

## INSTALLATION INSTRUCTIONS FOR FIELD ASSEMBLY OF TAPER THREADED GRIP-TWIST® NC BOLT CONNECTOR COUPLERS

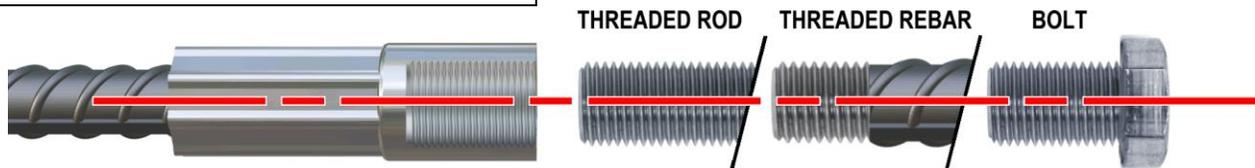
**FABRICATOR IS RESPONSIBLE FOR PROVIDING THESE INSTRUCTIONS TO THE PLACER AND/OR CONTRACTOR.**

Taper Threaded Grip-Twist® NC Bolt Connector couplers are shipped with color-coded plastic plugs to protect the threads. These should be kept in place until time of assembly. If missing, obtain the correct plugs from the manufacturer. If thread damage is discovered, it must be corrected before assembly to avoid premature binding. Minor damage can be fixed using a thread file, or a thread cleaning tool. **DO NOT TRY TO ASSEMBLE DAMAGED THREADS.** All Female couplers are marked with the intended rebar size and male component thread size. Take care to install the correct size male component (threaded rod, threaded rebar, bolt, etc.) into the corresponding size Female coupler. **DO NOT USE WITH REBAR OR UNC THREADED MALE COMPONENT THAT IS LARGER OR SMALLER THAN THE INTENDED SIZE. STORE COUPLERS IN A CLEAN, DRY PLACE UNTIL READY TO INSTALL.**

**CAUTION:** If installing in stages, make sure the couplers placed first are completely swaged, and that the threads are protected. Check to ensure thread plugs are installed in all Female couplers prior to pouring concrete around or over the placed couplers. **DO NOT PLACE REINFORCING BAR IF SWAGING IS NOT CORRECT, AND DO NOT POUR CONCRETE IF THREADS ARE NOT PROTECTED.**

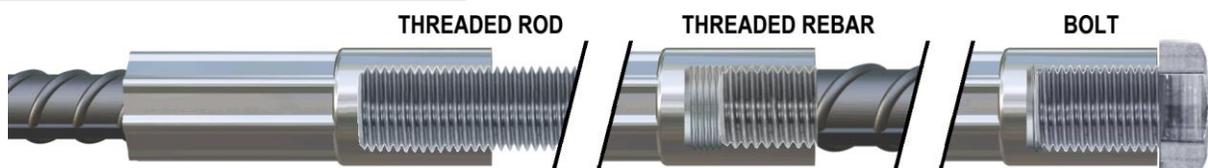
- 1) Remove the protective plug from the Female coupler and check both external (male – threaded rod, threaded rebar, bolt, etc.) and internal (Female NC Bolt connector coupler) threads for cleanliness. Clean off any debris and/or foreign matter. **DO NOT USE CORROSIVE ACIDS.** Any thread damage must be corrected as noted above prior to installation.
- 2) Locate the Female coupler and UNC threaded male component, and line them up as straight as possible so that the threads will screw together without binding. See **FIGURE 1** for pre-assembled connection.

**FIGURE 1: PRE-ASSEMBLED CONNECTION**



- 3) After the initial thread location, rotate the free component clockwise making sure the two halves remain aligned. If you feel the threads starting to prematurely bind, **DO NOT FORCE THEM.** Shake the free end while turning, allowing it to rotate in its own natural circle with the threads aligned. Continue to rotate until **FULLY ENGAGED** and **SNUG**. Final installation depth will depend on the type and length of the male component (threaded rod, threaded rebar, bolt, etc.) being installed. See **FIGURE 2** for assembled connection.

**FIGURE 2: ASSEMBLED CONNECTION**



**NOTE:** If the Male and Female threads do not properly engage during assembly, stop immediately. Disassemble the connection to determine the problem. Possible causes of mis-assembly may be mis-matched thread sizes, contaminated threads (i.e. concrete, dirt, etc.) or damaged threads. Re-assemble only after the problem has been identified and corrected.

- 4) A chain wrench or pipe wrench can be used to snug and tighten the male component (threaded rod, threaded rebar, bolt, etc.) and Female coupler as needed. Always consider your own **personal safety**. Make sure you are securely positioned and that you will not slip or fall during installation. Use only good quality wrenches that will not round-out.

**NOTE:** Long lengths of threaded rod or rebar, especially large diameters, are heavy. To overcome weight, it may be necessary to use an extension bar. As necessary, use the following wrench lengths as a guide: Bar sizes #4 - #6 (12-19 mm) = 8 - 12" (20-30 cm) length; Sizes #7 - #8 (22-25 mm) = 12 - 18" (30-45 cm) length; Sizes #9 - #11 (29 - 36 mm) = 18 - 24" (45-60 cm) length; and Sizes #14 - #18 (43-57 mm) = 24-36" (60-90 cm) length. **DO NOT WIRE TIE COMPONENTS UNTIL AFTER FULL ASSEMBLY.**

- 5) After assembly, inspect for complete swaging of the couplers and proper thread engagement. If needed, fully assembled threads can be double-checked by the application of a chain wrench or pipe wrench as described above, to ensure the couplers are snug. **IT IS NOT NECESSARY TO USE A TORQUE WRENCH OR APPLY A HIGH TORQUE VALUE.**