

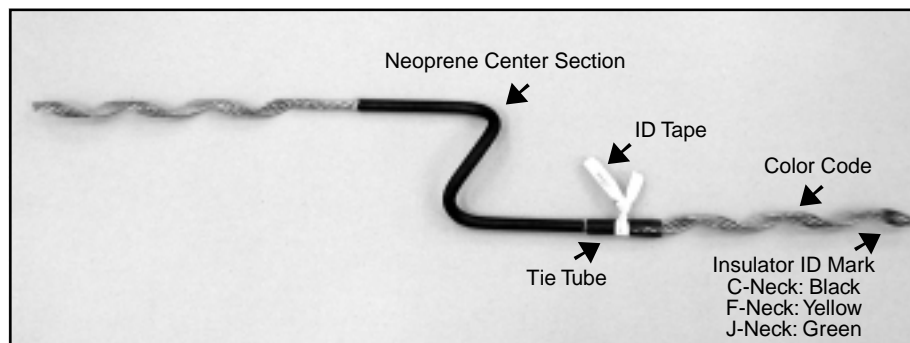
# APPLICATION PROCEDURE & SAFETY CONSIDERATIONS **PREFORMED** LINE PRODUCTS



## WRAPLOCK® TIE

### FOR TOP GROOVE, SINGLE INSULATOR INSTALLATIONS

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before installation.



WRAPLOCK Tie as received in the field

To aid in installation, grab the ends of the tie legs and bring them toward each other. This procedure will result in the legs naturally sweeping downward. This will force the legs to cross beneath the conductor during rotation. (Figures A, B, C)



FIGURE A



FIGURE B



FIGURE C

### 1.00 HAND APPLICATION

**1.01** Apply Tie Tube to conductor so that the conductor does not come into direct contact with the insulator. (Figure 1)



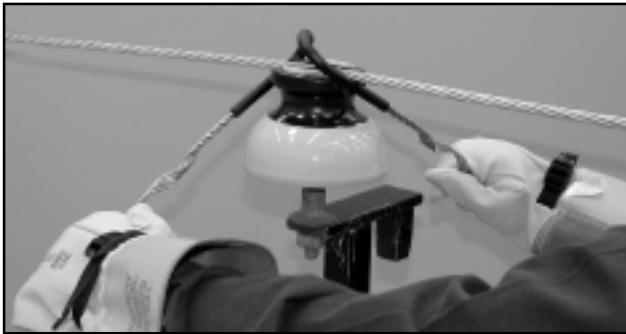
FIGURE 1

**1.02** Align the WRAPLOCK Tie with the conductor as shown, so that both legs are parallel to the conductor. (Figure 2)



FIGURE 2

**1.03** Rotate the WRAPLOCK Tie in a counter-clockwise direction. Make sure that both legs go under the conductor as shown. This MUST BE DONE to ensure the conductor is secured to the insulator. (Figure 3)



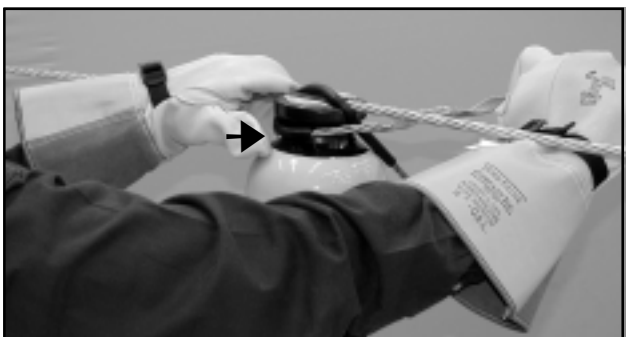
**FIGURE 3**

**1.04** Continue to rotate the legs for one quarter turn. Make sure the center of the tie seats squarely on the insulator head. (Figure 4)



**FIGURE 4**

**1.05** Bend one leg of the WRAPLOCK Tie around the neck of the insulator. Make sure the tie is firmly seated under the insulator ear (see arrow). (Figure 5)



