Helical Ties for T2 Conductor

**CONSTRUCTION**

T2 conductor consists of two identical conductors twisted together in a left-hand lay direction at an approximate nine foot pitch length. Generally the conductors used are standard ACSR, AAC or AAAC construction but can be conductors of any configuration.

**THEORY**

The spiral shape of the two conductors twisted together disrupts the forces created by the steady crosswinds that can cause cable motion. The forces are disrupted by the continuously changing profile exposed to the wind. This spiral shape, together with less torsional stiffness and varying bending stiffness also reduces or can minimize cable galloping due to ice and wind loads.

**APPLICATION**

T2 conductor can be used in regions that are subject to galloping due to wind and ice. T2 conductor is also designed to reduce the requirement for vibration protection when installed within accepted tension limits.
**GENERAL RECOMMENDATIONS**

T2 conductor is designed to prevent “typical” conductor motion activity like aeolian vibration and galloping, however, the non-circular configuration and unusual cable movement of T2 conductors requires special consideration of tie devices. When choosing products for T2 conductor, it is important not to mistake standard concentric conductor products listed in the catalog for similarly name T2 conductor. The T2 conductor equivalents require substantially larger sized products for similarly named conductor sizes. If a desired product is not listed in the product table in this section, contact Preformed Line Products to determine if the product has been reviewed. In many cases, Preformed Line Products can recommend products for a particular installation.

**INTENDED USE.** Manufactured formed wire ties secure conductors in the grooves of interchangeable headstyle insulators.

PREFORMED™ ties provide an improved method of securing conductor compared to clamp-top or hand-ties over Armor Rods.

**DEAD-ENDING.** T2 conductor can be terminated in the same manner as a single conductor except both of the elements of the T2 conductor requires its own Dead-end device. The two Dead-end devices should be terminated on separate hardware on the structure.

**CONDUCTOR REPAIR.** When repairing T2 conductor, the individual elements of the span must be analyzed and repaired separately. To accomplish this, it is important to know the construction of the T2 conductor so the correct repair components can be chosen.

**ARMOR RODS/ARMOR-GRIP® SUSPENSION/SUPPORT.** When using Armor Rods or ARMOR-GRIP Suspensions or Supports, the introduction of a third piece of conductor is advisable. This short section of conductor is equal to one of the conductor elements of the T2 conductor. The additional piece of conductor is placed in the interstices of the two conductor elements of the T2 conductor assembly in order to create an assembly that is closer to the shape of the circle. The appropriately sized Armor Rod or ARMOR-GRIP Suspensions or Supports can then be easily installed over this new assembly. The additional piece of conductor should be held in place by a few pieces of tape prior to the installation of the Armor Rods. For specific information on this installation including the length of the additional piece of conductor and the appropriate Armor Rods or ARMOR-GRIP Suspension or Supports catalog number, contact Preformed Line Products.

**INTERCHANGEABLE HEADSTYLE INSULATOR.** To insure proper fit and service life, it is recommended that only insulators corresponding to C-Neck, F-Neck, J-Neck, K-Neck, or spool insulators be used. These neck diameter and groove height dimensions appear in ANSI standards. Consult Preformed Line Products for engineering recommendations on non-interchangeable headstyle insulators. A sample of the insulator in question is desirable.

**SAFETY CONSIDERATIONS**

1. These products are intended for a single (one-time) use and for the specified application. CAUTION: DO NOT REUSE OR MODIFY THESE PRODUCTS UNDER ANY CIRCUMSTANCES.
2. This product is intended for use by trained craftspeople only. This product SHOULD NOT BE USED by anyone who is not familiar with and trained in the use of it.
3. When working in the area of energized lines with this product, EXTRA CARE should be taken to prevent accidental electrical contact.
4. For PROPER PERFORMANCE AND PERSONAL SAFETY be sure to select the proper size PREFORMED products before application.
5. PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.
Helical Ties for T2 Conductor

**PREFORMED™ TIES FOR T2 CONDUCTOR**

- **WRAPLOCK® Tie**
- **Distribution Tie**
- **EZ-WRAP® Spool Tie**
- **Spool Tie**
- **Double Support Tie**
- **Side Tie**
- **Double Side Tie**

**BENEFITS:**
- Elastomeric tubes/pads cushion to protect T2 conductor.
- No special equipment or installation techniques required.
- Reduces time required to tie in T2 conductor
- Minimizes possibility of mistakes during tie installations.
- Complete line of ties readily available for popular T2 conductors and insulators.
- Over 15 years of successful experience with support devices on T2 conductor
- Superior ability to hold T2 conductor to insulator
- Meets NESC longitudinal holding requirement
- Provides resiliency under all potential motion conditions
- Provides stability during twisting motion
**Helical Ties for T2 Conductor**

**For use on:**
ACSR, Compacted ACSR, Aluminum Alloy, All-Aluminum, AWAC®, Compacted All-Aluminum

<table>
<thead>
<tr>
<th>T2 Conductors</th>
<th>Distribution Ties</th>
<th>WRAPLOCK Tie</th>
<th>Spool Tie</th>
<th>EZ-WRAP Spool Ties</th>
<th>Double Support Ties</th>
<th>Double Side Ties</th>
<th>Side Ties</th>
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</thead>
<tbody>
<tr>
<td>2 x #4 (6/1) ACSR (7/W) AAAC</td>
<td>UTC-1106, UT-1206, UJ-1306, UTK-1606</td>
<td>WTC-0112 WTF-0212 WTI-0412</td>
<td>SPL-135-P</td>
<td>EZSP-4376</td>
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<td>DST-0354 (J)</td>
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<td>SPL-1360-P</td>
<td>EZSP-4379</td>
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<td>DST-0361 (J)</td>
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<td>DST-0361 (J)</td>
<td>DBST-1111 (F)</td>
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</table>

*Insulator groove not large enough for these T2 sizes.

**EXPLANATORY NOTES:**

1. User should make sure insulator groove radius is large enough for T2 conductor and PLP tie with pad.
2. This table represents application of the PLP ties on T2 conductor only.
3. Consideration should be made of the physical fit of the actual T2 conductor plus PLP tie on a specific insulator because variances in individual insulators can affect application.
   a. Only insulators with ANSI accepted dimensions should be used with PLP ties.
   b. PLP suggests application trials be conducted on actual T2 conductor, PLP ties and insulators prior to installation.
4. Consult PLP for application with Armor Rod, ARMOR-GRIP® Suspensions or Supports, or T2 conductor not shown.