | 10                      | 1/2-13        | UDB-1213-USS       | UDB-1213-USST     |
|                                  | 10                      | 9/16-12       | UDB-91612-USS      | UDB-91612-USST    |
|                                  | 10                      | 5/8-11        | UDB-5811-USS       | UDB-5811-USST     |
|                                  | 10                      | 7/8-14        | UDB-7814-USS       | UDB-7814-USST     |
| 5                                | 1-1/8-12                | UDB-11812-USS | UDB-11812-USST     |                   |

# UniSerts - Stainless Steel

STANDARD HEAVY-DUTY AND THINWALL VERSIONS



THINWALL



HEAVY DUTY



THINWALL



HEAVY DUTY



## STAINLESS INTERNAL THREAD LOCKING SERIES

Internal thread locking UniSerts are designed to securely lock a bolt when it is entered into the UniSert only a few turns.

## STANDARD STAINLESS SERIES

Standard stainless heavy duty and thinwall UniSerts meet MS and NAS specifications: MS SPEC. 51830/51832 and NAS SPEC. 1394/1395. Standard heavy duty on thinwalls are available. Thinwalls have smaller O.D. threads.

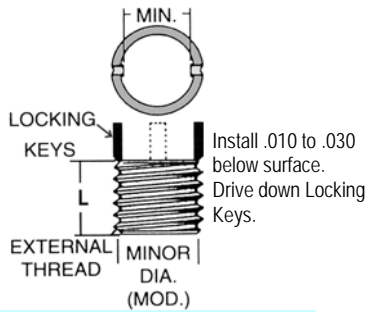
## STANDARD HEAVY-DUTY OR OPTIONAL THINWALL VERSIONS AVAILABLE.

MATERIAL — BODY: 303 STAINLESS STEEL KEYS: 302 STAINLESS STEEL

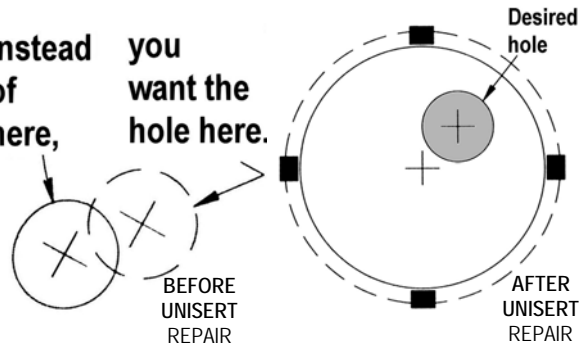
| INSERT DIMENSIONS   |                 |                 |                       |      | INSTALLATION DATA |             |              |                    |                            | REMOVAL    |             | SPECS        |            |
|---|-----------------|-----------------|-----------------------|------|-------------------|-------------|--------------|--------------------|----------------------------|------------|-------------|--------------|------------|
| UNITED PART NO.   | INTERNAL THREAD | EXTERNAL THREAD | SHEAR ENGAG (SQ. IN.) | LEN  | REQ'D TAP DRILL   | C'SINK DIA. | MIN THRD LEN | STANDARD TAP UN-2B | INSTALLATION TOOL PART NO. | DRILL SIZE | DRILL DEPTH | MS SPEC      | NAS SPEC   |
| <b>STANDARD — HEAVY DUTY (USA) — STAINLESS</b>                |                 |                 |                       |      |                   |             |              |                    |                            |            |             |              |            |
| UDB-1024-SUS  | #10-24          |                 |                       |      |                   |             |              |                    |                            |            |             | MS51831-101  |            |
| UDB-1032-SUS  | #10-32          | 3/8-16          | .1901                 | .31  | .332              | .385        | .37          | 3/8-16             | UDB-10-UST                 | 9/32       | 1/8         | MS51831-201  | NAS1395C3  |
| UDB-1420-SUS  | 1/4-20          |                 |                       |      |                   |             |              |                    |                            |            |             | MS51831-102  |            |
| UDB-1428-SUS  | 1/4-28          | 7/16-14         | .2842                 | .37  | .397              | .447        | .43          | 7/16-14            | UDB-14-UST                 | 11/32      | 3/16        | MS51831-202  | NAS1395C4  |
| UDB-51618-SUS   | 5/16-18         |                 |                       |      |                   |             |              |                    |                            |            |             | MS51831-103  |            |
| UDB-51624-SUS   | 5/16-24         | 1/2-13          | .3588                 | .43  | .453              | .510        | .50          | 1/2-13             | UDB-516-UST                | 13/32      | 3/16        | MS51831-203  | NAS1395C5  |
| UDB-3816-SUS  | 3/8-16          |                 |                       |      |                   |             |              |                    |                            |            |             | MS51831-104  |            |
| UDB-3824-SUS  | 3/8-24          | 9/16-12         | .4975                 | .50  | .516              | .572        | .56          | 9/16-12            | UDB-38-UST                 | 15/32      | 3/16        | MS51831-204  | NAS1395C6  |
| UDB-1213-SUS  | 1/2-13          |                 |                       |      |                   |             |              |                    |                            |            |             |              |            |
| UDB-1220-SUS  | 1/2-20          | 3/4-16          | 1.0573                | .62  | .703              | .750        | .69          | 3/4-16             | UDB-12-UST                 | 21/32      | 3/16        |              |            |
| UDB-5811-SUS  | 5/8-11          | 7/8-14          | 1.4866                | .87  | .828              | .885        | 1.00         | 7/8-14             | UDB-58-UST                 | 25/32      | 3/16        | MS51831-108  |            |
| UDB-3410-SUS  | 3/4-10          | 1-1/8-12        | 2.4901                | 1.12 | 1.062             | 1.145       | 1.31         | 1-1/8-12           | UDB-34-UST                 | 31/32      | 5/16        | MS51831-109  |            |
| <b>STANDARD — THINWALL (USA) — STAINLESS</b>                  |                 |                 |                       |      |                   |             |              |                    |                            |            |             |              |            |
| UDB-1024-TSUS   | #10-24          |                 |                       |      |                   |             |              |                    |                            |            |             | MS51830-105  |            |
| UDB-1032-TSUS   | #10-32          | 5/16-18         | .1517                 | .31  | .272              | .323        | .37          | 5/16-18            | UDBM-58-USMT               | 7/32       | 5/32        | MS51830-201  | NAS1394C3  |
| UDB-1420-TSUS   | 1/4-20          |                 |                       |      |                   |             |              |                    |                            |            |             | MS51830-106  |            |
| UDB-1428-TSUS   | 1/4-28          | 3/8-16          | .2371                 | .37  | .332              | .385        | .43          | 3/8-16             | UDB-10-UST                 | 9/32       | 3/16        | MS51830-202  | NAS1394C4  |
| UDB-51618-TSUS  | 5/16-18         | 7/16-14         | .3049                 | .43  | .397              | .447        | .50          | 7/16-14            | UDB-14-UST                 | 11/32      | 3/16        | MS51830-107  |            |
| UDB-3816-TSUS   | 3/8-16          | 1/2-13          | .4299                 | .50  | .453              | .510        | .56          | 1/2-13             | UDB-516-UST                | 13/32      | 3/16        | MS51830-108  |            |
| UDB-1213-TSUS   | 1/2-13          | 5/8-11          | .7175                 | .62  | .578              | .635        | .68          | 5/8-11             | UDB-716-UST                | 17/32      | 3/16        | MS51830-110  |            |
| <b>STAINLESS — INTERNAL THREAD LOCKING (USA) — HEAVY DUTY</b> |                 |                 |                       |      |                   |             |              |                    |                            |            |             |              |            |
| UDB-1420-SUSL   | 1/4-20          | 7/16-14         | .1970                 | .37  | .397              | .447        | .43          | 7/16-14            | UDB-14-UST                 | 11/32      | 3/16        | MS51831-102L |            |
| UDB-51618-SUSL  | 5/16-18         | 1/2-13          | .2608                 | .43  | .453              | .510        | .50          | 1/2-13             | UDB-516-UST                | 13/32      | 3/16        | MS51831-103L |            |
| UDB-3816-SUSL   | 3/8-16          | 9/16-12         | .3843                 | .50  | .516              | .572        | .56          | 9/16-12            | UDB-38-UST                 | 15/32      | 3/16        | MS51831-104L |            |
| UDB-1213-SUSL   | 1/2-13          | 11/16-11NS      | .7368                 | .68  | .641              | .700        | .75          | 11/16-             | UDB-111611-USST            | 19/32      | 3/16        | MS51831-106L |            |
| UDB-5811-SUSL   | 5/8-11          | 7/8-14          | 1.2415                | .87  | .828              | .885        | 1.00         | 7/8-14             | UDB-58-UST                 | 25/32      | 3/16        | MS51831-108L |            |
| UDB-3410-SUSL   | 3/4-10          | 1-1/8-12        | 2.4478                | 1.25 | 1.062             | 1.145       | 1.31         | 1-1/2-12           | UDB-34-UST                 | 31/32      | 5/16        | MS51831-109L |            |
| <b>STAINLESS — INTERNAL THREAD LOCKING (USA) — THINWALL</b>   |                 |                 |                       |      |                   |             |              |                    |                            |            |             |              |            |
| UDB-1032-TSUSL  | #10-32          | 5/16-18         | .0945                 | .31  | .272              | .323        | .37          | 5/16-18            | UDBM-58-USMT               | 7/32       | 5/32        | MS51830-201L | NAS1394C3L |
| UDB-1420-TSUSL  | 1/4-20          | 3/8-16          | .1726                 | .37  | .332              | .385        | .43          | 3/8-16             | UDB-10-UST                 | 9/32       | 3/16        | MS51830-106L |            |
| UDB-51618-TSUSL   | 5/16-18         | 7/16-14         | .2321                 | .43  | .397              | .447        | .50          | 7/16-14            | UDB-14-UST                 | 11/32      | 3/16        | MS51830-107L |            |
| UDB-3816-TSUSL  | 3/8-16          | 1/2-13          | .3366                 | .50  | .453              | .510        | .56          | 1/2-13             | UDB-516-UST                | 13/32      | 3/16        | MS51830-108L |            |
| UDB-1213-TSUSL  | 1/2-13          | 5/8-11          | .5906                 | .62  | .578              | .635        | .68          | 5/8-11             | UDB-716-UST                | 17/32      | 3/16        | MS51830-110L |            |