**FIGURE 5**

**1.06** Wrap leg onto conductor, then snap the end into place with slight thumb pressure. (Figure 6)



**FIGURE 6**

**1.07** Bend the other leg of the WRAPLOCK Tie around the neck of the insulator. Again, make sure the tie is firmly seated under the insulator ear (see arrow). (Figure 7)



**FIGURE 7**

**1.08** Wrap leg onto conductor, then snap the end into place with slight thumb pressure. MAKE SURE TIE LOOP IS TIGHT ON INSULATOR NECK AND UNDER INSULATOR HEAD. (Figure 8)



**FIGURE 8**

- 1.09** Completed application of WRAPLOCK Tie. (Figure 9)



**FIGURE 9**

## 2.00 HOT-STICK APPLICATION

- 2.01** Apply Tie Tube to conductor so that conductor does not come into direct contact with the insulator. You may need to lift the conductor with the aid of another hot stick. (Figure 10)



**FIGURE 10**

- 2.02** Follow steps A through C. With one of the legs of the WRAPLOCK Tie in the jumper holding tool, align the WRAPLOCK Tie with the conductor as shown, so that the held leg is parallel to the conductor and the other leg is positioned to rotate under the conductor. (Figure 11)



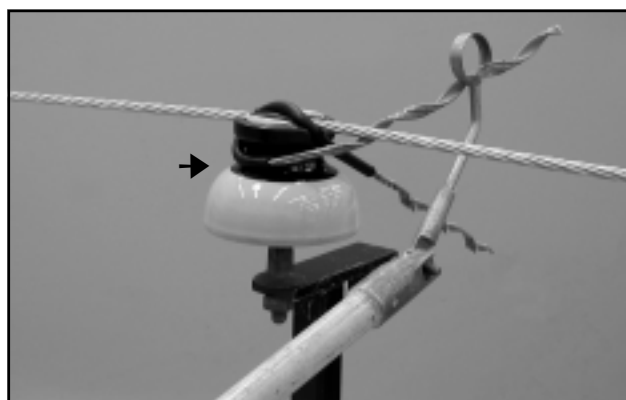
**FIGURE 11**

- 2.03** Rotate the WRAPLOCK Tie one-quarter turn in a counter-clockwise direction. Make sure that both legs go under the conductor as shown. This MUST BE DONE to ensure the conductor is secured to the insulator. (Figure 12)



**FIGURE 12**

- 2.04** Using the PREFORMED™ Applicator Ring, bend one leg of the WRAPLOCK Tie around the neck of the insulator. Make sure the tie is firmly seated under the insulator ear (see arrow). (Figure 13)



**FIGURE 13**

- 2.05** Wrap leg onto conductor, then snap the end of the leg into place with a twisting motion of the applicator ring. (Figure 14)



**FIGURE 14**

**2.06** Bend the other leg of the WRAPLOCK Tie around the neck of the insulator. Again, make sure the tie is firmly seated under the insulator ear (see arrow). Snap the ends of the legs into place with a twisting motion of the applicator ring. (Figure 15)



**FIGURE 15**

**2.07** Completed application of WRAPLOCK Tie. (Figure 16)



**FIGURE 16**

#### **SAFETY CONSIDERATIONS**

1. This Application Procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **CAUTION: FAILURE TO FOLLOW THESE PROCEDURES AND RESTRICTIONS MAY RESULT IN PERSONAL INJURY OR DEATH.**
2. This product is intended for a single (one-time) use and for the specified application. **CAUTION: DO NOT REUSE OR MODIFY THIS PRODUCT UNDER ANY CIRCUMSTANCES.**
3. 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.
4. When working in the area of energized lines with this product, **EXTRA CARE** should be taken to prevent accidental electrical contact.
5. For **PROPER PERFORMANCE AND PERSONAL SAFETY** be sure to select the proper size WRAPLOCK® Tie before application.
6. WRAPLOCK Ties are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.

