

For Correcting Tapping Errors and Restoring Screw Thread Insert Tapped Holes.

Oversize™ Inserts and Twinserts®

Two types of Heli-Coil® Thread Repair Kits are available for correcting tapping errors to sTi* and standard tapped holes. Oversize Inserts and Twinserts allow use of the original bolt size after the repair has been made. Each type of kit is described fully on the following pages.

Oversize Inserts are primarily used to correct Heli-Coil® Insert assemblies that gage oversize due to tapping errors. The effective correction is achieved through a larger wire cross section.

Twinserts offer a greater degree of correction to oversize tapping errors because of the larger diameter that results from installing one insert inside another. This larger diameter allows repair of stripped sTi holes as well as off-center sTi and standard tapped holes. Holes tapped with the incorrect diameter and/or pitch can also be repaired.

For questions on how to use Oversize Insert and Twinsert Kits, contact the Heli-Coil® Applications Engineering Department in Danbury, CT. at (203) 830-3274.

APPROVALS

Heli-Coil® Oversize Inserts and Twinserts have been approved for use by many U.S. Government agencies. U.S. Air Force T.O. 44H1-1-117 prescribes their use in maintenance and salvage operations at major overhaul bases.

Oversize™ Inserts

DESCRIPTION

Oversize Inserts are Heli-Coil®s Inserts with a larger wire cross section.

WHEN TO USE

Oversize Inserts are used to correct the tapping errors that cause sTi* assemblies to gage oversize. They can also be used to correct conditions of slight taper and bell-mouth in sTi tapped holes.

SIZES AVAILABLE

Oversize Insert Kits and components come in inch sizes UNC and UNF, and Metric sizes as shown in the following tables. When Oversize Inserts are installed, the original internal thread size is re-established allowing installation of the original size bolt. The columns on the right of Tables A & C indicate the effective correction to the pitch diameter of oversize tapped holes.

HOW TO ORDER

Kits are ordered by part number from Tables A & C. Kits are available with either free running or Screw-Lock Inserts in 1-1/2 diameter lengths. Kit components can be ordered from Tables B & D if necessary as well as optional 2 diameter length inserts.

KIT CONTENTS

Each kit contains the quantity of 1-1/2 diameter inserts indicated in Tables A and C and a special oversize bottoming tap. For identification, the tang and bottom coil are dyed yellow on all Oversize Inserts.

HOW TO INSTALL

1. Retap the oversize hole with the special bottoming tap furnished in the kit. No re-drilling is necessary. For critical applications, refer to the tapping and gaging procedure listed in the Engineering Data and Trouble Shooting section.
2. Install the insert to the proper depth below the top surface (1/4 to 1/2 pitch for tapped holes without a countersink and 1 to 1-1/2 pitch for holes with a countersink). Use the same tool recommended for a standard Heli-Coil Insert of the same size.
3. If the assembly is still oversize, it will be necessary to resort to a Twinsert Repair Kit as shown on pages 6 & 7. Note – a standard gage can be used to check an installed free-running Oversize Insert assembly provided the insert is fully seated.
4. When assembly is satisfactory, remove the tang with the tang break-off tool recommended for the original insert.

*Screw Thread Insert