# UniSerts Varieties

# UniSerts—Stainless Steel, Self-Tapping and Cast



Instead of here, you want the hole here.



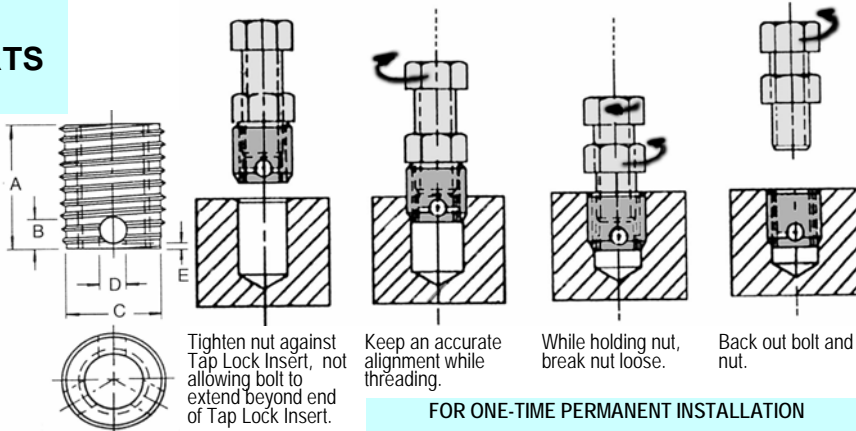
REMOVAL TOOL SEE BELOW

STAINLESS FOR RELOCATING DRILLED OR TAPPED HOLES. UNISERT KEYS PREVENT THE UNISERT FROM ROTATING.

UNISERT BODY: 303 STAINLESS STEEL. UNISERT KEYS: 302 STAINLESS STEEL

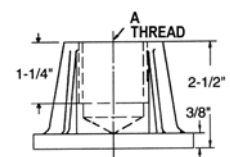
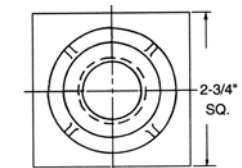
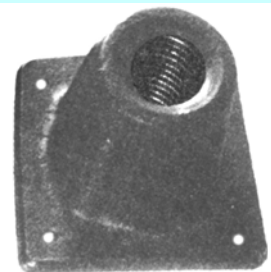
| STAINLESS STEEL<br>UNITED PART NO. | INSERT DIMENSIONS |                           |      |         | INSTALLATION DATA |             |               |               |                         | REMOVAL DATA |             |
|------------------------------------|-------------------|---------------------------|------|---------|-------------------|-------------|---------------|---------------|-------------------------|--------------|-------------|
|                                    | EXTERNAL THREAD   | (SQ. IN) SHEAR ENGAGEMENT | L    | K (MIN) | REQ'D TAP DRILL   | C' SINK DIA | STD TAP UN-2B | MIN THRD DPTH | INSTALL'N TOOL PART NO. | DRILL SIZE   | DRILL DEPTH |
| UDB-51618-USS                      | 5/16-18           | .1517                     | .31  | .216    | .272              | .323        | 5/16-18       | .37           | UDB-51618-UST           | 7/32         | 1/8         |
| UDB-3816-USS                       | 3/8-16            | .1901                     | .31  | .285    | .332              | .385        | 3/8-16        | .37           | UDB-3816-UST            | 9/32         | 1/8         |
| UDB-71614-USS                      | 7/16-14           | .2842                     | .37  | .341    | .397              | .447        | 7/16-14       | .43           | UDB-71614-UST           | 11/32        | 3/16        |
| UDB-1213-USS                       | 1/2-13            | .3588                     | .43  | .403    | .453              | .510        | 1/2-13        | .50           | UDB-1213-UST            | 13/32        | 3/16        |
| UDB-91612-USS                      | 9/16-12           | .4975                     | .50  | .465    | .516              | .572        | 9/16-12       | .56           | UDB-91612-UST           | 15/32        | 3/16        |
| UDB-5811-USS                       | 5/8-11            | .7172                     | .62  | .528    | .578              | .635        | 5/8-11        | .68           | UDB-5811-UST            | 17/32        | 3/16        |
| UDB-111611-USS                     | 11/16-11-NS       | .8884                     | .68  | .590    | .641              | .700        | 11/16-11-NS   | .75           | UDB-111611-UST          | 19/32        | 3/16        |
| UDB-131616-USS                     | 13/16-16          | 1.2493                    | .81  | .716    | .766              | .822        | 13/16-16      | .94           | UDB-131616-UST          | 23/32        | 3/16        |
| UDB-7814-USS                       | 7/8-14            | 1.4866                    | .87  | .778    | .828              | .885        | 7/8-14        | 1.00          | UDB-7814-UST            | 25/32        | 3/16        |
| UDB-11812-USS                      | 1-1/8-12          | 2.4901                    | 1.12 | .970    | 1.062             | 1.145       | 1-1/8-12      | 1.31          | UDB-11812-UST           | 31/32        | 5/16        |
| UDB-11412-USS                      | 1-1/4-12          | 3.1370                    | 1.25 | 1.095   | 1.187             | 1.270       | 1-1/4-12      | 1.41          | UDB-11412-UST           | 1-3/32       | 5/16        |
| UDB-13812-USS                      | 1-3/8-12          | 3.8381                    | 1.37 | 1.220   | 1.312             | 1.395       | 1-3/8-12      | 1.56          | UDB-13812-UST           | 1-7/32       | 5/16        |

## UNITED TAP LOCK INSERTS



FOR ONE-TIME PERMANENT INSTALLATION

## CAST UNI-SERTS FOR DROP-HAMMER-DIE STUDS



| UNITED PART NO. | A       |
|-----------------|---------|
| UDB-14-K1       | 7/8 - 9 |
| UDB-16-K1       | 1 - 8   |

## FOR ALUMINUM AND MAGNESIUM

### U.S.A.

| UNITED PART NO. | INTERNAL THREAD | EXTERNAL THREAD | A     | B     | C PILOT DIA | D DIA | E    | HOLE SIZE        |                 |
|-----------------|-----------------|-----------------|-------|-------|-------------|-------|------|------------------|-----------------|
|                 |                 |                 |       |       |             |       |      | ALUM & MAG PLATE | CAST ALUM & MAG |
| UDB-4-LSTI      | 1/4-20          | 3/8-20          | .484  | .103  | .332        | 1/8   | .031 | .356-.349        | .349-.343       |
| UDB-5-LSTI      | 5/16-18         | 15/32-18        | .562  | .117  | .420        | 9/64  | .035 | .447-.440        | .440-.433       |
| UDB-6-LSTI      | 3/8-16          | 9/16-16         | .687  | .129  | .510        | 5/32  | .038 | .538-.530        | .530-.521       |
| UDB-8-LSTI      | 1/2-13          | 47/64-13        | .906  | .172  | .668        | 7/32  | .045 | .704-.694        | .694-.684       |
| UDB-10-LSTI     | 5/8-11          | 29/32-11        | .937  | .198  | .827        | 1/4   | .052 | .871-.859        | .859-.847       |
| UDB-12-LSTI     | 3/4-10          | 1-5/64-10       | 1.375 | 1.375 | .993        | 9/32  | .057 | 1.028-1.016      | 1.016-1.004     |

### METRIC

|              |     |          |      |      |      |      |      |           |           |
|--------------|-----|----------|------|------|------|------|------|-----------|-----------|
| UDB-M-6-STI  | M6  | 3/8-20   | .484 | .103 | .332 | 1/8  | .031 | .356-.349 | .349-.343 |
| UDB-M-8-STI  | M8  | 15/32-18 | .562 | .117 | .420 | 9/64 | .035 | .447-.440 | .440-.433 |
| UDB-M-10-STI | M10 | 9/16-16  | .687 | .129 | .510 | 5/32 | .038 | .538-.530 | .530-.521 |
| UDB-M-12-STI | M12 | 47/64-13 | .906 | .172 | .668 | 7/32 | .045 | .704-.694 | .694-.684 |
| UDB-M-16-STI | M16 | 29/32-11 | .937 | .198 | .827 | 1/4  | .052 | .871-.859 | .859-.847 |