**PREFORMED LINE PRODUCTS** 

P.O. Box 91129, Cleveland, Ohio 44101 • 440.461.5200 • www.preformed.com • e-mail: inquiries@preformed.com

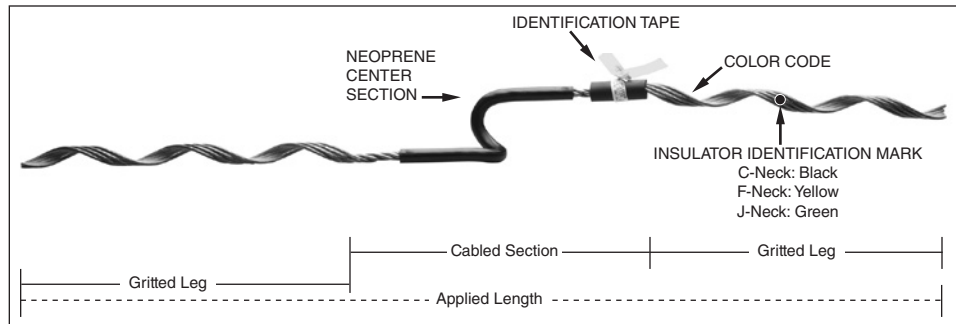
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# WRAPLOCK® Tie

## NOMENCLATURE

RUS Accepted



**WRAPLOCK Tie Tube:** Component is detached and placed in the saddle groove of the insulator.

**Molded Center Section:** Together with tubes, completely surrounds conductor with protective cushion.

**Insulator Identification Mark:** Identifies the correct insulator head-style by colors corresponding to information on Catalog Specification pages.

**Color Code:** Assists in identification of conductor diameter and indicates starting point for application, corresponding to tabular information appearing on Catalog pages.

**Applied Length:** Assists in identification of conductor size, corresponding to tabular information appearing on Catalog pages.

**Identification Tape:** Shows catalog number, nominal sizes.

## GENERAL RECOMMENDATIONS

**INTENDED USE:** WRAPLOCK Ties secure conductors in the top groove of interchangeable head-style insulators.

WRAPLOCK Ties provide an improved method of securing conductor compared to clamp-top insulators or hand ties over Armor Rods.

**WRAPLOCK TIE TUBE:** WRAPLOCK Ties provide superior abrasion protection for the conductor under all types of motion, including low frequency sway oscillation, high frequency aeolian vibration, and galloping.

The elastomer components are recommended because they surround the bare conductor with a resilient cushion where the conductor would come into contact with the insulator and with the center section of the tie. The WRAPLOCK Tie provides superior protection by eliminating abrasion rather than sacrificing outside surfaces to abrasion.

**VIBRATION DAMPERS:** By using WRAPLOCK Ties, the vibration fatigue life is maximized to the extent that the original endurance limit of the conductor is not reduced by abrasion on its outside surface. However, on selected lines where experience indicates that prolonged periods of vibration might approach the fatigue life of the conductor, or cause inner wire fretting, it will be necessary to supplement with dampers.

The following are guideline definitions for vibration activity. They should be applied to a Utility's own experience on lines in a given area.

**“Excessive”** Vibration: Areas where abrasion damage has been known to require replacement of both hand tie wire and protective rods, or where fatigue has been found under clamps. Protective rods should be replaced when visual inspection shows approximately half or more of the rod diameter has been abraded.

**“Severe”** Vibration: Areas where abrasion has required replacement of hand tie wire, but damage to protective rods has not progressed to the point where replacement is necessary.

**“Moderate”** Vibration: Areas where replacement of hand tie wire has not been required, and damage is minor.

WRAPLOCK Ties provide protection on areas of **“severe”** or **“moderate”** vibration. For areas experiencing **“excessive”** vibration, supplemental use of dampers is recommended. Spiral Vibration Damper's single purpose is to prevent the unlimited accumulation of aeolian vibration.

(Continued)

# WRAPLOCK® Tie

## GENERAL RECOMMENDATIONS CONTD.

**INTERCHANGEABLE HEAD-STYLE INSULATOR:** To insure proper fit and service life, it is recommended that only insulators corresponding to C-neck, F-neck, or J-neck be used. These neck-diameter and groove-height dimensions appear on ANSI standards.

