# RIVETS AND THREADED INSERTS

- **Tri-Clamp, Multi-Grip, Dome Head and Stainless Steel Rivets**
- **Multi-Grip Rivets Adapt to All Material Types and Thicknesses**
- **Threaded Inserts Install Threads Into Blind Areas and Thin Material**
- **Thread Repair Inserts for Metal and Wood**



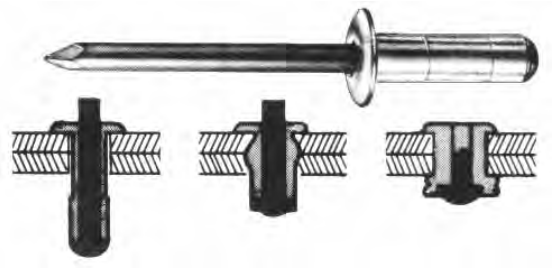
**CHROMATE RIVETS AND THREADED INSERTS PROVIDE SUPERIOR FASTENING STRENGTH AND SIMPLE INSTALLATION.** For more diversity and coverage of applications with fewer stocked items, use Chromate Rivets and Threaded Inserts.

# CIC 200™ MULTI-GRIP PULL RIVETS

## DOME HEAD

Only Chromate multi-grip pull rivets adapt to hole size variance and pull up snug regardless of material thickness. Only a few sizes cover the applications of up to 15 standard rivets.

### THE CHROMATE MULTI-GRIP DIFFERENCE



**EXCLUSIVE FEATURES:**

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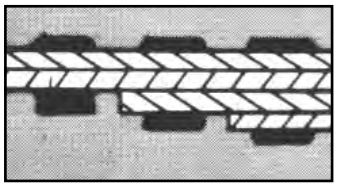
- EXPANDS UP TO ITS OWN HEAD DIAMETER FOR USE IN WIDE TOLERANCE HOLES
- ONE LENGTH FITS ALL THICKNESSES WITHIN GRIP RANGE
- SUPERIOR CLAMP-UP ACTION ELIMINATES LOOSE PART UNDER ADVERSE CONDITIONS
- LOW PROFILE GUARANTEED FOR FINISHED APPEARANCE ON BOTH SIDES
- SEALED STEM FOR WATERPROOF, DUSTPROOF APPLICATION



- DOME HEAD RIVETS ARE USED IN STANDARD APPLICATIONS REQUIRING MAXIMUM HOLE FILL AND CLAMP-UP

| DOME HEAD | | | | | |
|---|---|---|---|---|---|
| DIAMETER | GRIP RANGE | HEAD DIA. | DRILL SIZE | | PART |
| 1/8 | 1/32 to 3/16 | 13/64 | #29 | U | 6850 |
| 1/8 | 1/8 to 5/16 | 13/64 | #29 | U | 6853 |
| 5/32 | 3/64 to 1/4 | 1/4 | #19 | U | 6855 |
| 3/16 | 1/16 to 1/4 | 11/32 | #8 | U | 6860 |
| 3/16 | 3/16 to 7/16 | 11/32 | #8 | T | 6865 |

- LARGE FLANGE RIVETS INCREASE HEAD BEARING SURFACE, PREVENTING PULL-THROUGH IN SOFT MATERIALS

| LARGE FLANGE | | | | | |
|---|---|---|---|---|---|
| DIAMETER | GRIP RANGE | HEAD DIA. | DRILL SIZE | | PART |
| 1/8 | 1/32 to 3/16 | 21/64 | #29 | U | 6875 |
| 1/8 | 1/8 to 5/16 | 21/64 | #29 | U | 6876 |
| 3/16 | 1/4 to 1/2 | 5/8 | #8 | T | 6879 |
| 3/16 | 1/2 to 25/32 | 5/8 | #8 | T | 6882 |

- 120° COUNTERSUNK RIVETS PROVIDE SMOOTH OFFSIDE SURFACES AND CLEARANCE FOR MOVING PARTS

| 120° COUNTERSUNK | | | | | |
|---|---|---|---|---|---|
| DIAMETER | GRIP RANGE | HEAD DIA. | DRILL SIZE | | PART |
| 1/8 | 3/32 to 1/4 | 13/64 | #29 | U | 6867 |

### DUAL-ACTION HAND RIVET TOOL

| NOSE PIECES INCLUDED: | | PART |
|---|---|---|
| 3/32, 1/8, 5/32, 3/16 | A | 6885 |

### HAND RIVET TOOL

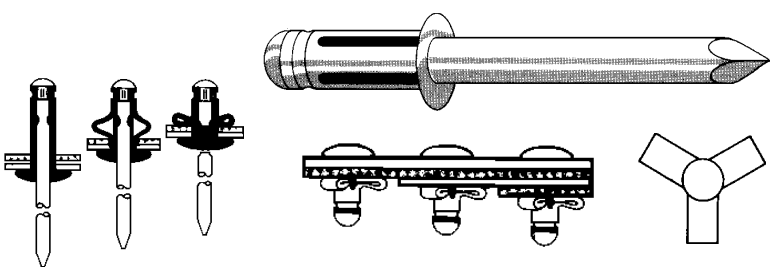
- SETS 1/8" - 1/4" DIAMETER RIVETS IN ALL MATERIALS. CAN ALSO SET T-RIVET/KLIK-SPLIT®, KLIK-LOCK™ AND ALL OTHER STRUCTURAL BLIND RIVETS
- HEAVY DUTY CONSTRUCTION WITH SHOCK RESISTANT HANDLES
- 1/4" NOSEPIECE INSTALLED IN THE TOOL AND 3/16" AND 5/32" NOSEPIECES IN THE HANDLE
- LONGER HANDLES PERMIT ACCESS TO HARD-TO-REACH AREAS
- OVERALL LENGTH 21", HANDLE LENGTH 16"

| NOSE PIECES INCLUDED: | | PART |
|---|---|---|
| 1/4", 3/16" and 5/32" | A | 6884 |

# CIC 200™ MULTI-GRIP PULL RIVETS (Cont'd.)

## TRI-CLAMP

All aluminum, multi-purpose, multi-grip rivet designed to fasten all materials including metal, plastic, fiberglass, ceramic, plexiglass and other composites where pull-through with standard rivets is a common cause of failure.



17940

- **EASY USE – INSERT AND SQUEEZE**
- **POSITIVE FASTENING**
- **ADAPTS TO ALL MATERIALS – THIN, BRITTLE, CLAD, SOFT**
- **MULTI-GRIP – WILL FASTEN MATERIALS FROM 3/64" TO 15/32" THICK**
- **SUPERIOR CLAMPING – SLOTTED SHELL UPSETS INTO 3 UNIFORM TINES ON BLIND SIDE CREATING A LARGE BEARING SURFACE EXTENDING PROPER CLAMPING FORCE FROM BOTH SIDES**

| DIAMETER | GRIP RANGE | HEAD DIA. | DRILL SIZE | | PART |
|---|---|---|---|---|---|
| 5/32 | 3/64 to 1/8 | 5/16 | 11/64 (.1719) | T | 6887 |
| 5/32 | 3/64 to 9/32 | 5/16 | 11/64 (.1719) | T | 6888 |
| 3/16 | 3/64 to 5/32 | 25/64 | #8 (.1990) | T | 6883 |
| 3/16 | 3/64 to 11/32 | 25/64 | #8 (.1990) | T | 6886 |
| 3/16 | 5/32 to 15/32 | 25/64 | #8 (.1990) | T | 6889 |

## FINISHING CAPS FOR TRI-CLAMP RIVETS



- **THESE DECORATIVE "SNAP-ON" PLASTIC CAPS PROVIDE A FINISHED QUALITY IN APPLICATIONS WHERE RIVET HEADS SHOULD BE CONCEALED**

17940

| DIAMETER | USE WITH PART NOS. | COLOR | | PART |
|---|---|---|---|---|
| 5/32 | 6887, 6888 | WHITE | T | 6896 |
| 5/32 | 6887, 6888 | BLACK | T | 6897 |
| 3/16 | 6883, 6886, 6889 | WHITE | T | 6898 |
| 3/16 | 6883, 6886, 6889 | BLACK | T | 6899 |