# Hex & Wing Nut Fasteners



**FREE WHEELING, POWER OR MANUALLY OPERATED TEMPORARY TYPES**

**HEX NUT FASTENERS** are recommended for high production applications that require a consistent clamping force and are pneumatically driven with UDB-QNR 300 Power Nut Runner.

| UNITED PART NO. | CROSS REF   | COLOR CODE | GRIP   | DIA.  | DRILL SIZE |
|-----------------|-------------|------------|--------|-------|------------|
| UDB-QHN-3/32    | HNX-SF-3/32 | ZINC       | 0-1/2" | 3/32" | #40        |
| UDB-QHN-1/8     | HNX-SF-1/8  | COPPER     | 0-1/2" | 1/8"  | #30        |
| UDB-QHN-5/32    | HNX-SF-5/32 | BLACK      | 0-1/2" | 5/32" | #21        |
| UDB-QHN-3/16    | HNX-SF-3/16 | BRASS      | 0-1/2" | 3/16" | #10        |

## UDB-QHN SERIES



Power Hex Nut Style - Standard Grip

|               |           |        |      |       |     |
|---------------|-----------|--------|------|-------|-----|
| UDB-QHNL-3/32 | HNXL-3/32 | ZINC   | 0-1" | 3/32" | #40 |
| UDB-QHNL-1/8  | HNXL-1/8  | COPPER | 0-1" | 1/8"  | #30 |
| UDB-QHNL-5/32 | HNXL-5/32 | BLACK  | 0-1" | 5/32" | #21 |
| UDB-QHNL-3/16 | HNXL-3/16 | BRASS  | 0-1" | 3/16" | #10 |

## UDB-QHNL SERIES



Power Hex Nut Style - Long Grip

**WING NUT FASTENERS** are recommended for low production applications where high clamping force with ranges from zero to 300 lbs. is required.

|              |          |        |        |       |     |
|--------------|----------|--------|--------|-------|-----|
| UDB-QWN-3/32 | WNX-3/32 | ZINC   | 0-1/2" | 3/32" | #40 |
| UDB-QWN-1/8  | WNX-1/8  | COPPER | 0-1/2" | 1/8"  | #30 |
| UDB-QWN-5/32 | WNX-5/32 | BLACK  | 0-1/2" | 5/32" | #21 |
| UDB-QWN-3/16 | WNX-3/16 | BRASS  | 0-1/2" | 3/16" | #10 |

## UDB-QWN SERIES



Manual Wing Nut Style - Standard Grip

|               |           |        |      |       |     |
|---------------|-----------|--------|------|-------|-----|
| UDB-QWNL-3/32 | WNXL-3/32 | ZINC   | 0-1" | 3/32" | #40 |
| UDB-QWNL-1/8  | WNXL-1/8  | COPPER | 0-1" | 1/8"  | #30 |
| UDB-QWNL-5/32 | WNXL-5/32 | BLACK  | 0-1" | 5/32" | #21 |
| UDB-QWNL-3/16 | WNXL-3/16 | BRASS  | 0-1" | 3/16" | #10 |

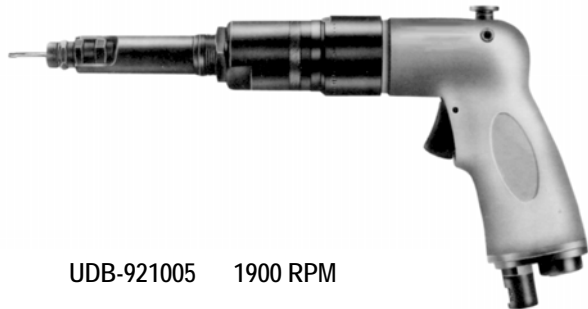
## UDB-QWNL SERIES



Manual Wing Nut Style - Long Grip

## PNEUMATIC HEX NUT INSTALLATION TOOL

INTERNAL HEX CAPACITY; 9/16-6 pt EXTERNAL HEX CAPACITY. LENGTH: 9 1/8; WT. 2 LBS. 9 OZ. SIMPLE & RUGGED. EASY ACCESS ABILITY. REVERSIBLE. For all brands and styles of hex nut fasteners. Reversible tool with pre-set torque control 1/2"-12 pt.



UDB-921005 1900 RPM

## PNEUMATIC INSTALLATION TOOL

1-7/16 OD X 5-1/8 OAL 360 FULL SWIVEL MOUNT STRAIGHT LEVER ACTUATES THROTTLE CHUCK. Ergonomically designed high speed insertion and removal tool used for all styles of "button" plunger type "Cleko's" side grip and tension clamps like those shown on page F12.



UDB-921002

## Plier-Actuated Fasteners

# Temporary Fasteners

## PRECISE HOLDING

UDB-QC series fasteners of standard button plunger type Cleko are spring-loaded. Durably made of strong steel-plated bodies, *UNITED*'s fasteners are plier-operated for precise holding of sheets during the process before task completion.

### UDB-QC SERIES



Quick Lock Regular

| UNITED PART NO. | CROSS REF | COLOR CODE | GRIP   | DIA.  | DRILL SIZE |
|-----------------|-----------|------------|--------|-------|------------|
| UDB-QC-3/32     | M-3/32    | ZINC       | 0-1/4" | 3/32" | #40        |
| UDB-QC-1/8      | M-1/8     | COPPER     | 0-1/4" | 1/8"  | #30        |
| UDB-QC-5/32     | M-5/32    | BLACK      | 0-1/4" | 5/32" | #21        |
| UDB-QC-3/16     | M-3/16    | BRASS      | 0-1/4" | 3/16" | #10        |

### UDB-QM SERIES



Quick Lock Regular

UDB-QM series fasteners, of miniature style, are designed for confined areas and normal clamping force.

|             |         |        |        |       |     |
|-------------|---------|--------|--------|-------|-----|
| UDB-QM-3/32 | MM-3/32 | ZINC   | 0-1/4" | 3/32" | #40 |
| UDB-QM-1/8  | MM-1/8  | COPPER | 0-1/4" | 1/8"  | #30 |
| UDB-QM-5/32 | MM-5/32 | BLACK  | 0-1/4" | 5/32" | #21 |
| UDB-QM-3/16 | MM-3/16 | BRASS  | 0-1/4" | 3/16" | #10 |

### UDB-QHD SERIES



Regular Q-type with extended grip

UDB-QHD series fasteners have an extended grip range for heavier applications.

|              |          |        |        |       |     |
|--------------|----------|--------|--------|-------|-----|
| UDB-QHD-3/32 | MHD-3/32 | ZINC   | 0-1/2" | 3/32" | #40 |
| UDB-QHD-1/8  | MHD-1/8  | COPPER | 0-1/2" | 1/8"  | #30 |
| UDB-QHD-5/32 | MHD-5/32 | BLACK  | 0-1/2" | 5/32" | #21 |
| UDB-QHD-3/16 | MHD-3/16 | BRASS  | 0-1/2" | 3/16" | #10 |

### UDB-QCL SERIES



Standard plunger type

UDB-QCL series fasteners with an extended grip range are the standard plunger type Cleko.

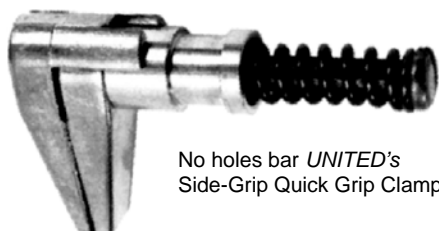
|              |         |        |           |       |     |
|--------------|---------|--------|-----------|-------|-----|
| UDB-QCL-3/32 | ML-3/32 | ZINC   | 1/4"-1/2" | 3/32" | #40 |
| UDB-QCL-1/8  | ML-1/8  | COPPER | 1/4"-1/2" | 1/8"  | #30 |
| UDB-QCL-5/32 | ML-5/32 | BLACK  | 1/4"-1/2" | 5/32" | #21 |
| UDB-QCL-3/16 | ML-3/16 | BRASS  | 1/4"-1/2" | 3/16" | #10 |

### MODEL UDB-QC 200 PLIER-OPERATED



UDB-QC-200 is for installing all Quick Lock Plier-operated Fasteners. Nickel-plated forged steel resists corrosion and extends their life. For use with all UDB-QC, UDB-QM, UDB-QHD and UDB-QCL fasteners.

### UDB-QSG SERIES SIDE-GRIP CLAMPS



No holes bar *UNITED*'s Side-Grip Quick Grip Clamp.