Consult the Factory for engineering recommendations on non-interchangeable head-style insulators. A sample of the insulator in question is desirable.

**CONDUCTOR SIZE:** Conductor sizes up to 1.240" O.D. can be accommodated depending on the insulator's top groove radius.

**MECHANICAL STRENGTH:** The WRAPLOCK Tie is designed to provide longitudinal holding strength in excess of values required by the National Electric Safety Code. The maximum holding strength is usually sufficient to contain the broken conductor to a single span, however, the WRAPLOCK Tie is designed to relieve the load before severe damage is done to the pole's structural components.

The WRAPLOCK Tie is designed to permit controlled and limited movement of unbroken conductor, reducing cantilever loading at the base of the insulator or bracket, then restore itself. We refer to this unique feature as "resilience." **TM-169E** covers the mechanical testing of the WRAPLOCK Tie and is available upon request.

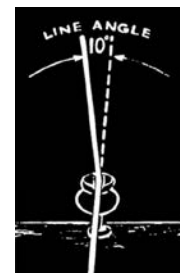
**RADIO INTERFERENCE:** The RIV characteristics of WRAPLOCK Ties are equivalent to those of a well-made hand tie when originally installed. During service life the precontoured tie assures continued fit, which would have better RIV than a loosened tie wire.

**TAPPING:** Compared to the use of protective rods, placing hot-line clamps directly over the applied legs of WRAPLOCK Ties cannot be recommended. Tapping over protective rods will remain permissible, however, there are now stirrups available that provide a superior method of making hot-line taps.



## LINE ANGLES – GENERAL GUIDELINES:

On vertically-mounted insulators, WRAPLOCK Ties can normally accommodate line angles up to 10°. Larger angles may be accommodated when the insulator is mounted at varying degrees of cant from the vertical, depending upon the actual cant of the insulator. Combining Side Ties with WRAPLOCK Ties on a single structure can also affect the acceptable line angles for that structure.



A technical report (**TM-197E**) is available which describes these various permissible line angles of WRAPLOCK Ties as a function of the insulator cant.

In all cases the conductor should rest in the preferred insulator groove, independently of the tie, so the tie is not required to force the conductor to remain in that groove. The largest practical angle a tie can accommodate depends upon limiting factors such as conductor size, tension, span lengths, sag angles, insulator style and orientation, etc. Consult PLP for further guidance on line angle issues not covered in the above test report.

**DOUBLE SUPPORTS:** At double crossarms PREFORMED™ Double-Support Tie can be used to cross major highways and railroads, or turn angles where it is practical to hold the conductor in the top groove during installation.

## SAFETY CONSIDERATIONS

1. This product is intended for a single (one-time) use and for the specified application. **CAUTION: DO NOT REUSE OR MODIFY THIS PRODUCT 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 WRAPLOCK Tie before application.
5. WRAPLOCK Ties are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