# RIVEDRILL™

## PATENTED DRILL ATTACHMENT WITH EFFORTLESS OPERATION

- **EASILY CONVERTS CORDLESS, ELECTRIC AND PNEUMATIC DRILLS INTO BLIND RIVET GUNS**
- **INSTALLS AS EASILY AS A DRILL BIT**
- **COMPATIBLE WITH ANY REVERSIBLE DRILLING MACHINE WITH OR WITHOUT CORD**
- **ALLOWS OPERATORS TO SET UP TO 14 RIVETS PER MINUTE**
- **ERGONOMICALLY FRIENDLY – REQUIRING JUST 6.6 POUND OF PRESSURE TO OPERATE**

***APPLICATIONS:***

- **AUTOMOTIVE AFTERMARKET**
- **SMALL AIRCRAFT AND BOAT REPAIR**
- **RESIDENTIAL AND COMMERCIAL CONSTRUCTION**
- **GENERAL FACILITY MAINTENANCE AND REPAIR**

***Includes Nosepieces for 1/8", 5/32" and 3/16" sizes***

**P/N 9612**

| DESCRIPTION | | PART | REPLACEMENT NOSEPIECES | | PART |
|---|---|---|---|---|---|
| Rivedrill | A | 9612 | 1/8 | A | 9612NP18 |
| Replacement Jaws for Rivedrill | A | 9612JAWS | 3/16 | A | 9612NP316 |
| | | | 5/32 | A | 9612NP532 |

# CIC 200™ PULL RIVETS

## DOME HEAD

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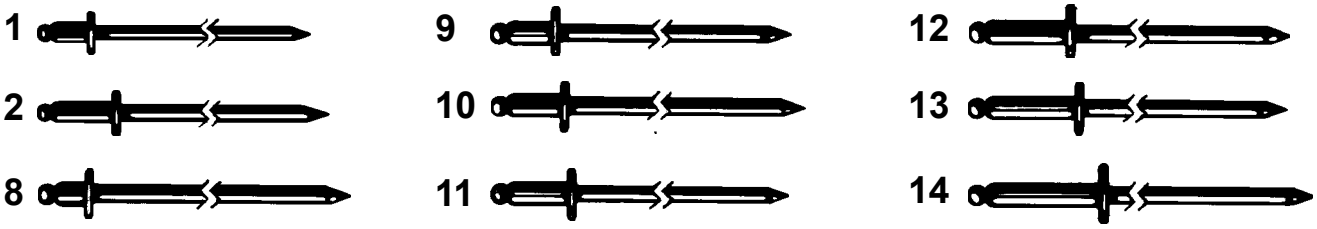
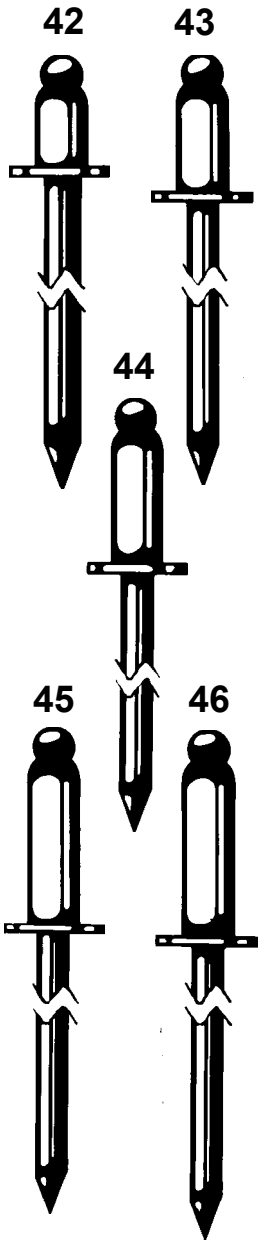
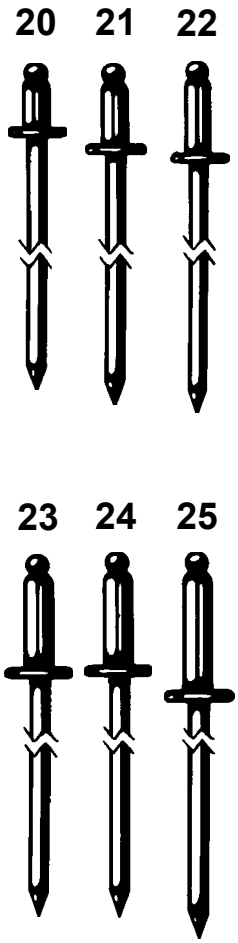
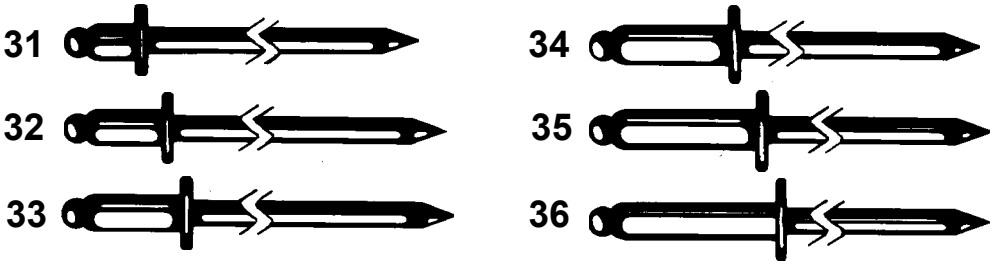


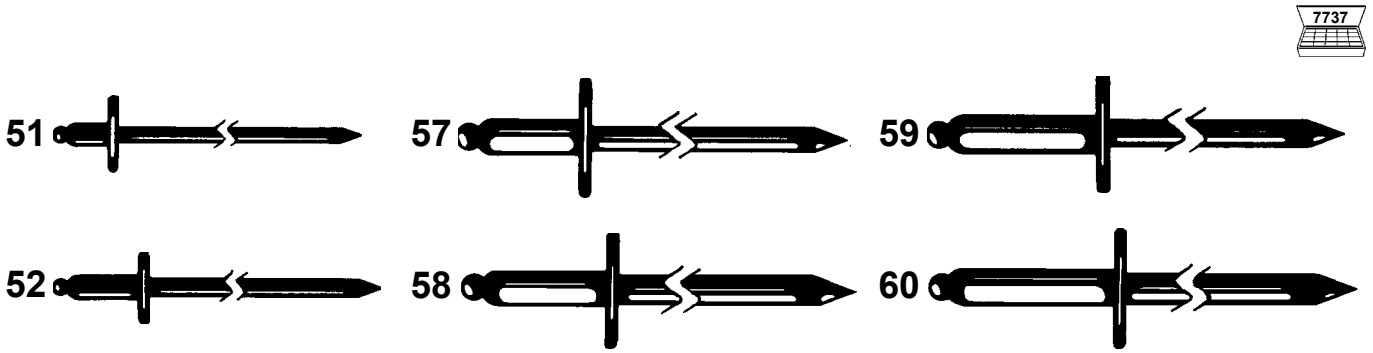

| DIA. | DRILL SIZE | NO. | GRIP RANGE | ALUM. RIVET ALUM. MANDREL | ALUM. RIVET STEEL MANDREL | STEEL RIVET STEEL MANDREL | IN-DUS-TRY NO. |
|---|---|---|---|---|---|---|---|
| 3/32 | #41 (.0960) | 1 | to 1/8 | V 9800 | V 9851 | V 9911 | 32 |
| | | 2 | 1/8 to 1/4 | V 9801 | V 9852 | V 9912 | 34 |
| 1/8 | #30 (.1285) | 8 | to 1/16 | V 9806 | V 9858 | V 9918 | 41 |
| | | 9 | 1/16 to 1/8 | V 9807 | V 9859 | V 9919 | 42 |
| | | 10 | 1/8 to 3/16 | V 9808 | V 9860 | V 9920 | 43 |
| | | 11 | 3/16 to 1/4 | V 9809 | V 9861 | V 9921 | 44 |
| | | 12 | 1/4 to 5/16 | V 9810 | V 9862 | V 9922 | 45 |
| | | 13 | 5/16 to 3/8 | V 9811 | V 9863 | V 9923 | 46 |
| | | 14 | 3/8 to 1/2 | U 9812 | U 9864 | U 9924 | 48 |
| 5/32 | #20 (.1610) | 20 | to 1/8 | U 9818 | U 9869 | U 9930 | 52 |
| | | 21 | 1/8 to 3/16 | - | U 9870 | - | 53 |
| | | 22 | 3/16 to 1/4 | - | U 9871 | - | 54 |
| | | 23 | 1/8 to 1/4 | U 9820 | - | U 9932 | 54 |
| | | 24 | 1/4 to 3/8 | U 9821 | U 9872 | U 9933 | 56 |
| | | 25 | 3/8 to 1/2 | U 9822 | - | U 9934 | 58 |
| 3/16 | #11 (.1910) | 31 | to 1/8 | U 9827 | U 9878 | U 9939 | 62 |
| | | 32 | 1/8 to 1/4 | U 9828 | U 9879 | U 9940 | 64 |
| | | 33 | 1/4 to 3/8 | U 9829 | U 9880 | U 9941 | 66 |
| | | 34 | 3/8 to 1/2 | U 9830 | U 9881 | U 9942 | 68 |
| | | 35 | 1/2 to 5/8 | U 9831 | U 9882 | U 9943 | 610 |
| | | 36 | 5/8 to 3/4 | T 9832 | T 9883 | T 9944 | 612 |
| 1/4 | F (.2370) | 42 | to 1/4 | - | T 9889 | T 9950 | 84 |
| | | 43 | 1/4 to 3/8 | - | T 9890 | T 9951 | 86 |
| | | 44 | 3/8 to 1/2 | - | T 9891 | T 9952 | 88 |
| | | 45 | 1/2 to 5/8 | - | - | T 9953 | 810 |
| | | 46 | 5/8 to 3/4 | - | - | T 9954 | 812 |