### UDB-QUICKLOCK SIDE GRIP CLAMPS MODEL UDB-QSG

| UNITED PART NO.   | CLAMPING CAPACITY (GAP) | EFFECTIVE BODY DEPTH | BODY LENGTH |
|-------------------|-------------------------|----------------------|-------------|
| UDB-QSG 1/2 x 1/2 | 0-1/2"                  | 1/2"                 | 2-3/16"     |
| UDB-QSG 3/4 x 1/2 | 0-3/4"                  | 1/2"                 | 2-7/16"     |
| UDB-QSG 1/2 x 1   | 0-1/2"                  | 1"                   | 2-3/16"     |
| UDB-QSG 3/4 x 1   | 0-3/4"                  | 1"                   | 2-7/16"     |

SIDE GRIP CLAMPS HOLD WORKPIECES AT THE EDGE OF A WORK AREA DURING BONDING OR SIMILAR TASKS.

# Fasten Precisely

MANUFACTURED TO ANSI B18.3 1998 SPECS  
MIL-S-21472A and SSPBSS-100 SPECS

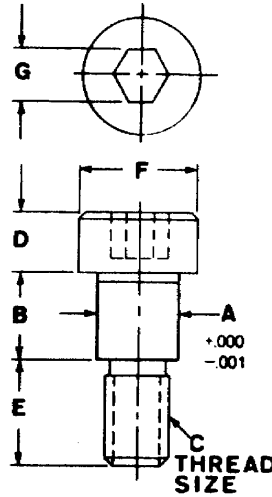
Manufactured to tool and die standards, *UNITED* Socket Shoulder Screws replace costly special parts, shafts, pivots, clevis pins, guides, trunnion mountings, linkages, etc.

Tough, reliable heat treated. Closer tolerances are held than on standard stripper bolts. The "B" dimension is always a plus, eliminating binding on movable plates. The "A" dimension is held within +.000 -.001 for bearing unless otherwise specified.

*UNITED* Hex Wrenches are shown on catalog page F18.

**STANDARD PACKAGE QUANTITY IS 25.**

| PART NO.   | A O.D.      | B LEN                                      | C THD  | D    | E    | F    | G    |
|------------|-------------|--|--|------|------|------|------|
| UDB-931000 | 1/4         | *1/4                                       | 10-24  | 3/16 | 3/8  | 3/8  | 1/8  |
| UDB-931002 |             | *5/16                                      |  |      |      |      |      |
| UDB-931005 |             | *3/8                                       |  |      |      |      |      |
| UDB-931010 |             | *1/2                                       |  |      |      |      |      |
| UDB-931015 |             | *5/8                                       |  |      |      |      |      |
| UDB-931020 |             | *3/4                                       |  |      |      |      |      |
| UDB-931022 |             | *7/8                                       |  |      |      |      |      |
| UDB-931025 |             | *1   |  |      |      |      |      |
| UDB-931026 | .248/.246   | 1-1/4                                      | ← THESE SIZES CAN BE MFG'D FROM .250/.249.   |      |      |      |      |
| UDB-931027 |             | 1-1/2                                      |  |      |      |      |      |
| UDB-931030 | 5/16        | *1/4                                       | 1/4-20                                       | 7/32 | 7/16 | 7/16 | 5/32 |
| UDB-931035 |             | *5/16                                      |  |      |      |      |      |
| UDB-931040 |             | *3/8                                       |  |      |      |      |      |
| UDB-931045 |             | *1/2                                       |  |      |      |      |      |
| UDB-931050 |             | *5/8                                       |  |      |      |      |      |
| UDB-931055 |             | *3/4                                       |  |      |      |      |      |
| UDB-931060 | *1          |  |  |      |      |      |      |
| UDB-931061 | 5/16        | 1-1/4                                      | ← THESE SIZES CAN BE MFG'D FROM .3125/.3115. |      |      |      |      |
| UDB-931062 |             | 1-1/2                                      |  |      |      |      |      |
| UDB-931063 | .3105/.3085 | 1-3/4                                      |  |      |      |      |      |
| UDB-931064 |             | 2  |  |      |      |      |      |
| UDB-931065 | 3/8         | *1/4                                       | 5/16-18                                      | 1/4  | 1/2  | 9/16 | 3/16 |
| UDB-931067 |             | *5/16                                      |  |      |      |      |      |
| UDB-931070 |             | *3/8                                       |  |      |      |      |      |
| UDB-931075 |             | *1/2                                       |  |      |      |      |      |
| UDB-931080 |             | *5/8                                       |  |      |      |      |      |
| UDB-931085 |             | *3/4                                       |  |      |      |      |      |
| UDB-931090 |             | *1   |  |      |      |      |      |
| UDB-931091 |             | 1-1/4                                      |  |      |      |      |      |
| UDB-931092 | 1-1/2       |  |  |      |      |      |      |
| UDB-931093 | 1-3/4       |  |  |      |      |      |      |
| UDB-931094 | 3/8         | 2  |  |      |      |      |      |
| UDB-931095 |             | 2-1/4                                      |  |      |      |      |      |
| UDB-931096 |             | 2-1/2                                      |  |      |      |      |      |
| UDB-931097 |             | 2-3/4                                      |  |      |      |      |      |
| UDB-931098 |             | 3  |  |      |      |      |      |
| UDB-931099 |             | 3-1/4                                      |  |      |      |      |      |
| UDB-931100 |             | 3-1/2                                      |  |      |      |      |      |
| UDB-931101 |             | 3-3/4                                      |  |      |      |      |      |
| UDB-931102 | 4           |  |  |      |      |      |      |
| UDB-931111 | 1/2         | *3/8                                       | 3/8-16                                       | 5/16 | 5/8  | 3/4  | 1/4  |
| UDB-931112 |             | *1/2                                       |  |      |      |      |      |
| UDB-931113 |             | *5/8                                       |  |      |      |      |      |
| UDB-931114 |             | *3/4                                       |  |      |      |      |      |
| UDB-931115 |             | *7/8                                       |  |      |      |      |      |
| UDB-931116 |             | *1   |  |      |      |      |      |
| UDB-931117 | 1-1/4       | ← THESE SIZES CAN BE MFG'D FROM .500/.499. |  |      |      |      |      |
| UDB-931118 | 1-1/2       |  |  |      |      |      |      |
| UDB-931119 | 1-3/4       |  |  |      |      |      |      |
| UDB-931120 | 1/2         | 2  |  |      |      |      |      |
| UDB-931121 |             | 2-1/4                                      |  |      |      |      |      |
| UDB-931122 |             | 2-1/2                                      |  |      |      |      |      |
| UDB-931123 |             | 2-3/4                                      |  |      |      |      |      |
| UDB-931124 |             | 3  |  |      |      |      |      |
| UDB-931125 |             | 3-1/4                                      |  |      |      |      |      |
| UDB-931126 |             | 3-1/2                                      |  |      |      |      |      |
| UDB-931127 |             | 3-3/4                                      |  |      |      |      |      |
| UDB-931128 |             | 4  |  |      |      |      |      |
| UDB-931129 |             | 4-1/4                                      |  |      |      |      |      |
| UDB-931130 |             | 4-1/2                                      |  |      |      |      |      |
| UDB-931131 |             | 4-3/4                                      |  |      |      |      |      |
| UDB-931132 | 5           |  |  |      |      |      |      |



1998 SPECIFICATIONS

## Socket Shoulder Precision Screws



**PACKAGED 25 PER BOX**  
**UNIFIED NATIONAL COARSE 3A FIT**  
**MICRO-INCH FINISH 32 OR BETTER**

| PART NO.   | A O.D. | B LEN  | C THD                                      | D   | E   | F   | G    |
|------------|--------|--------|--|-----|-----|-----|------|
| UDB-931141 | 5/8    | *1/2   | 1/2-13                                     | 3/8 | 3/4 | 7/8 | 5/16 |
| UDB-931142 |        | *5/8   |  |     |     |     |      |
| UDB-931143 |        | *3/4   |  |     |     |     |      |
| UDB-931144 |        | *7/8   |  |     |     |     |      |
| UDB-931145 |        | *1     |  |     |     |     |      |
| UDB-931146 | 5/8    | 1-1/4  | ← THESE SIZES CAN BE MFG'D FROM .625/.624. |     |     |     |      |
| UDB-931147 |        | 1-1/2  |  |     |     |     |      |
| UDB-931148 |        | 1-3/4  |  |     |     |     |      |
| UDB-931149 |        | 2      |  |     |     |     |      |
| UDB-931150 |        | 2-1/4  |  |     |     |     |      |
| UDB-931151 |        | 2-1/2  |  |     |     |     |      |
| UDB-931152 |        | 2-3/4  |  |     |     |     |      |
| UDB-931153 |        | 3      |  |     |     |     |      |
| UDB-931154 |        | 3-1/4  |  |     |     |     |      |
| UDB-931155 |        | 3-1/2  |  |     |     |     |      |
| UDB-931156 |        | 3-3/4  |  |     |     |     |      |
| UDB-931157 |        | 4      |  |     |     |     |      |
| UDB-931158 |        | 4-1/4  |  |     |     |     |      |
| UDB-931159 |        | 4-1/2  |  |     |     |     |      |
| UDB-931160 |        | 4-3/4  |  |     |     |     |      |
| UDB-931161 | 5      |        |  |     |     |     |      |
| UDB-931163 | 5-1/2  |        |  |     |     |     |      |
| UDB-931165 | 6      |        |  |     |     |     |      |
| UDB-931171 | 3/4    | *1/2   | 5/8-11                                     | 1/2 | 7/8 | 1   | 3/8  |
| UDB-931172 |        | *5/8   |  |     |     |     |      |
| UDB-931173 |        | *3/4   |  |     |     |     |      |
| UDB-931174 |        | *7/8   |  |     |     |     |      |
| UDB-931175 |        | *1     |  |     |     |     |      |
| UDB-931170 |        | *1-1/4 |  |     |     |     |      |
| UDB-931176 | 3/4    | 1-1/2  |  |     |     |     |      |
| UDB-931177 |        | 1-3/4  |  |     |     |     |      |
| UDB-931178 |        | 2      |  |     |     |     |      |
| UDB-931179 |        | 2-1/4  |  |     |     |     |      |
| UDB-931180 |        | 2-1/2  |  |     |     |     |      |
| UDB-931181 |        | 2-3/4  |  |     |     |     |      |
| UDB-931182 |        | 3      |  |     |     |     |      |
| UDB-931183 |        | 3-1/4  |  |     |     |     |      |
| UDB-931184 |        | 3-1/2  |  |     |     |     |      |
| UDB-931185 |        | 3-3/4  |  |     |     |     |      |
| UDB-931186 |        | 4      |  |     |     |     |      |
| UDB-931187 |        | 4-1/4  |  |     |     |     |      |
| UDB-931188 |        | 4-1/2  |  |     |     |     |      |
| UDB-931189 |        | 4-3/4  |  |     |     |     |      |
| UDB-931190 |        | 5      |  |     |     |     |      |
| UDB-931192 |        | 5-1/2  |  |     |     |     |      |
| UDB-931194 |        | 6      |  |     |     |     |      |
| UDB-931198 |        | 7      |  |     |     |     |      |