# WRAPLOCK® Tie

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

**C-Neck Interchangeable**  
**Headstyle Insulators**



**ANSI 55-2 Pin**  
**ANSI 55-3 Pin**      **2-1/4" Neck Diameter**

| Catalog Number                     | Diameter Range (inches) |      | Nominal Conductor Size                                     | Units Per Carton | Wt./Lbs. | Applied Length (inches) | Insulator Identification Mark | Color Code |
|------------------------------------|-------------------------|------|--|------------------|----------|-------------------------|-------------------------------|------------|
|                                    | Min.                    | Max. |  |                  |          |                         |                               |            |
| <b>9/16" R Groove (See Note 2)</b> |                         |      |  |                  |          |                         |                               |            |
| WTC-0100                           | .248                    | .259 | #4, 6/1-7/1<br>#4, 7W Alum. Alloy                          | 100              | 21       | 19                      | Black                         | Orange     |
| WTC-0101                           | .260                    | .269 | #4, AWAC, 5/2<br>#3, 7W, All-Alum.<br>#2, 7W, Comp.        | 100              | 21       | 19                      | Black                         | Green      |
| WTC-0102                           | .270                    | .280 | #3, 7W, Alum. Alloy<br>#3, AWAC, 6/1                       | 100              | 21       | 19                      | Black                         | Yellow     |
| WTC-0103                           | .281                    | .291 | #4, AWAC, 4/3<br>#3, 6/1 #2, 6/1, Comp.                    | 100              | 24       | 20-1/2                  | Black                         | White      |
| WTC-0104                           | .292                    | .303 | #3, AWAC, 5/2<br>#2, 7W, All-Alum.<br>#2, 7/1, Comp.       | 100              | 24       | 20-1/2                  | Black                         | Purple     |
| WTC-0105                           | .304                    | .314 | #4, AWAC, 3/4<br>#2, AWAC, 6/1                             | 100              | 24       | 21-1/2                  | Black                         | Brown      |
| WTC-0106                           | .315                    | .327 | #2, 6/1-7/1<br>#2, 7W, Alum. Alloy                         | 100              | 24       | 21-1/2                  | Black                         | Red        |
| WTC-0107                           | .328                    | .340 | #2, AWAC, 5/2<br>#1, 7W, All-Alum. 1/0, 7W, Comp.          | 100              | 25       | 22-1/2                  | Black                         | Blue       |
| WTC-0108                           | .341                    | .353 | #3, AWAC, 3/4<br>#1, 7W, Alum. Alloy                       | 100              | 25       | 22-1/2                  | Black                         | Orange     |
| WTC-0109                           | .354                    | .367 | #2, AWAC, 4/3<br>#1, 6/1, 1/0, 6/1, Comp.                  | 100              | 26       | 23-1/2                  | Black                         | Green      |
| WTC-0110                           | .368                    | .381 | 1/0, 7W, All-Alum.<br>2/0, 7W, Comp.                       | 100              | 26       | 20                      | Black                         | Black      |
| WTC-0111                           | .382                    | .394 | #2, AWAC, 3/4<br>1/0, AWAC, 6/1                            | 100              | 27       | 21                      | Black                         | White      |
| WTC-0112                           | .395                    | .411 | 1/0, 6/1 1/0, 7W, Alum. Alloy                              | 100              | 27       | 21                      | Black                         | Yellow     |
| WTC-0113                           | .412                    | .437 | 2/0, 7W-19W, All-Alum.<br>3/0, 7W-19W, Comp.               | 100              | 27       | 22                      | Black                         | Brown      |
| WTC-0114                           | .438                    | .463 | 2/0, 6/1-7/1 2/0, 7W, Alum. Alloy                          | 100              | 28       | 23                      | Black                         | Blue       |
| WTC-0115                           | .464                    | .492 | 3/0, 7W-19W, All-Alum.<br>4/0, 7W-19W, Comp.               | 50               | 18       | 24-1/2                  | Black                         | Green      |
| WTC-0116                           | .493                    | .522 | 3/0, 6/1 3/0, 7W, Alum. Alloy<br>4/0, 7W, All-Alum.        | 50               | 18       | 24-1/2                  | Black                         | Orange     |
| WTC-0117                           | .523                    | .554 | 3/0, AWAC, 5/2 4/0, 19W, All-Alum.<br>266.8, 7W-19W, Comp. | 50               | 18       | 26-1/2                  | Black                         | Black      |
| WTC-0118                           | .555                    | .594 | 4/0, 6/1 4/0, 7W, Alum. Alloy<br>266.8, 7W-19W, All-Alum.  | 50               | 19       | 27-1/2                  | Black                         | Red        |
| WTC-0119                           | .595                    | .630 | 266.8, 18/1 300, 18W-37W, All-Alum.                        | 50               | 21       | 28-1/2                  | Black                         | Purple     |

Right-hand lay standard

(Continued on next page)