# CIC 200™ PULL RIVETS (Cont'd.)

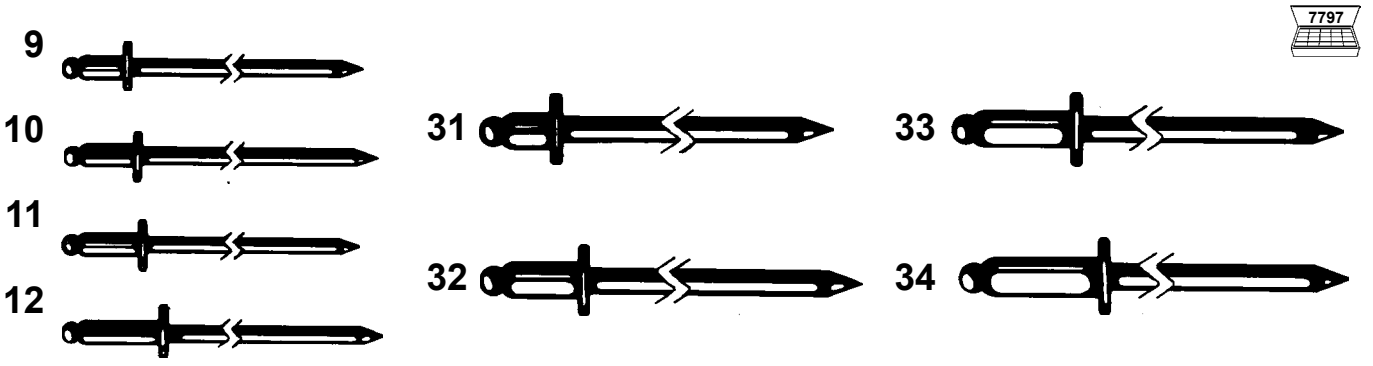
## LARGE FLANGE




| DIA. | FLANGE DIA. | DRILL SIZE | NO. | GRIP RANGE | ALUM. RIVET ALUM. MANDREL | ALUM. RIVET STEEL MANDREL | STEEL RIVET STEEL MANDREL |
|---|---|---|---|---|---|---|---|
| 1/8 | 3/8 | #30 (.1285) | 51 | 1/16 to 1/8 | U 9838 | U 9897 | U 9960 |
| | | | 52 | 1/8 to 1/4 | U 9839 | U 9898 | U 9961 |
| 3/16 | 5/8 | #11 (.1910) | 57 | 1/4 to 3/8 | U 9844 | U 9903 | U 9967 |
| | | | 58 | 3/8 to 1/2 | - | U 9904 | U 9968 |
| | | | 59 | 1/2 to 5/8 | T 9846 | T 9905 | T 9969 |
| | | | 60 | 5/8 to 3/4 | - | T 9906 | T 9970 |



## STAINLESS STEEL

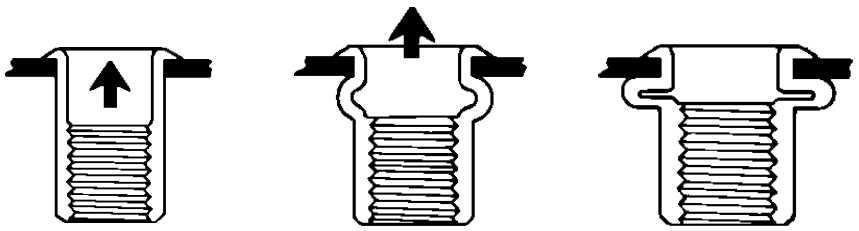



| DIAMETER | DRILL SIZE | NO. | GRIP RANGE | PART |
|---|---|---|---|---|
| 1/8 | #30 (.1285) | 9 | to 1/8 | T 9702 |
| | | 10 | 1/8 to 3/16 | T 9704 |
| | | 11 | 3/16 to 1/4 | T 9706 |
| | | 13 | 1/4 to 3/8 | T 9708 |
| 3/16 | #11 (.1910) | 31 | to 1/8 | R 9710 |
| | | 32 | 1/8 to 1/4 | R 9712 |
| | | 33 | 1/4 to 3/8 | R 9714 |
| | | 34 | 3/8 to 1/2 | R 9716 |

# CIC 200™ THREADED INSERT FASTENERS

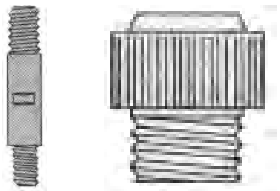
## FAST, CONVENIENT INSTALLATION OF THREADS IN ANY BLIND AREA

CIC 200 Thinserts are an easily-installed alternative to many "blind" fasteners. They offer strength, permanence and load-bearing capabilities for a variety of materials.



**THINSERTS**
**DESIGNED TO PROVIDE A HIGHLY EFFICIENT METHOD OF SECURING THREADS FROM ONE SIDE OF WORK IN MATERIALS TOO THIN TO SUPPORT THREADS.**

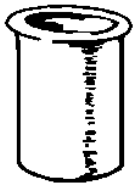
**FOR MATERIALS .020" TO .200" THICK.**

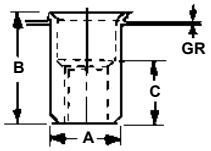
| THINSERTS | | | | ADAPTERS/MANDRELS | | |
|---|---|---|---|---|---|---|
|  | | | |  | | |
| **SIZE** | **DRILL SIZE** | | **PART** | **SIZE** | | **PART** |
| 6-32 | 1/4 | T | 581 | 4-40 | A | 460 |
| 8-32 | 1/4 | T | 582 | 6-32 | A | 483 |
| 10-24 | 9/32 | T | 583 | 8-32 | A | 484 |
| 10-32 | 9/32 | T | 584 | 10-24 | A | 485 |
| 1/4-20 | 3/8 | R | 585 | 10-32 | A | 486 |
| 5/16-18 | 1/2 | R | 587 | 12-24 | A | 487 |
| – | – | | – | 1/4-20 | A | 488 |
| – | – | | – | 1/4-28 | A | 492 |
| – | – | | – | 5/16-18 | A | 490 |
| – | – | | – | 5/16-24 | A | 493 |
| – | – | | – | 3/8-16 | A | 489 |
| – | – | | – | 3/8-24 | A | 494 |

# CIC 200™ THREADED INSERT FASTENERS (Cont'd.)

## SPECIFICATIONS

### THINSERTS






| THREAD SIZE CLASS 2B AFTER INSTALLATION | RECOMMENDED GRIP RANGE | | 'A' MAX. | 'B' MAX. | 'C' MAX. | HOLE SIZE |
|---|---|---|---|---|---|---|
| | PILOT | FORMED | | | | |
| 6-32 and 8-32 | .020 / .080 | .020 / .060 | .249 | .410 | .250 | .250 / .254 |
| 10-24 and 10-32 | .020 / .130 | .020 / .100 | .280 | .465 | .240 | .281 / .285 |
| 1/4-20 | .030 / .165 | .030 / .130 | .374 | .610 | .335 | .375 / .379 |
| 5/16-18 | .040 / .180 | N/A | .499 | .720 | .395 | .500 / .504 |