NOTE: All items listed in column B marked with an asterisk (\*) have O.D.s held to +.000-.001. All sizes not marked with an asterisk have O.D.s held to commercial tolerances of +.000 -.002 -.004.

**ALL SIZES CAN BE SUPPLIED WITH ±.000 -.001 ON REQUEST.**

# Socket Set Screws

# Socket Set Screws

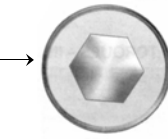
Heat Treated – Alloy Steel – Unified 3A Thread Fit – B18.3 – ASME/ANSI

## SOCKET SET SCREWS

Stress is distributed uniformly with *UNITED*'s Socket Set Screws to minimize reaming or cracking and to increase strength and tightening power.

UDB-SSS-C Series Coarse Thread  
UDB-SSS-F Series Fine Thread

RADIUSED SOCKET EDGES HAVE CORNERS ROUNDED TO RESIST CRACKING



LENGTH



HEAT TREATMENT CONTROLLED FOR MAXIMUM STRENGTH

BLACK OXIDE FINISH

FULL FORMED RADIUS THREAD FOR HIGHER TIGHTENING TORQUE

ROLLED THREAD MINIMIZES STRIPPING, SHEARING OR CRACKING



*UNITED* SOCKET SET SCREWS HAVE CLASS 3A THREADS FOR SMOOTH ASSEMBLING.  
CLASS 3A – RC-45-53 118° ANGLE

CUP POINT CAN BE USED AGAINST HARDENED SHAFTS, DIE CASTING, ZINC AND SOFT MATERIALS WHEN HIGH TORQUE TIGHTENING IS NOT PRACTICAL.

## UNC-COARSE THREAD SERIES = C

| THREAD SIZE:       | 4-40     | 5-40   | 6-32     | 8-32     | 10-24    | 1/4-20  | 5/16-18  | 3/8-16   | 7/16-14  | 1/2-13  | 5/8-11   | 3/4-10  |        |
|--------------------|----------|--|----------|----------|----------|---------|----------|----------|----------|---------|----------|---------|--------|
| HEX KEY SIZE:      | .050 HEX | 1/16 HEX                                     | 1/16 HEX | 5/64 HEX | 3/32 HEX | 1/8 HEX | 5/32 HEX | 3/16 HEX | 7/32 HEX | 1/4 HEX | 5/16 HEX | 3/8 HEX |        |
| THD O.D. PART NO.: | 4        | 5  | 6        | 8        | 10       | 16      | 20       | 24       | 28       | 32      | 40       | 48      |        |
| ACTUAL LEN         | NO. PART |  |          |          |          |         |          |          |          |         |          |         |        |
| 1/8                | 02       | 4-02   | 5-02     | 6-02     | 8-02     |         |          |          |          |         |          |         |        |
| 3/16               | 03       | 4-03   | 5-03     | 6-03     | 8-03     | 10-03   | 16-03    |          |          |         |          |         |        |
| 1/4                | 04       | 4-04   | 5-04     | 6-04     | 8-04     | 10-04   | 16-04    | 20-04    | 24-04    |         |          |         |        |
| 5/16               | 05       | 4-05   | 5-05     | 6-05     | 8-05     | 10-05   | 16-05    | 20-05    | 24-05    |         |          |         |        |
| 3/8                | 06       | 4-06   | 5-06     | 6-06     | 8-06     | 10-06   | 16-06    | 20-06    | 24-06    | 28-06   | 32-06    |         |        |
| 7/16               | 07       |  |          |          | 8-07     |         |          | 20-07    | 24-07    | 28-07   |          |         |        |
| 1/2                | 08       | 4-08   | 5-08     | 6-08     | 8-08     | 10-08   | 16-08    | 20-08    | 24-08    | 28-08   | 32-08    | 40-08   |        |
| 5/8                | 10       |  | 5-10     | 6-10     | 8-10     | 10-10   | 16-10    | 20-10    | 24-10    | 28-10   | 32-10    | 40-10☆  | 48-10☆ |
| 3/4                | 12       |  | 5-12     | 6-12     | 8-12     | 10-12   | 16-12    | 20-12    | 24-12    | 28-12   | 32-12    | 40-12☆  | 48-12☆ |
| 7/8                | 14       |  |          | 6-14     | 8-14     | 10-14   | 16-14    | 20-14    | 24-14    | 28-14   | 32-14☆   |         |        |
| 1"                 | 16       |  |          | 6-16     | 8-16     | 10-16   | 16-16    | 20-16    | 24-16    | 28-16   | 32-16☆   | 40-16☆  | 48-16☆ |
| 1-1/4              | 20       |  |          |          |          | 10-20   | 16-20    | 20-20    | 24-20    | 28-20☆  | 32-20☆   | 40-20⊕  | 48-20⊕ |
| 1-1/2              | 24       | <b>ORDERING EXAMPLE:</b>                     |          |          |          |         | 16-24    | 20-24    | 24-24    | 28-24☆  | 32-24☆   | 40-24⊕  | 48-24⊕ |
| 1-3/4              | 28       | <b>ADD SUFFIX 'C' FOR COARSE THREAD.</b>     |          |          |          |         | 16-28☆   | 20-28☆   | 24-28☆   |         | 32-28⊕   | 40-28⊕  | 48-28* |
| 2"                 | 32       | <b>UDB-SSS-C – 1/4-20x1 = UDB-SSS-16-16C</b> |          |          |          |         | 16-32☆   | 20-32☆   | 24-32☆   |         | 32-32⊕   | 40-32⊕  | 48-32* |
| 2-1/2              | 40       |  |          |          |          |         |          |          | 24-40☆   |         | 32-40⊕   | 40-40*  | 48-40* |
| 3"                 | 48       | OTHER SIZES AVAILABLE ON REQUEST.            |          |          |          |         |          |          |          |         | 32-48⊕   | 40-48*  | 48-48* |

