

INSTALLATION INSTRUCTIONS FOR FIELD ASSEMBLY OF TAPER THREADED GRIP-TWIST® STANDARD & XT COUPLERS WITH FEMALE FLANGE

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

Taper Threaded Grip-Twist® Male and Female couplers are shipped with color-coded plastic caps and plugs to protect the threads. These should be kept in place until time of assembly. If missing, obtain the correct caps and/or 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 Male and Female couplers are marked with the intended rebar size. Take care to install the correct size Male coupler into the corresponding size Female coupler. **DO NOT USE WITH REBAR THAT IS LARGER OR SMALLER THAN THE INTENDED BAR SIZE.** STORE MALE AND FEMALE COUPLERS IN A CLEAN, DRY PLACE UNTIL READY TO INSTALL.

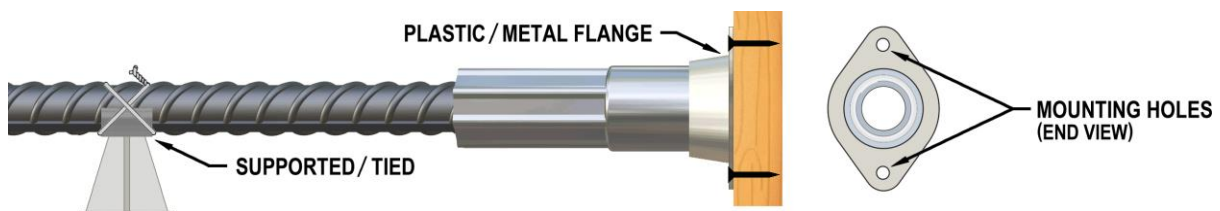
When the bar cannot be turned, use a Grip-Twist® Position coupler or an alternate splice system such as Zap Screwlok®. This product is **NOT** suitable for use on CURVED REBAR.

CAUTION: When installing to a form, make sure the Female couplers are completely swaged, and that the threads are protected. Check to ensure thread plugs are installed in all Female couplers prior to attaching to form or 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) Attach Taper Threaded Grip-Twist® Female couplers supplied with a metal or inert plastic flange to the formwork using suitable screws or nails through the two holes in the flange. When reinforcing bar is horizontal, make sure to use both holes with the flange orientated vertically as shown in **FIGURE 1**.

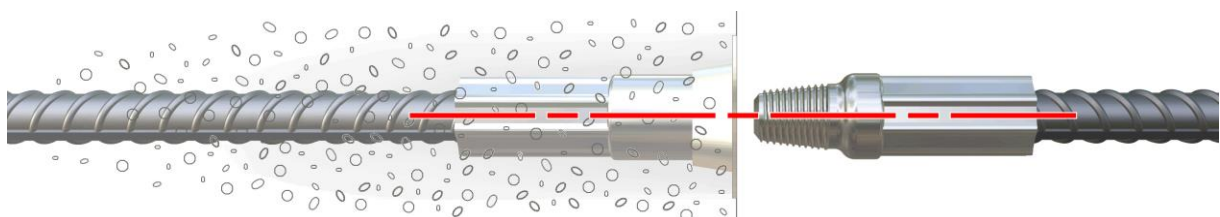
NOTE: Flanges are **NOT** structural components. After attachment, rebar extending from the coupler **MUST** be properly supported and tied to prevent bar movement which could result in the flanges disconnecting from the coupler, or the coupler pulling away from the form. **DO NOT STAND ON UNSUPPORTED OR IMPROPERLY SUPPORTED BARS AND/OR COUPLERS.**

FIGURE 1: FLANGE CONNECTION AND ORIENTATION



- 2) After pouring concrete, and removing the form, remove the protective cap from the TTGT Male coupler and the protective plug from the Female coupler and check both external (Male) and internal (Female) 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.
- 3) Locate the Male and Female coupler, and line them up as straight as possible. See **FIGURE 2** for pre-assembled connection. **DO NOT ALIGN THE REBAR.** Align the COUPLERS so that the threads will screw together without binding.

FIGURE 2: PRE-ASSEMBLED CONNECTION



- 4) After the initial thread location, rotate the free rebar clockwise making sure the two coupler halves remain aligned. If you feel the threads starting to prematurely bind, **DO NOT FORCE THEM**. Shake the free end of the rebar while turning, allowing the free end of the rebar to rotate in its own natural circle with the coupler threads aligned. Continue to rotate (approximately 4 – 5 rotations) until **FULLY ENGAGED** and **SNUG**. See **FIGURE 3** for assembled connection.

FIGURE 3: 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.

- 5) A chain wrench or pipe wrench can be used to snug and tighten the Male and Female couplers 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 rebar, especially large diameter bars, are heavy. To overcome rebar weight, it may be necessary to use an extension bar. As necessary, use the following wrench lengths as a guide: Bar sizes #4 - #6 (16-19 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 #12 - #18 (38-57 mm) = 24-36" (60-90 cm) length. **DO NOT WIRE TIE BARS UNTIL AFTER FULL ASSEMBLY.**

- 6) After assembly, inspect for complete swaging of the couplers and proper thread engagement. For taper threads, some variation in the number of exposed threads is natural due to the thread tolerance and run-out. In general, it is typical to see 0 to 1 complete thread(s) after full assembly, per **FIGURE 3**. If needed, fully assembled taper threads can be double-checked using 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.**