### QUIK TOOL KITS

**KIT INCLUDES:**
- **QUIK TOOL**
- **ADAPTERS/MANDRELS 6-32, 8-32, 10-24, 10-32, 1/4-20 AND 5/16-18**

**P/N 9600**

### QUIK TOOL (WITHOUT ADAPTER)

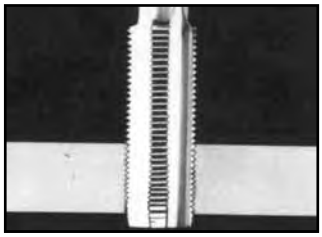
**P/N 9610**

# CIC 200™ PERMASERTS™

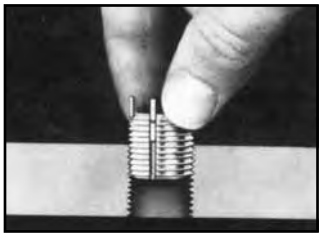
## PERMANENT, LOCKING STEEL THREAD REPAIR INSERTS

Quickly repairs stripped, damaged or worn threads. Also for use on original equipment applications where softer materials won't hold. Installed with standard drills and taps. No pre-winder tool required. Positive mechanical lock against rotation.

1. Drill out old threads, using standard drill.



2. Tap new threads, using standard tap.



3. Screw in insert until slightly below surface. "Kees" act as depth stop.

4. Drive "Kees" down with several light taps on installation tool.

5. Installed Insert

INSTALLATION TOOL

- **SOLID BUSHING WITH LOCKING KEES — PROVIDES POSITIVE MECHANICAL LOCKING AGAINST ROTATION**
- **USE IN ALUMINUM, MAGNESIUM, CAST IRON, COLD ROLLED STEEL AND PLASTIC — NO RESTRICTIONS ON PARENT MATERIAL**
- **HIGH STRENGTH AND RELIABILITY — PROVIDES MAXIMUM PULLOUT STRENGTH; BREAKS GRADE 8 BOLT**
- **EASY INSTALLATION — LEARN IN MINUTES**
- **HOLE PREPARED WITH STANDARD DRILL AND TAP — NO SPECIAL, COSTLY, SINGLE-PURPOSE DRILLS OR TAPS REQUIRED**
- **INSERT WITH FINGERS — NO SPECIAL PRE-WINDER TOOLS REQUIRED**
- **IMPOSSIBLE TO CROSS-THREAD DURING INSTALLATION — PERFECT EVERY TIME**
- **SIMPLE REMOVAL — PERMANENTLY INSTALLED UNLESS REMOVAL IS REQUIRED**



### USS THREAD SIZES

| INTERNAL THREAD | EXTERNAL THREAD | LENGTH | TAP DRILL DIA. | TAP SIZE | DRILL REMOVAL SIZE | DRILL REMOVAL DEPTH | PART | | INSTALLATION TOOL | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10-24 | 3/8-16 | .31 | "Q" | 3/8-16 | 9/32 | 1/8 | L | 1913 | A | 1881 |
| 1/4-20 | 7/16-14 | .37 | "X" | 7/16-14 | 11/32 | 3/16 | L | 1915 | A | 1882 |
| 5/16-18 | 1/2-13 | .43 | 29/64 | 1/2-13 | 13/32 | 3/16 | L | 1917 | A | 1883 |
| 3/8-16 | 9/16-12 | .50 | 33/64 | 9/16-12 | 15/32 | 3/16 | I | 1919 | A | 1884 |
| 7/16-14 | 5/8-11 | .62 | 37/64 | 5/8-11 | 17/32 | 3/16 | I | 1921 | A | 1885 |
| 1/2-13 | 3/4-16 | .62 | 45/64 | 3/4-16 | 21/32 | 3/16 | I | 1923 | A | 1886 |
| 5/8-11 | 7/8-14 | .87 | 53/64 | 7/8-14 | 25/32 | 3/16 | F | 1927 | A | 1888 |
| 3/4-10 | 1-1/8-12 | 1.12 | 1-1/16 | 1-1/8-12 | 31/32 | 5/16 | D | 1929 | A | 1889 |
| 7/8-9 | 1-1/4-12 | 1.25 | 1-3/16 | 1-1/4-12 | 1-3/32 | 5/16 | D | 1931 | A | 1890 |
| 1-8 | 1-3/8-12 | 1.37 | 1-5/16 | 1-3/8-12 | 1-7/32 | 5/16 | B | 1933 | A | 1891 |

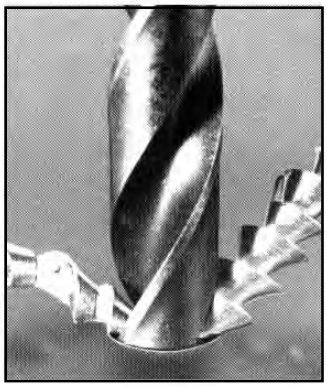
### SAE THREAD SIZES

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10-32 | 3/8-16 | .31 | "Q" | 3/8-16 | 9/32 | 1/8 | L | 1914 | A | 1881 |
| 1/4-28 | 7/16-14 | .37 | "X" | 7/16-14 | 11/32 | 3/16 | L | 1916 | A | 1882 |
| 5/16-24 | 1/2-13 | .43 | 29/64 | 1/2-13 | 13/32 | 3/16 | L | 1918 | A | 1883 |
| 3/8-24 | 9/16-12 | .50 | 33/64 | 9/16-12 | 15/32 | 3/16 | I | 1920 | A | 1884 |
| 7/16-20 | 5/8-11 | .62 | 37/64 | 5/8-11 | 17/32 | 3/16 | I | 1922 | A | 1885 |
| 1/2-20 | 3/4-16 | .62 | 45/64 | 3/4-16 | 21/32 | 3/16 | I | 1924 | A | 1886 |
| 5/8-18 | 7/8-14 | .87 | 53/64 | 7/8-14 | 25/32 | 3/16 | F | 1928 | A | 1888 |
| 3/4-16 | 1-1/8-12 | 1.12 | 1-1/16 | 1-1/8-12 | 31/32 | 5/16 | D | 1930 | A | 1889 |
| 7/8-14 | 1-1/4-12 | 1.25 | 1-3/16 | 1-1/4-12 | 1-3/32 | 5/16 | D | 1932 | A | 1890 |
| 1-14 | 1-3/8-12 | 1.37 | 1-5/16 | 1-3/8-12 | 1-7/32 | 5/16 | B | 1935 | A | 1891 |

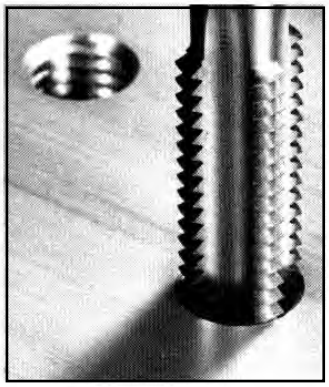
# CIC 200™ THREAD REPAIR INSERTS

## METAL

Installs permanent threads that won't fail, strip, rotate or pull out even under excessive loading.