**EXPLANATORY NOTES:**

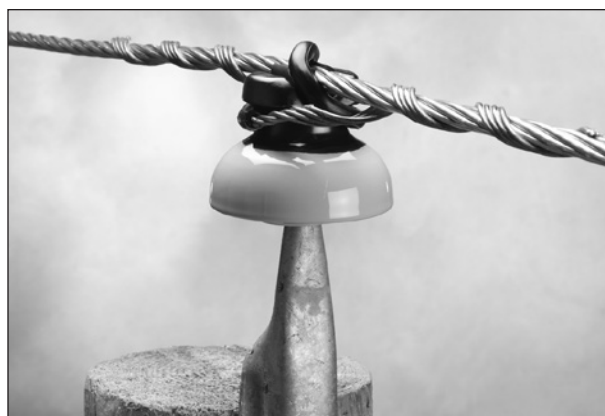
- (1) Nominal Conductor size indicates one of various conductors within each range.
- (2) For the succeeding conductors ranges, the insulator's top groove radius should be at least as large as shown above.
- (3) AWAC is a registered trademark of the Copperweld Co.

# WRAPLOCK® Tie

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

**C-Neck Interchangeable**  
**Headstyle Insulators**

**ANSI 55-2 Pin**  
**ANSI 55-3 Pin**      **2-1/4" Neck Diameter**



| Catalog Number                           | Diameter Range (Inches) |       | Nominal Conductor Size   | Units Per Carton | Wt./Lbs. | Applied Length (Inches) | Insulator Identification Mark | Color Code |
|--|-------------------------|-------|--|------------------|----------|-------------------------|-------------------------------|------------|
|  | Min.                    | Max.  |  |                  |          |                         |                               |            |
| <b>5/8", R. Groove (See Note 2)</b>      |                         |       |  |                  |          |                         |                               |            |
| WTC-0120                                 | .631                    | .664  | 266.8, 26/7 266.8, 19W, Alum. Alloy                                | 50               | 21       | 28-1/2                  | Black                         | Yellow     |
| WTC-0121                                 | .665                    | .705  | 336.4, 18/1-36/1 336.4, 19W, All-Alum. 350, 19W-37W, All-Alum.     | 50               | 21       | 29-1/2                  | Black                         | Brown      |
| WTC-0122                                 | .706                    | .747  | 336.4, 26/7-30/7 397.5, 19W, All-Alum.                             | 50               | 22       | 30-1/2                  | Black                         | Green      |
| <b>3/4" R. Groove (See Note 2)</b>       |                         |       |  |                  |          |                         |                               |            |
| WTC-0123                                 | .748                    | .795  | 397.5, 24/7, 26/7 397.5, 19W, Alum. Alloy 477, 19W, 37W, All-Alum. | 50               | 20       | 33                      | Black                         | Orange     |
| WTC-0124                                 | .796                    | .846  | 477, 18/1, 36/1 500, 19W, All-Alum.                                | 50               | 21       | 37                      | Black                         | Purple     |
| WTC-0125                                 | .847                    | .900  | 556.5, 18/1, 36/1 556.5, 19W, 37W All-Alum.                        | 50               | 21       | 39                      | Black                         | Blue       |
| WTC-0126                                 | .901                    | .958  | 636, 18/1, 36/1 636, 37W All-Alum. 556.5M, 19W Alum. Alloy         | 50               | 22       | 41                      | Black                         | Green      |
| WTC-0127                                 | .959                    | 1.018 | 666.6, 24/7, 54/7 750, 37W All-Alum. 636, 37 Alum. Alloy           | 50               | 23       | 43                      | Black                         | White      |
| <b>13/16" R. Groove (See Note 2)</b>     |                         |       |  |                  |          |                         |                               |            |
| WTC-0128                                 | 1.019                   | 1.083 | 795, 36/1, 45/7 795, 37W Alum. Alloy                               | 50               | 24       | 45                      | Black                         | Brown      |
| <b>7/8" or 1" R. Groove (See Note 2)</b> |                         |       |  |                  |          |                         |                               |            |
| WTC-0129                                 | 1.084                   | 1.151 | 954, 36/1 954, 37W All-Alum. 795, 37W Alum. Alloy                  | 50               | 25       | 47                      | Black                         | Orange     |
| WTC-0130                                 | 1.152                   | 1.223 | 954, 45/7, 54/7 1033.5, 37W All-Alum. 954, 37W Alum. Alloy         | 50               | 27       | 49                      | Black                         | Purple     |
| WTC-0131                                 | 1.224                   | 1.240 |  | 50               | 29       | 59                      | Black                         | Black      |