SYMBOL FOR BOX QUANTITIES  
 ☆ = 50 PIECES  
 ⊕ = 25 PIECES  
 \* = 10 PIECES  
**ALL OTHERS ARE 100 PER BOX.**

## UNF-3A FINE THREAD SERIES = F

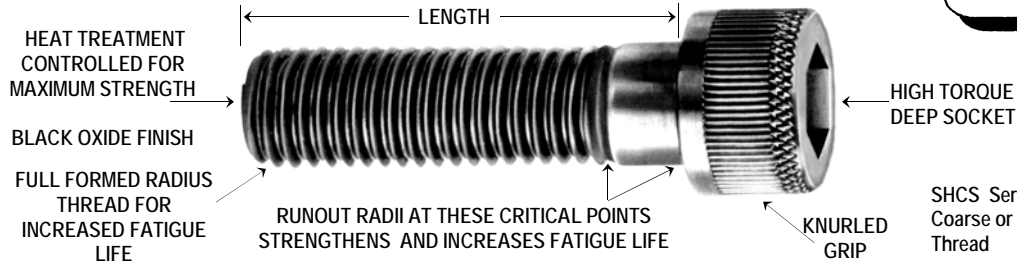
| THREAD SIZE:       | 4-48     | 5-44   | 6-40     | 8-36     | 10-32    | 1/4-28  | 5/16-24  | 3/8-24   | 7/16-20  | 1/2-20  | 5/8-18   |        |  |
|--------------------|----------|--|----------|----------|----------|---------|----------|----------|----------|---------|----------|--------|--|
| HEX KEY SIZE:      | .050 HEX | 1/16 HEX                                     | 1/16 HEX | 5/64 HEX | 3/32 HEX | 1/8 HEX | 5/32 HEX | 3/16 HEX | 7/32 HEX | 1/4 HEX | 5/16 HEX |        |  |
| THD O.D. PART NO.: | 4        | 5  | 6        | 8        | 10       | 16      | 20       | 24       | 28       | 32      | 40       |        |  |
| ACTUAL LEN         | NO. PART |  |          |          |          |         |          |          |          |         |          |        |  |
| 1/8                | 02       | 4-02   | 5-02     | 6-02     | 8-02     |         |          |          |          |         |          |        |  |
| 3/16               | 03       | 4-03   | 5-03     | 6-03     | 8-03     | 10-03   | 16-03    |          |          |         |          |        |  |
| 1/4                | 04       | 4-04   | 5-04     | 6-04     | 8-04     | 10-04   | 16-04    | 20-04    | 24-04    |         |          |        |  |
| 5/16               | 05       | 4-05   | 5-05     | 6-05     | 8-05     | 10-05   | 16-05    | 20-05    | 24-05    |         |          |        |  |
| 3/8                | 06       | 4-06   | 5-06     | 6-06     | 8-06     | 10-06   | 16-06    | 20-06    | 24-06    | 28-06   | 32-06    |        |  |
| 7/16               | 07       |  |          |          | 8-07     |         |          | 20-07    | 24-07    | 28-07   |          |        |  |
| 1/2                | 08       | 4-08   | 5-08     | 6-08     | 8-08     | 10-08   | 16-08    | 20-08    | 24-08    | 28-08   | 32-08    | 40-08  |  |
| 5/8                | 10       |  | 5-10     | 6-10     | 8-10     | 10-10   | 16-10    | 20-10    | 24-10    | 28-10   | 32-10    | 40-10☆ |  |
| 3/4                | 12       |  | 5-12     | 6-12     | 8-12     | 10-12   | 16-12    | 20-12    | 24-12    | 28-12   | 32-12    | 40-12☆ |  |
| 7/8                | 14       |  |          | 6-14     | 8-14     | 10-14   | 16-14    | 20-14    | 24-14    | 28-14   | 32-14☆   |        |  |
| 1"                 | 16       |  |          | 6-16     | 8-16     | 10-16   | 16-16    | 20-16    | 24-16    | 28-16   | 32-16☆   | 40-16☆ |  |
| 1-1/4              | 20       |  |          |          |          | 10-20   | 16-20    | 20-20    | 24-20    | 28-20☆  | 32-20☆   | 40-20⊕ |  |
| 1-1/2              | 24       |  |          |          |          |         | 16-24    | 20-24    | 24-24    | 28-24☆  | 32-24☆   | 40-24⊕ |  |
| 1-3/4              | 28       | <b>ORDERING EXAMPLE:</b>                     |          |          |          |         | 16-28☆   | 20-28☆   | 24-28☆   |         | 32-28⊕   | 40-28⊕ |  |
| 2"                 | 32       | <b>ADD SUFFIX 'F' FOR FINE THREAD.</b>       |          |          |          |         | 16-32☆   | 20-32☆   | 24-32☆   |         | 32-32⊕   | 40-32⊕ |  |
| 2-1/2              | 40       | <b>UDB-SSS-F – 1/4-20x1 = UDB-SSS-16-16F</b> |          |          |          |         |          |          | 24-40☆   |         | 32-40⊕   | 40-40* |  |
| 3"                 | 48       |  |          |          |          |         |          |          |          |         | 32-48⊕   | 40-48* |  |

*UNITED* Socket Set Screws have great endurance and torque power!

# Socket Head Cap Screws

Socket Head  
Cap Screws

Heat Treated – Alloy Steel – Unified 3A Thread Fit – 1960 Series – ASME/



## SOCKET HEAD CAP SCREWS

Stress is distributed uniformly throughout *UNITED*'s Socket Head Cap Screw to minimize failure and increase strength and life.

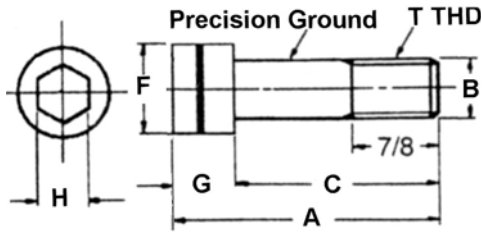
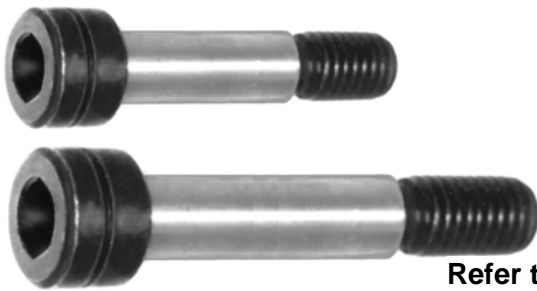
| UNC-COARSE THREAD 1960 SERIES = C  |          |          |          |          |          |          |         |          |         |         |         |         |
|--|----------|----------|----------|----------|----------|----------|---------|----------|---------|---------|---------|---------|
| THREAD SIZE:   | 4-40     | 5-40     | 6-32     | 8-32     | 10-24    | 1/4-20   | 5/16-18 | 3/8-16   | 7/16-14 | 1/2-13  | 5/8-11  | 3/4-10  |
| HEX KEY SIZE:  | 3/32 HEX | 3/32 HEX | 7/64 HEX | 9/64 HEX | 5/32 HEX | 3/16 HEX | 1/4 HEX | 5/16 HEX | 3/8 HEX | 3/8 HEX | 1/2 HEX | 5/8 HEX |
| THD O.D. PART NO.:   | 4        | 5        | 6        | 8        | 10       | 16       | 20      | 24       | 28      | 32      | 40      | 48      |
| ACTUAL LEN   | NO. PART |          |          |          |          |          |         |          |         |         |         |         |
| 1/4  | 04       | 4-04     | 5-04     | 6-04     | 8-04     | 10-04    | 16-04   |          |         |         |         |         |
| 5/16   | 05       | 4-05     |          |          |          |          |         |          |         |         |         |         |
| 3/8  | 06       | 4-06     | 5-06     | 6-06     | 8-06     | 10-06    | 16-06   | 20-06    |         |         |         |         |
| 1/2  | 08       | 4-08     | 5-08     | 6-08     | 8-08     | 10-08    | 16-08   | 20-08    | 24-08   |         |         |         |
| 5/8  | 10       | 4-10     | 5-10     | 6-10     | 8-10     | 10-10    | 16-10   | 20-10    | 24-10   |         |         |         |
| 3/4  | 12       | 4-12     | 5-12     | 6-12     | 8-12     | 10-12    | 16-12   | 20-12    | 24-12   | 28-12   | 32-12☆  |         |
| 7/8  | 14       | 4-14     |          | 6-14     | 8-14     | 10-14    | 16-14   | 20-14    | 24-14   | 28-14   | 32-14☆  |         |
| 1"   | 16       | 4-16     |          | 6-16     | 8-16     | 10-16    | 16-16   | 20-16    | 24-16   | 28-16   | 32-16☆  | 40-16☆  |
| 1-1/4  | 20       |          |          | 6-20     | 8-20     | 10-20    | 16-20   | 20-20    | 24-20   | 28-20   | 32-20☆  | 40-20☆  |
| 1-1/2  | 24       |          |          | 6-24     | 8-24     | 10-24    | 16-24   | 20-24    | 24-24   | 28-24   | 32-24☆  | 40-24☆  |
| 1-3/4  | 28       |          |          | 6-28     |          | 10-28    | 16-28   | 20-28    | 24-28☆  | 28-28   | 32-28☆  | 40-28☆  |
| 2"   | 32       |          |          | 6-32     | 8-32     | 10-32    | 16-32   | 20-32    | 24-32☆  | 28-32☆  | 32-32☆  | 40-32☆  |
| 2-1/4  | 36       |          |          |          |          |          | 16-36   | 20-36    | 24-36☆  | 28-36☆  | 32-36☆  | 40-36☆  |
| 2-1/2  | 40       |          |          |          | 8-40     | 10-40    | 16-40   | 20-40☆   | 24-40☆  | 28-40☆  | 32-40☆  | 40-40☆  |
| 2-3/4  | 44       |          |          |          |          |          | 16-44   | 20-44☆   | 24-44☆  | 28-44☆  | 32-44☆  | 40-44☆  |
| 3"   | 48       |          |          |          | 8-48     |          | 16-48   | 20-48☆   | 24-48☆  | 28-48☆  | 32-48☆  | 40-48☆  |
| 3-1/4  | 52       |          |          |          |          |          | 16-52   | 20-52☆   | 24-52☆  | 28-52☆  | 32-52☆  | 40-52☆  |
| 3-1/2  | 56       |          |          |          |          |          | 16-56   | 20-56☆   | 24-56☆  | 28-56☆  | 32-56☆  | 40-56☆  |
| 4"   | 64       |          |          |          |          |          | 16-64   |          | 24-64☆  | 28-64☆  | 32-64☆  | 40-64☆  |
| 4-1/2  | 72       |          |          |          |          |          |         |          | 24-72☆  |         | 32-72☆  | 40-72☆  |
| 5"   | 80       |          |          |          |          |          |         |          | 24-80☆  |         | 32-80☆  | 40-80☆  |
| 5-1/2  | 88       |          |          |          |          |          |         |          |         |         | 32-88☆  | 40-88☆  |
| 6"   | 96       |          |          |          |          |          |         |          |         |         | 32-96☆  | 40-96☆  |
| 6-1/2  | 104      |          |          |          |          |          |         |          |         |         | 32-104☆ | 40-104☆ |
| 7"   | 112      |          |          |          |          |          |         |          |         |         | 32-112☆ | 40-112☆ |
| 8"   | 128      |          |          |          |          |          |         |          |         |         | 32-128☆ | 40-128☆ |
| <b>ORDERING EXAMPLE:</b><br><b>ADD SUFFIX 'C' FOR COARSE THREAD.</b><br><b>UDB-SHCS – 1/4-20x1 = UDB-SHCS-16-16C</b> |          |          |          |          |          |          |         |          |         |         |         |         |
| OTHER SIZES AVAILABLE ON REQUEST.  |          |          |          |          |          |          |         |          |         |         |         |         |
| UNF-3A FINE THREAD 1960 SERIES = F   |          |          |          |          |          |          |         |          |         |         |         |         |
| THREAD SIZE:   |          |          | 6-40     | 8-36     | 10-32    | 1/4-28   | 5/16-24 | 3/8-24   | 7/16-20 | 1/2-20  | 5/8-18  |         |
| HEX KEY SIZE:  |          |          | 7/64 HEX | 9/64 HEX | 5/32 HEX | 3/16 HEX | 1/4 HEX | 5/16 HEX | 3/8 HEX | 3/8 HEX | 1/2 HEX |         |
| THD O.D. PART NO.:   | 4        | 5        | 6        | 8        | 10       | 16       | 20      | 24       | 28      | 32      | 40      | 48      |
| ACTUAL LEN   | NO. PART |          |          |          |          |          |         |          |         |         |         |         |
| 1/4  | 04       |          | 6-04     |          | 10-04    |          |         |          |         |         |         |         |
| 3/8  | 06       |          | 6-06     | 8-06     | 10-06    | 16-06    |         |          |         |         |         |         |
| 1/2  | 08       |          | 6-08     | 8-08     | 10-08    | 16-08    | 20-08   | 24-08    |         |         |         |         |
| 5/8  | 10       |          | 6-10     |          | 10-10    | 16-10    | 20-10   | 24-10    |         |         |         |         |
| 3/4  | 12       |          | 6-12     | 8-12     | 10-12    | 16-12    | 20-12   | 24-12    |         |         |         |         |
| 7/8  | 14       |          |          |          | 10-14    | 16-14    | 20-14   | 24-14    |         |         |         |         |
| 1"   | 16       |          |          |          | 10-16    | 16-16    | 20-16   | 24-16    | 28-16☆  | 32-16☆  | 40-16☆  |         |
| 1-1/4  | 20       |          |          |          | 10-20    | 16-20    | 20-20   | 24-20    | 28-20☆  | 32-20☆  | 40-20☆  |         |
| 1-1/2  | 24       |          |          |          | 10-24    | 16-24    | 20-24   | 24-24    | 28-24☆  | 32-24☆  | 40-24☆  |         |
| 1-3/4  | 28       |          |          |          | 10-28    | 16-28    | 20-28   | 24-28    | 28-28☆  | 32-28☆  | 40-28☆  |         |
| 2"   | 32       |          |          |          | 10-32    | 16-32    | 20-32   | 24-32    | 28-32☆  | 32-32☆  | 40-32☆  |         |
| 2-1/4  | 36       |          |          |          | 10-36    | 16-36    | 20-36   | 24-36    |         | 32-36☆  | 40-36☆  |         |
| 2-1/2  | 40       |          |          |          | 10-40    |          | 20-40   | 24-40☆   |         | 32-40☆  | 40-40☆  |         |
| 3"   | 48       |          |          |          | 10-48    |          |         | 24-48☆   |         | 32-48☆  |         |         |
| <b>ORDERING EXAMPLE:</b><br><b>ADD SUFFIX 'F' FOR FINE THREAD.</b><br><b>UDB-SHCS – 1/4-28x1 = UDB-SHCS-16-16F</b>   |          |          |          |          |          |          |         |          |         |         |         |         |