DRILL WITH STANDARD DRILL



TAP HOLE WITH STANDARD TAP

TURN E-Z LOK HOM FLUSH WITH BOLT

AUTOMATIC SELF-LOCKING EXTENERAL THREAD



| USS THREAD SIZES | | | | | | | |
|---|---|---|---|---|---|---|---|
| INTERNAL THREAD | EXTERNAL THREAD | LENGTH | TAP DRILL SIZE | TAP SIZE | MIN. FULL THREAD DEPTH | | PART |
| 4-40 | 10-32 | .250 | 5/32 | 10-32 | 9/32 | L | 1653 |
| 6-32 | 1/4-20 | .280 | 7 | 1/4-20 | 11/32 | L | 1654 |
| 8-32 | 5/16-18 | .290 | F | 5/16-18 | 7/16 | L | 1655 |
| 10-24 | 3/8-16 | .406 | 5/16 | 3/8-16 | 15/32 | L | 1656 |
| 1/4-20 | 7/16-14 | .437 | 23/64 | 7/16-14 | 1/2 | L | 1657 |
| 5/16-18 | 1/2-13 | .484 | 27/64 | 1/2-13 | 9/16 | I | 1658 |
| 3/8-16 | 9/16-12 | .515 | 31/64 | 9/16-12 | 19/32 | I | 1659 |
| 7/16-14 | 5/8-11 | .656 | 17/32 | 5/8-11 | 23/32 | I | 1660 |
| 1/2-13 | 3/4-10 | .656 | 21/32 | 3/4-10 | 3/4 | I | 1661 |
| 5/8-11 | 7/8-9 | .687 | 49/64 | 7/8-9 | 13/16 | E | 1662 |
| 5/8-11-Long | 7/8-9 | 1.125 | 49/64 | 7/8-9 | 1-1/4 | E | 1663 |
| 3/4-10 | 1-8 | .781 | 7/8 | 1-8 | 7/8 | E | 1664 |
| 1-8 | 1-3/8-12 | 1.250 | 1-9/32 | 1-3/8-12 | 1-3/8 | E | 1665 |
| **SAE THREAD SIZES** | | | | | | | |
| 10-32 | 3/8-16 | .406 | 5/16 | 3/8-16 | 15/32 | L | 1757 |
| 1/4-28 | 7/16-14 | .437 | 23/64 | 7/16-14 | 1/2 | L | 1758 |
| 5/16-24 | 1/2-13 | .484 | 27/64 | 1/2-13 | 9/16 | I | 1759 |
| 3/8-24 | 9/16-12 | .515 | 31/64 | 9/16-12 | 19/32 | I | 1760 |
| 7/16-20 | 5/8-11 | .656 | 17/32 | 5/8-11 | 23/32 | I | 1761 |
| 1/2-20 | 3/4-10 | .656 | 21/32 | 3/4-10 | 3/4 | I | 1762 |
| 5/8-18 | 7/8-9 | .687 | 49/64 | 7/8-9 | 13/16 | E | 1763 |
| 3/4-16 | 1/8 | .781 | 7/8 | 1-8 | 7/8 | E | 1764 |

# CIC 200™ THREAD REPAIR INSERTS (Cont'd.)

## 303 STAINLESS STEEL, PASSIVATED

| USS THREAD | | | | | | | |
|---|---|---|---|---|---|---|---|
| INTERNAL THREAD | EXTERNAL THREAD | OVERALL LENGTH | TAP DRILL SIZE | TAP SIZE | MIN. FULL THREAD DEPTH | | PART |
| 10-24 | 3/8-16 | .406 | 5/16 | 3/8-16 | 15/32 | E | 1564 |
| 1/4-20 | 7/16-14 | .437 | 23/64 | 7/16-14 | 1/2 | E | 1565 |
| 5/16-18 | 1/2-13 | .484 | 27/64 | 1/2-13 | 9/16 | E | 1566 |
| 3/8-16 | 9/16-12 | .515 | 31/64 | 9/16-12 | 19/32 | E | 1567 |
| 7/16-14 | 5/8-11 | .656 | 17/32 | 5/8-11 | 23/32 | E | 1568 |
| 1/2-13 | 3/4-10 | .656 | 21/32 | 3/4-10 | 3/4 | E | 1569 |
| **SAE THREAD** | | | | | | | |
| 10-32 | 3/8-16 | .406 | 5/16 | 3/8-16 | 15/32 | E | 1575 |
| 1/4-28 | 7/16-14 | .437 | 23/64 | 7/16-14 | 1/2 | E | 1576 |
| 5/16-24 | 1/2-13 | .484 | 27/64 | 1/2-13 | 9/16 | E | 1577 |
| 3/8-24 | 9/16-12 | .515 | 31/64 | 9/16-12 | 19/32 | E | 1578 |
| 7/16-20 | 5/8-11 | .656 | 17/32 | 5/8-11 | 23/32 | E | 1579 |
| 1/2-20 | 3/4-10 | .656 | 21/32 | 3/4-10 | 3/4 | E | 1580 |

## WOOD



The most effective way to make strong joints in hard wood, soft wood and particle board using machine screws and/or bolts.


| INTERNAL THREAD | MAX. DIA. EXT. THREAD | OVERALL LENGTH | DRILLED HOLE SIZE | | PART |
|---|---|---|---|---|---|
| 6-32 | .350 | .375 | 1/4" | R | 3786 |
| 8-32 | .350 | .375 | 1/4" | R | 3788 |
| 10-24 | .453 | .500 | 3/8" | R | 3790 |
| 10-32 | .453 | .500 | 3/8" | R | 3792 |
| 1/4-20 | .453 | .500 | 3/8" | R | 3794 |
| 5/16-18 | .594 | .562 | 1/2" | O | 3796 |
| 3/8-16 | .600 | .625 | 1/2" | O | 3798 |

### INSTALLATION TOOL

| SIZE | USS | SAE | | PART |
|---|---|---|---|---|
| 8 | 32 | - | A | 1893 |
| 10 | 24 | 32 | A | 1894 |
| 1/4 | 20 | 28 | A | 1895 |
| 5/16 | 18 | 24 | A | 1896 |
| 3/8 | 16 | 24 | A | 1897 |
| 7/16 | 14 | 20 | A | 1898 |
| 1/2 | 13 | 20 | A | 1899 |

# SELF-TAPPING THREADED INSERTS

## FOR USE IN ALUMINUM, ALUMINUM ALLOY, MAGNESIUM AND MILD STEEL

- **TAPS AND INSTALLS IN ONE EASY STEP SAVING TIME, MONEY AND LABOR**
- **DESIGNED TO PROVIDE MAXIMUM PULL-OUT STRENGTH AND WEAR RESISTANT THREADS IN ALUMINUM, ALUMINUM ALLOY, MAGNESIUM AND MILD STEEL**
- **THREE LATERAL CUTTING HOLES PROVIDES AN EASY SELF-TAPPING INSTALLATION RESULTING IN A CONNECTION HIGHLY RESISTANT TO VIBRATION**

17785

**SUPERIOR PULL-OUT RESISTANCE IN SOFTER METALS AND PLASTICS FROM THE EXTERNAL V-FORM THREAD.**

**CIRCULAR CUTTING ELEMENTS SELF-TAP AND LOCK INTO THE BASE MATERIAL. RESISTS EXTREME VIBRATION WITH NO LOSS IN PERFORMANCE.**

**HIGH-QUALITY INTERNAL THREADS ARE WEAR RESISTANT STANDARD CLASS 2B.**

***INSTALLATION INSTRUCTIONS:***
***(Using a hex head cap screw and nut)***

1. **Drill to recommended hole size.**
2. **Thread hex nut onto cap screw. Screw insert onto cap screw with holes away from nut. Tighten the nut snugly to the top of the insert.**
3. **Using appropriate wrench or socket, carefully align insert perpendicular to the hole and turn clockwise until flush with surface. To remove cap screw, hold the nut with a wrench and loosen cap screw.**

| SIZE | LENGTH | DRILL/ HOLE SIZE | HOLE DEPTH | PART | SIZE | LENGTH | DRILL/ HOLE SIZE | HOLE DEPTH | PART |
|---|---|---|---|---|---|---|---|---|---|
| 4-40 | .236 | #15 (.181) | .315 | N 1940 | 1/4-20 | .472 | U (.366) | .591 | N 1945 |
| 6-32 | .315 | 7/32 (.216) | .394 | N 1941 | 5/16-18 | .551 | 7/16 (.437) | .669 | I 1946 |
| 8-32 | .315 | 15/64 (.236) | .394 | N 1942 | 3/8-16 | .709 | 33/64 (.516) | .866 | I 1947 |
| 10-24 | .394 | L (.291) | .512 | N 1943 | 7/16-14 | .866 | 19/32 (.590) | 1.024 | I 1948 |
| 10-32 | .394 | L (.291) | .512 | N 1944 | 1/2-13 | .945 | 43/64 (.669) | 1.102 | I 1949 |
| – | – | – – | – | | 5/8-11 | .945 | 3/4 (.748) | 1.102 | E 1950 |



# HI-TORQUER TOOL AND CONVERSION KITS

- **EASILY INSTALLS ALL SIZES OF THREADED INSERTS**
- **"QUICK-CHANGE" THREAD ADAPTATION KIT CHANGE OVER OF THE BASE TOOL (TOOL BODY WITH "T" HANDLE) TO PLACE DIFFERENT THREAD SIZES WITHOUT THE NEED OF ANY TOOLS**