## Socket Head Locating Screws

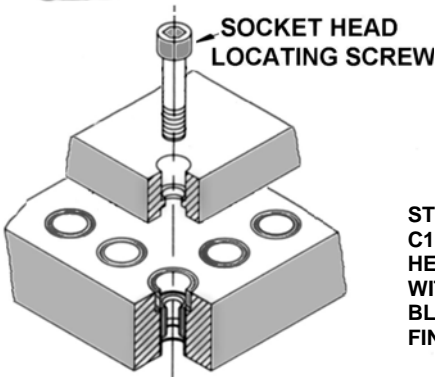
# Socket Head Precision Locating Screws

### SOCKET HEAD PRECISION LOCATING SCREWS



Socket Head Precision Locating Screws are used to mount all multi-purpose grid holes in standard or heavy applications.

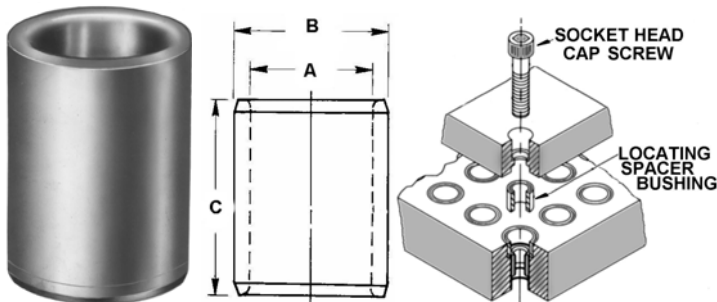
Refer to previous pages in F Section for complete listings for all sizes of Socket Head Precision Locating and Hex Head Cap Screws.



STRESS-PROOF  
C1144 STEEL  
HEAT TREATED  
WITH RC-35-40  
BLACK OXIDE  
FINISH

| UNITED PART NO. | SIZE     | A     | B DIA<br>-.0009<br>-.0013 | C     | T      | F     | G   | H   |
|-----------------|----------|-------|---------------------------|-------|--------|-------|-----|-----|
| UCC-SHLS-32-28  | STANDARD | 2-1/4 | .5000                     | 1-3/4 | 1/2-13 | 3/4   | 1/2 | 3/8 |
| UCC-SHLS-32-32  | STANDARD | 2-3/4 | .5000                     | 2-1/4 | 1/2-13 | 3/4   | 1/2 | 3/8 |
| UCC-SHLS-32-44  | STANDARD | 3-1/4 | .5000                     | 2-3/4 | 1/2-13 | 3/4   | 1/2 | 3/8 |
| UCC-SHLS-40-32  | HEAVY    | 2-5/8 | .6250                     | 2"    | 5/8-11 | 15/16 | 5/8 | 1/2 |
| UCC-SHLS-40-40  | HEAVY    | 3-1/8 | .6250                     | 2-1/2 | 5/8-11 | 15/16 | 5/8 | 1/2 |
| UCC-SHLS-40-48  | HEAVY    | 3-5/8 | .6250                     | 3"    | 5/8-11 | 15/16 | 5/8 | 1/2 |

### PRECISION LOCATING SPACER BUSHINGS



These Bushings fit **UNITED** Hex and Socket Head 5/16 – 1/2 – 5/8 Screws!

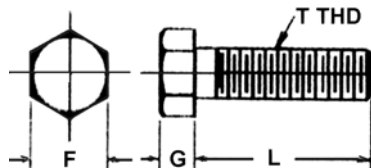
Socket Head Precision Locating Screws and Hex Head Cap Screws should be used with Locating Bushings adding super strength for small components and helping eliminate thread fatigue.

| UNITED PART NO.   | SIZE   | A I. D.<br>±.002 | B O. D.<br>+.0001<br>+.0004 | C LENGTH<br>±.001 | FITS SOCKET HEAD CAP SCREW |
|-------------------|--------|------------------|-----------------------------|-------------------|----------------------------|
| UCC-PS-32-10-.325 | SMALL  | .335             | .5000                       | .590              | 5/16-18                    |
| UCC-PS-48-10-.525 | MEDIUM | .525             | .7500                       | .590              | 1/2-13                     |
| UCC-PS-56-10-.650 | LARGE  | .650             | .8750                       | .590              | 5/8-11                     |

STRESS-PROOF C1144 STEEL HEAT TREATED WITH RC-58-64 BLACK OXIDE FINISH

### HEX HEAD CAP SCREWS

When mounting high rise clamps and/or when access to a Socket Head Screw is limited, use these convenient Hex Head Cap Screws.