17861

***INSTALLATION INSTRUCTIONS:***

1. **Lock the correct size conversion kit into the Hi-Torquer threaded insert tool.**
2. **Screw a nutsert or threadsert onto socket head cap screw.**
3. **Using the tool, place the insert into the hole until the tool comes to rest on the base material.**
4. **Hold in place with handle and turn the T-handle until insert is installed.**
5. **Remove the tool by unscrewing the T-handle out of the insert.**

**HEX DRIVER** | **SOCKET HEAD CAP SCREW** | **METAL WASHER** | **BRASS WASHER** | **NUT**

**HI-TORQUER THREADED INSERT TOOL**

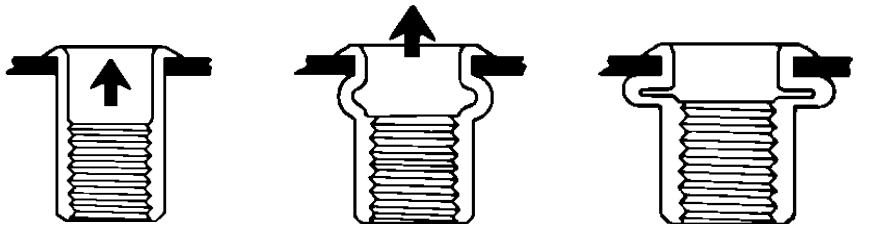
**CONVERSION KIT**

| DESCRIPTION | PART | DESCRIPTION | PART |
|---|---|---|---|
| Hi-Torquer Threaded Insert Tool | A 9611 | 1/4-20 Hi-Torquer Conversion Kit | A 22105 |
| 4-40 Hi-Torquer Conversion Kit | A 22100 | 1/4-28 Hi-Torquer Conversion Kit | A 22106 |
| 6-32 Hi-Torquer Conversion Kit | A 22101 | 5/16-18 Hi-Torquer Conversion Kit | A 22107 |
| 8-32 Hi-Torquer Conversion Kit | A 22102 | 5/16-24 Hi-Torquer Conversion Kit | A 22108 |
| 10-24 Hi-Torquer Conversion Kit | A 22103 | 3/8-16 Hi-Torquer Conversion Kit | A 22109 |
| 10-32 Hi-Torquer Conversion Kit | A 22104 | 3/8-24 Hi-Torquer Conversion Kit | A 22110 |

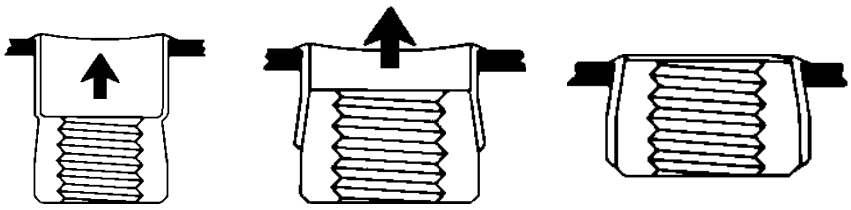
# KNURLED FLANGED THREADED INSERT FASTENERS

## FAST, CONVENIENT INSTALLATION OF THREADS IN ANY BLIND AREA

Knurled Flanged Thinserts and Nutserts are an easily-installed alternative to many "blind" fasteners. They offer strength, permanence and load-bearing capabilities for a variety of materials.



**THINSERTS**
**DESIGNED TO PROVIDE A HIGHLY EFFICIENT METHOD OF SECURING THREADS FROM ONE SIDE OF WORK IN MATERIALS TOO THIN TO SUPPORT THREADS. FOR MATERIALS .020" TO .200" THICK.**



**NUTSERTS**
**UNIQUE "BREAKAWAY" DESIGN PROVIDES SUPERIOR HOLDING POWER. A CONICALLY-SHAPED THREADED BASE IS DRAWN INTO THE UPPER SLEEVE, WEDGING THE SLEEVE FIRMLY IN THE HOLE. FOR MATERIALS .030" AND THICKER.**



### THINSERTS

17828

- **SPLINED BODY PROVIDES INCREASED TORQUE-TO-TURN RESISTANCE OVER CONVENTIONAL NON-SPLINED INSERTS**
- **LOW PROFILE HEAD PROVIDES NEAR-FLUSH SEATING WITHOUT SPECIAL HOLE PREPARATION**
- **MATERIAL THICKNESS RANGING FROM .020" TO 0.312"**
- **HARDENED SURFACE PROVIDING HIGH-STRENGTH, LOAD-BEARING THREADS**
- **LEAD-IN CHAMFER ON THE BODY PROVIDES EASE OF INSERTION INTO THE WORK PIECE**

| SIZE | DRILL SIZE | | PART |
|---|---|---|---|
| 6-32 | 17/64 | T | 590 |
| 8-32 | 17/64 | T | 591 |
| 10-24 | 19/64 | T | 592 |
| 10-32 | 19/64 | T | 593 |
| 1/4-20 | 25/64 | T | 594 |
| 5/16-18 | 17/32 | R | 595 |
| 3/8-16 | 17/32 | R | 596 |
| - | - | | - |
| - | - | | - |

### NUTSERTS

17828

- **REDUCED ASSEMBLY COSTS – INSTALLED FROM ONE SIDE OF THE WORKPIECE**
- **NOT GRIP SENSITIVE – CAN BE USED IN ANY MATERIAL THICKNESS FROM .030" THROUGH SOLID MATERIALS**
- **PERMANENT – RADIAL EXPANSION PROVIDES 360° CONTACT WITH PARENT MATERIAL**
- **PORTABILITY – ALLOWS INSTALLATION ANYWHERE AND AT ANY TIME IN THE ASSEMBLY PROCESS**
- **REDUCED REAR-SHEET PROTRUSION**

| SIZE | DRILL SIZE | | PART |
|---|---|---|---|
| 4-40 | 3/16 | R | 47900 |
| 6-32 | 7/32 | R | 47901 |
| 8-32 | 1/4 | R | 47902 |
| 10-24 | 9/32 | R | 47903 |
| 10-32 | 9/32 | R | 47904 |
| 1/4-20 | 3/8 | R | 47905 |
| 1/4-28 | 3/8 | R | 47906 |
| 5/16-18 | 1/2 | N | 47907 |
| 5/16-24 | 1/2 | N | 47908 |

### ADAPTERS/MANDRELS

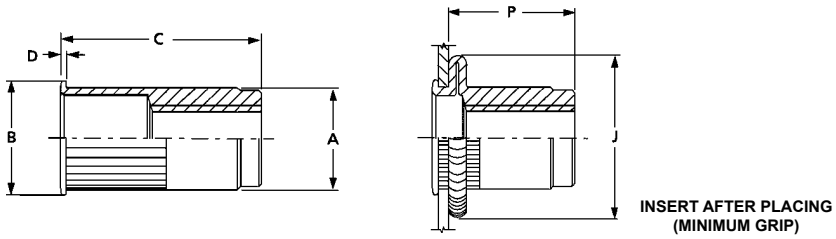
17829

| SIZE | | PART |
|---|---|---|
| 4-40 | A | 460 |
| 6-32 | A | 483 |
| 8-32 | A | 484 |
| 10-24 | A | 485 |
| 10-32 | A | 486 |
| 1/4-20 | A | 488 |
| 1/4-28 | A | 492 |
| 5/16-18 | A | 490 |
| 5/16-24 | A | 493 |
| 3/8-16 | A | 489 |

# KNURLED FLANGED INSERT FASTENERS (Cont'd.)

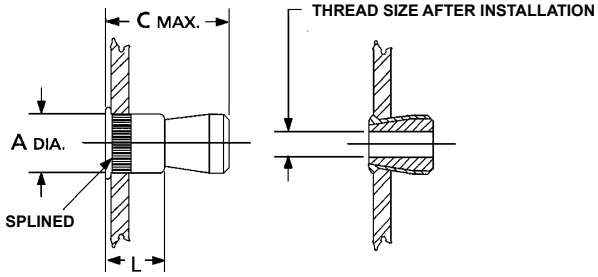
## SPECIFICATIONS

### THINSERTS




| THREAD DESIGNATION | GRIP RANGE | HOLE DIA. +.006 –.000 | A MAX. | B NOM. | C MAX. | P REF. | D MAX. | J MAX. |
|---|---|---|---|---|---|---|---|---|
| 6-32 and 8-32 | .020 - .080 | 17/64 (.2656) | .265 | .310 | .450 | .305 | .019 | .390 |
| 10-24 and 10-32 | .020 - .130 | 19/64 (.2969) | .296 | .340 | .505 | .315 | .020 | .450 |
| 1/4-20 | .027 - .165 | 25/64 (.3906) | .390 | .455 | .610 | .380 | .021 | .550 |
| 5/16-18 and 3/8-16 | .027 - .150 | 17/32 (.5312) | .530 | .595 | .720 | .470 | .023 | .740 |