RC-34-40  
MIN TENSILE STRENGTH  
150,000 PSI per SAE J429  
and ASTM 354BD

GRADE 8 BLACK OXIDE FINISH

| PART NO.       | SIZE     | T       | L    | G     | F     | BOX QTY |
|----------------|----------|---------|------|-------|-------|---------|
| UCC-HHCS-20-12 | LIGHT    | 5/16-18 | .75  | 13/64 | 1/2   | 100     |
| UCC-HHCS-20-20 | LIGHT    | 5/16-18 | 1.25 | 13/64 | 1/2   | 100     |
| UCC-HHCS-20-24 | LIGHT    | 5/16-18 | 1.50 | 13/64 | 1/2   | 100     |
| UCC-HHCS-32-28 | STANDARD | 1/2-13  | 1.75 | 5/16  | 3/4   | 100     |
| UCC-HHCS-32-44 | STANDARD | 1/2-13  | 2.75 | 5/16  | 3/4   | 100     |
| UCC-HHCS-32-48 | STANDARD | 1/2-13  | 3.00 | 5/16  | 3/4   | 100     |
| UCC-HHCS-40-32 | HEAVY    | 5/8-11  | 2.00 | 25/64 | 15/16 | 50      |
| UCC-HHCS-40-48 | HEAVY    | 5/8-11  | 3.00 | 25/64 | 15/16 | 50      |
| UCC-HHCS-40-56 | HEAVY    | 5/8-11  | 3.50 | 25/64 | 15/16 | 50      |

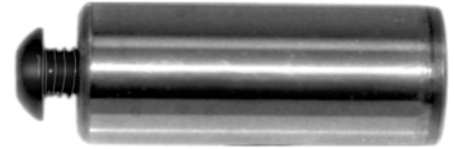
# Pull Out Dowels for Locating & Holding Square Hole Sleeves



## PULL OUT DOWELS

| PART NO.   | A O.D. | T THD      | L LEN |
|------------|--------|------------|-------|
| UDB-300002 | 1/4    | 8-32x3/8   | 3/4   |
| UDB-300004 | 1/4    | 8-32x3/8   | 1"    |
| UDB-300006 | 1/4    | 8-32x3/8   | 1-1/4 |
| UDB-300008 | 1/4    | 8-32x3/8   | 1-1/2 |
| UDB-300010 | 1/4    | 8-32x3/8   | 2"    |
| UDB-300012 | 5/16   | 10-32x1/4  | 3/4   |
| UDB-300014 | 5/16   | 10-32x1/4  | 1"    |
| UDB-300016 | 5/16   | 10-32x1/4  | 1-1/4 |
| UDB-300018 | 5/16   | 10-32x1/4  | 1-1/2 |
| UDB-300020 | 5/16   | 10-32x1/4  | 2"    |
| UDB-300022 | 3/8    | 10-32x3/8  | 1"    |
| UDB-300024 | 3/8    | 10-32x3/8  | 1-1/4 |
| UDB-300026 | 3/8    | 10-32x3/8  | 1-1/2 |
| UDB-300028 | 3/8    | 10-32x3/8  | 2"    |
| UDB-300030 | 3/8    | 10-32x3/8  | 2-1/2 |
| UDB-300032 | 3/8    | 10-32x3/8  | 3"    |
| UDB-300034 | 7/16   | 1/4-20x3/8 | 1-1/2 |

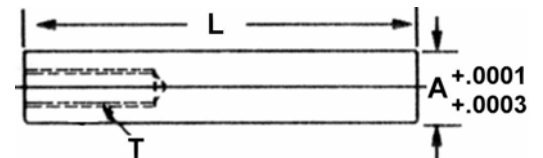
| PART NO.   | A O.D. | T THD       | L LEN |
|------------|--------|-------------|-------|
| UDB-300036 | 7/16   | 1/4-20x3/8  | 2"    |
| UDB-300038 | 1/2    | 1/4-20x1/2  | 1"    |
| UDB-300040 | 1/2    | 1/4-20x1/2  | 1-1/4 |
| UDB-300042 | 1/2    | 1/4-20x1/2  | 1-1/2 |
| UDB-300044 | 1/2    | 1/4-20x1/2  | 1-3/4 |
| UDB-300046 | 1/2    | 1/4-20x1/2  | 2"    |
| UDB-300048 | 1/2    | 1/4-20x1/2  | 2-1/2 |
| UDB-300050 | 1/2    | 1/4-20x1/2  | 3"    |
| UDB-300052 | 5/8    | 5/16-18x1/2 | 1-1/2 |
| UDB-300054 | 5/8    | 5/16-18x1/2 | 2"    |
| UDB-300056 | 5/8    | 5/16-18x1/2 | 2-1/2 |
| UDB-300058 | 5/8    | 5/16-18x1/2 | 3"    |
| UDB-300060 | 3/4    | 3/8-16x1/2  | 2"    |
| UDB-300062 | 3/4    | 3/8-16x1/2  | 2-1/2 |
| UDB-300064 | 3/4    | 3/8-16x1/2  | 3"    |
| UDB-300066 | 1"     | 3/8-16x1/2  | 2-1/2 |
| UDB-300068 | 1"     | 3/8-16x1/2  | 3"    |



FLAT GROUND ON THE SIDE FOR AIR RELEASE IN BLIND HOLES

BUTTON HEAD CAP SCREW INCLUDED FOR DRIVING AND REMOVING

C-12L15 STEEL CASE HARDENED



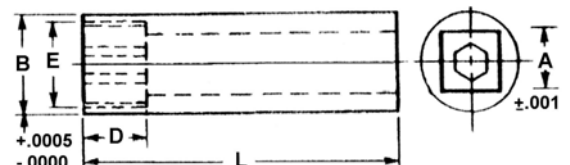
Customize **UNITED** sleeves to utilize your square and rectangular tool bits by reaming a hole at the angle you need and insert our Square Hole Sleeve.

## SQUARE HOLE SLEEVES

| PART NO.   | TOOL BIT | A I.D. | B O.D. | L LEN | D DEPTH | E THD I. D. |
|------------|----------|--------|--------|-------|---------|-------------|
| UDB-140611 | 3/16     | .1915  | .3125  | 1-1/2 | 7/16    | 1/4-28      |
| UDB-140612 | 1/4      | .2550  | .4375  | 2"    | 1/2     | 5/16-24     |
| UDB-140613 | 5/16     | .3175  | .5000  | 2-1/4 | 9/16    | 3/8-24      |
| UDB-140614 | 3/8      | .3800  | .5937  | 2-1/2 | 5/8     | 1/2-20      |
| UDB-140615 | 7/16     | .4425  | .6875  | 2-5/8 | 5/8     | 1/2-20      |
| UDB-140616 | 1/2      | .5050  | .7812  | 2-3/4 | 5/8     | 5/8-18      |
| UDB-140617 | 5/8      | .6300  | .9375  | 3-1/4 | 1"      | 3/4-16      |
| UDB-140618 | 3/4      | .7550  | 1.1250 | 4"    | 1"      | 1-14        |
| UDB-140619 | 7/8      | .8800  | 1.3125 | 4"    | 1-1/4   | 1-14        |
| UDB-140620 | 1"       | 1.0080 | 1.5000 | 5"    | 1-1/2   | 1-1/8-12    |



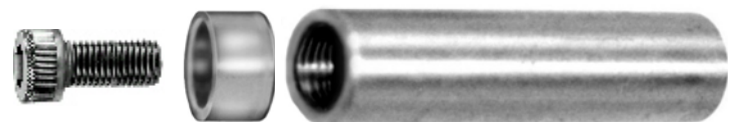
THREADED END OF SLEEVE ALLOWS ADJUSTMENTS OF TOOL BITS. PLUGS AVAILABLE.  
C-12L14 STEEL GROUND CONCENTRICALLY TO HOLE



MANUFACTURED FROM C-12 L14 CASE HARDENED FLAT GROUND ON ONE SIDE TO RELEASE OR BLEND HOLES BETTER.

**UNITED** Jig Legs cut costs in jig plates. Attach four Jig Legs to your plate and save costs while improving quality! These Jig Legs assure accuracy and greater bearing surface at top of leg. Large diameter Rest Buttons provide the greater surface for spot facing and counterboring.

## CREATE-YOUR-OWN JIG LEGS



HARDENED FOR LASTING QUALITY AND USE

| PART NO.   | L LEN | B O.D. | T THD  | D DEPTH | E CAP SCREW  |
|------------|-------|--------|--------|---------|--------------|
| UCC-250001 | 1"    | 5/8    | 1/4-20 | 5/8     | 1/4-20x1     |
| UCC-250002 | 2"    | 5/8    | 1/4-20 | 5/8     | 1/4-20x1     |
| UCC-250003 | 3"    | 5/8    | 1/4-20 | 5/8     | 1/4-20x1     |
| UCC-250004 | 4"    | 7/8    | 3/8-16 | 7/8     | 3/8-16x1-3/4 |
| UCC-250005 | 5"    | 7/8    | 3/8-16 | 7/8     | 3/8-16x1-3/4 |
| UCC-250006 | 6"    | 7/8    | 3/8-16 | 7/8     | 3/8-16x1-3/4 |