### NUTSERTS




| THREAD SIZE | A | L | C | SUGGESTED HOLE SIZE FOR MATERIAL THICKNESS | | | |
|---|---|---|---|---|---|---|---|
| | | | | .030-.090 | .091-.124 | .125-.186 | .187-OVER |
| 4-40 | .1820 - .1870 | .180 - .190 | .385 | .1875 | .1935 | .1935 | .1935 |
| 6-32 | .2136 - .2186 | .180 - .190 | .385 | .2187 | .2210 | .2280 | .2280 |
| 8-32 | .2449 - .2499 | .180 - .190 | .385 | .2500 | .2570 | .2656 | .2656 |
| 10-24 | .2760 - .2810 | .180 - .190 | .385 | .2812 | .2900 | .2968 | .2968 |
| 10-32 | .2760 - .2810 | .180 - .190 | .385 | .2812 | .2900 | .2968 | .2968 |
| 1/4-20 | .3699 - .3749 | .252 - .262 | .525 | .375 | .375 | .386 | .3906 |
| 1/4-28 | .3699 - .3749 | .252 - .262 | .525 | .375 | .375 | .386 | .3906 |
| 5/16-18 | .4949 - .4999 | .302 - .312 | .625 | .500 | .500 | .5156 | .5156 |
| 5/16-24 | .4949 - .4999 | .302 - .312 | .625 | .500 | .500 | .5156 | .5156 |

### QUIK TOOL KITS

**KIT INCLUDES:**
- **QUIK TOOL**
- **ADAPTERS/MANDRELS 6-32, 8-32, 10-24, 1/4-20 AND 5/16-18**

**P/N 9600**

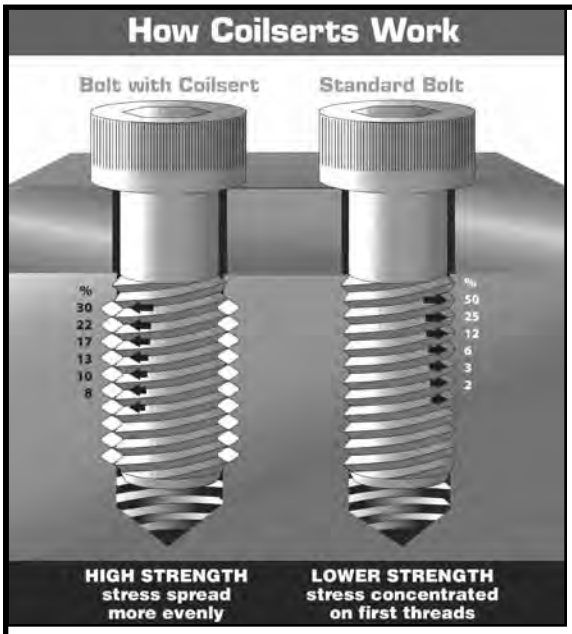
### QUIK TOOL (WITHOUT ADAPTER)

**P/N 9610**

# COILSERTS

## PERMANENT AND WEAR RESISTANT THREAD REPAIR INSERT

Coilserts are the quickest and simplest method of repair to stripped or damaged threads.
A complete system of coilsert, STI tap and installation tools are offered.




*In conventional threaded joints over 75% of the load is placed on the first three theads of the assembly. Coilsert on the left shows how the spring-like design of the insert allows the shear loading to be transformed into a preferable "hoop stress" or radial loading over the entire length of the insert.*

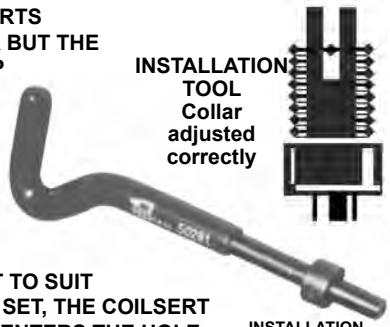
**COILSERTS**

- **ROLLED FROM HIGH QUALITY STAINLESS STEEL WIRE WOUND TO THE SHAPE OF A SPRING THREAD**
- **ONCE THE WIRE IS WOUND INTO A HELICAL COIL AND INSTALLED INTO A TAPPED HOLE, IT PROVIDES A PERMANENT AND WEAR RESISTANT THREAD IN THE PARENT MATERIAL THAT IS GENERALLY STRONGER THAN THE ORIGINAL THREAD**
- **COILSERT'S COMPENSATORY ACTION SHARES THE LOAD OVER THE ENTIRE BOLT AND HOLE, INCREASING HOLDING OR PULL OUT STRENGTH**
- **WITH A COILSERT IN PLACE, LOAD AND STRESS ARE MORE EVENLY DISTRIBUTED**


**COILSERT (partially installed)**

**STI TAPS**

- **SCREW THREAD INSERT (STI) TAPS ARE ONLY SUITABLE FOR USE WITH COILSERTS**
- **THEY HAVE A LARGER DIAMETER BUT THE SAME PITCH AS A STANDARD TAP IN ORDER TO ACCOMMODATE THE WIRE INSERT**



**INSTALLATION TOOL Collar adjusted correctly**

**INSTALLATION TOOL**

**INSTALLATION TOOL**

- **THE MOST PRACTICAL AND SIMPLE TO USE FOR GENERAL APPLICATIONS**
- **CARE MUST BE TAKEN TO ENSURE THAT THE ADJUSTABLE COLLAR IS CORRECTLY SET TO SUIT THE PARTICULAR TYPE AND LENGTH OF THE COILSERT. IF THE COLLAR IS CORRECTLY SET, THE COILSERT WILL NOT DRIVE PROPERLY AND THE TOOL MAY SLIP OFF THE TANG AS THE COILSERT ENTERS THE HOLE.**



### USS THREAD SIZES

| INTERNAL THREAD | LENGTH | TAP DRILL DIA. | PART | STI TAP PART | INSTALLATION TOOL |
|---|---|---|---|---|---|
| 1/4-20 | 1-1/2 | 17/64 | R 21823 | A 21823T | A 21861 |
| 5/16-18 | 1-1/2 | 21/64 | N 21825 | A 21825T | A 21862 |
| 3/8-16 | 1-1/2 | 25/64 | N 21827 | A 21827T | A 21864 |
| 7/16-14 | 1-1/2 | 29/64 | N 21829 | A 21829T | A 21866 |
| 1/2-13 | 1-1/2 | 17/32 | I 21831 | A 21831T | A 21867 |
| 9/16-12 | 1-1/2 | 19/32 | I 21833 | A 21833T | A 21868 |
| 5/8-11 | 1-1/2 | 21/32 | E 21835 | A 21835T | A 21869 |
| 3/4-10 | 1" | 25/32 | E 21837 | A 21837T | A 21870 |
| 7/8-9 | 1" | 29/32 | E 21839 | A 21839T | A 21871 |
| 1-8 | 1-1/2 | 1-1/32 | B 21841 | A 21841T | A 21872 |

### SAE THREAD SIZES

| | | | | | |
|---|---|---|---|---|---|
| 1/4-28 | 1-1/2 | 17/64 | R 21824 | A 21824T | A 21861 |
| 5/16-24 | 1-1/2 | 21/64 | N 21826 | A 21826T | A 21863 |
| 3/8-24 | 1-1/2 | 25/64 | N 21828 | A 21828T | A 21865 |
| 7/16-20 | 1-1/2 | 29/64 | N 21830 | A 21830T | A 21866 |
| 1/2-20 | 1-1/2 | 33/64 | I 21832 | A 21832T | A 21867 |
| 9/16-18 | 1-1/2 | 37/64 | I 21834 | A 21834T | A 21868 |
| 5/8-18 | 1-1/2 | 41/64 | E 21836 | A 21836T | A 21869 |
| 3/4-16 | 1" | 49/64 | E 21838 | A 21838T | A 21870 |
| 7/8-14 | 1" | 57/64 | E 21840 | A 21840T | A 21871 |
| 1-14 | 1-1/2 | 1-1/32 | B 21842 | A 21842T | A 21872 |

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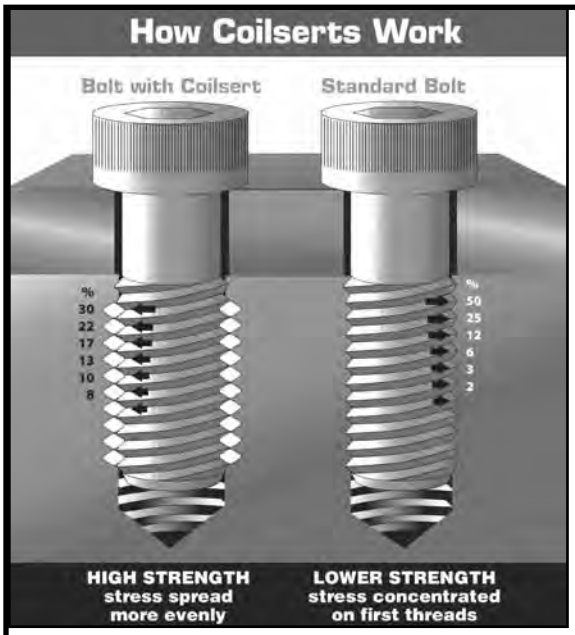


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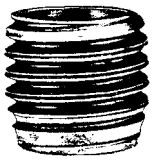
### METRIC THREAD SIZES

| INTERNAL THREAD | LENGTH | TAP DRILL DIA. | PART | STI TAP PART | INSTALLATION TOOL |
|---|---|---|---|---|---|
| M3 x .5 | 1-1/2 | 3.10 | R 21843 | A 21843T | A 21858 |
| M4 x .7 | 1-1/2 | 4.10 | R 21844 | A 21844T | A 21859 |
| M5 x .8 | 2 | 5.20 | N 21845 | A 21845T | A 21860 |
| M6 x 1 | 1-1/2 | 6.20 | N 21846 | A 21846T | A 21861 |
| M7 x 1 | 1-1/2 | 7.20 | N 21847 | A 21847T | A 21862 |
| M8 x 1 | 1-1/2 | 8.20 | N 21848 | A 21848T | A 21863 |
| M8 x 1.25 | 1-1/2 | 8.30 | N 21849 | A 21849T | A 21863 |
| M9 x 1 | 1-1/2 | 9.30 | N 21850 | A 21850T | A 21864 |
| M9 x 1.25 | 1-1/2 | 9.30 | N 21851 | A 21851T | A 21864 |
| M10 x 1.25 | 1-1/2 | 10.30 | N 21852 | A 21852T | A 21865 |
| M10 x 1.5 | 1-1/2 | 10.30 | N 21853 | A 21853T | A 21864 |
| M11 x 1.25 | 1-1/2 | 11.30 | N 21854 | A 21854T | A 21866 |
| M11 x 1.5 | 1-1/2 | 11.30 | N 21855 | A 21855T | A 21866 |
| M12 x 1.5 | 1-1/2 | 12.50 | I 21856 | A 21856T | A 21867 |
| M12 x 1.75 | 1-1/2 | 12.40 | I 21857 | A 21857T | A 21867 |

# CIC 200™ METRIC THREAD REPAIR INSERTS



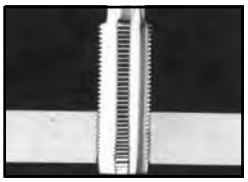
| INTERNAL THREAD | EXTERNAL THREAD | LENGTH SIZE | TAP DRILL SIZE | TAP SIZE | THREAD DEPTH | PART |
|---|---|---|---|---|---|---|
| **METRIC INTERNAL/METRIC EXTERNAL** | | | | | | |
| M3-0.5 | M6-1.0 | 6.5mm | 5.1mm (or #7) | M6-1.0 | 7.8mm | I 1860 |
| M4-0.7 | M8-1.25 | 7.5mm | 6.9mm (or I) | M8-1.25 | 8.5mm | I 1861 |
| M5-0.8 | M8-1.25 | 7.5mm | 6.9mm (or I) | M8-1.25 | 9.0mm | I 1862 |
| M14-1.25* | M18-1.5 | 11.5mm | 15.5mm (or 5/8) | M18-1.5 | 12.7mm | E 1876* |
| **METRIC INTERNAL — USS EXTERNAL** | | | | | | |
| M6-1.0 | 3/8-16 | .406 | 5/16 | 3/8-16 | 15/32 | L 1867 |
| M8-1.25 | 1/2-13 | .484 | 27/64 | 1/2-13 | 9/16 | I 1868 |
| M10-1.50 | 9/16-12 | .515 | 31/64 | 9/16-12 | 19/32 | I 1869 |
| M12-1.75 | 3/4-10 | .656 | 21/32 | 3/4-10 | 3/4 | E 1870 |
| M14-2.0 | 7/8-9 | .687 | 49/64 | 7/8-9 | 13/16 | E 1871 |
| M16-2.0 | 1-8 | .781 | 7/8 | 1-8 | 7/8 | E 1872 |

* FOR 14mm SPARK PLUGS (12.7mm REACH)



# METRIC THIN WALL PERMASERTS™

1. Drill out old threads, using standard drill.

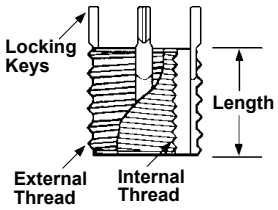


2. Tap new threads, using standard tap.

3. Screw in insert until slightly below surface. "Kees" act as depth stop.

4. Drive "Kees" down with several light taps on installation tool.

5. Installed insert




- SOLID BUSHING WITH LOCKING KEES – PROVIDES POSITIVE MECHANICAL LOCKING AGAINST ROTATION
- USE IN ALUMINUM, MAGNESIUM, CAST IRON, COLD ROLLED STEEL AND PLASTIC – NO RESTRICTIONS ON PARENT MATERIAL
- HIGH STRENGTH AND RELIABILITY – PROVIDES MAXIMUM PULLOUT STRENGTH; BREAKS GRADE 8 BOLT
- EASY INSTALLATION – LEARN IN MINUTES
- HOLE PREPARED WITH STANDARD DRILL AND TAP – NO SPECIAL, COSTLY, SINGLE-PURPOSE DRILLS OR TAPS REQUIRED
- INSERT WITH FINGERS – NO SPECIAL PRE-WINDER TOOLS REQUIRED
- IMPOSSIBLE TO CROSS-THREAD DURING INSTALLATION – PERFECT EVERY TIME
- SIMPLE REMOVAL – PERMANENTLY INSTALLED UNLESS REMOVAL IS REQUIRED

INSTALLATION TOOL

| INTERNAL THREAD | EXTERNAL THREAD | LENGTH | TAP DRILL DIA. | DRILL REMOVAL SIZE | DRILL REMOVAL DEPTH | PART | INSTALLATION TOOL |
|---|---|---|---|---|---|---|---|
| **METRIC THREAD SIZES** | | | | | | | |
| M5 x .8 | M8 x 1.25 | 8.0 | 6.9 or I | 5.5 | 4 | E 21800 | A 21815 |
| M6 x 1 | M10 x 1.25 | 10.0 | 8.8 or 11/32 | 7.5 | 4.75 | E 21801 | A 21816 |
| M8 x 1.25 | M12 x 1.25 | 12.0 | 10.8 or 27/64 | 9.5 | 4.75 | C 21802 | A 21817 |
| M8 x 1 | M12 x 1.25 | 12.0 | 10.8 or 27/64 | 9.5 | 4.75 | C 21803 | A 21818 |
| M10 x 1.5 | M14 x 1.5 | 14.0 | 12.8 or 1/2 | 11.5 | 4.75 | B 21804 | A 21819 |
| M10 x 1.25 | M14 x 1.5 | 14.0 | 12.8 or 1/2 | 11.5 | 4.75 | B 21805 | A 21820 |
| M12 x 1.75 | M16 x 1.5 | 16.0 | 14.75 or 37/64 | 13.5 | 4.75 | B 21806 | A 21821 |
| M12 x 1.25 | M16 x 1.5 | 16.0 | 14.75 or 37/64 | 13.5 | 4.75 | B 21807 | A 21822 |