Right-hand lay standard

**EXPLANATORY NOTES:**

- (1) Nominal Conductor size indicates one of various conductors within each range.
- (2) For the succeeding conductors ranges, the insulator's top groove radius should be at least as large as shown above.
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For use on:

**ACSR, Compacted ACSR, Aluminum Alloy  
All-Aluminum, AWAC® Compacted All-Aluminum  
F-Neck Interchangeable Headstyle Insulators**

**ANSI 55-4 Pin  
ANSI 55-5 Pin  
ANSI 57-1 Post  
ANSI 57-2 Post  
ANSI 57-3 Post**

**2-7/8"  
Neck Diameter**



| Catalog Number                      | Diameter Range (inches) |      | Nominal Conductor Size  | Units      | Wt./Lbs. | Applied Length (inches) | Insulator Identification Mark | Color Code |
|-------------------------------------|-------------------------|------|---|------------|----------|-------------------------|-------------------------------|------------|
|                                     | Min.                    | Max. |   | Per Carton |          |                         |                               |            |
| <b>9/16" R Groove (See Note 2)</b>  |                         |      |   |            |          |                         |                               |            |
| WTF-0200                            | .248                    | .259 | #4, 6/1-7/1 – #4, 7W, Alum. Alloy                                 | 100        | 24       | 20-3/4                  | Yellow                        | Orange     |
| WTF-0201                            | .260                    | .269 | #4, AWAC, 5/2 – #3, 7W, All-Alum. – #2, 7W, Comp.                 | 100        | 24       | 20-3/4                  | Yellow                        | Green      |
| WTF-0202                            | .270                    | .280 | #3, 7W, Alum. Alloy – #3, AWAC, 6/1                               | 100        | 24       | 20-3/4                  | Yellow                        | Yellow     |
| WTF-0203                            | .281                    | .291 | #4, AWAC, 4/3 – #3, 6/1 – #2, 6/1, Comp.                          | 100        | 26       | 21-3/4                  | Yellow                        | White      |
| WTF-0204                            | .292                    | .303 | #3, AWAC, 5/2 – #3, 7W, All-Alum. – #2, 7/1, Comp.                | 100        | 26       | 21-3/4                  | Yellow                        | Purple     |
| WTF-0205                            | .304                    | .314 | #4, AWAC, 3/4 – #2, AWAC, 6/1                                     | 100        | 27       | 22-3/4                  | Yellow                        | Brown      |
| WTF-0206                            | .315                    | .327 | #2, 6/1-7/1 – #2, 7W, Alum. Alloy                                 | 100        | 27       | 22-3/4                  | Yellow                        | Red        |
| WTF-0207                            | .328                    | .340 | #2, AWAC, 5/2 – #1, 7W, All-Alum. 1/0, 7W, Comp.                  | 100        | 27       | 23-3/4                  | Yellow                        | Blue       |
| WTF-0208                            | .341                    | .353 | #3, AWAC, 3/4 – #1, 7W, Alum. Alloy                               | 100        | 27       | 23-3/4                  | Yellow                        | Orange     |
| WTF-0209                            | .354                    | .367 | #2, AWAC, 4/3 – #1, 6/1 1/0, 6/1, Comp.                           | 100        | 28       | 24-3/4                  | Yellow                        | Green      |
| WTF-0210                            | .368                    | .381 | 1/0, 7W, All-Alum. – 2/0, 7W, Comp.                               | 100        | 29       | 21-1/2                  | Yellow                        | Black      |
| WTF-0211                            | .382                    | .394 | #2, AWAC, 3/4 – 1/0, AWAC, 6/1                                    | 100        | 29       | 22-1/2                  | Yellow                        | White      |
| WTF-0212                            | .395                    | .411 | 1/0, 6/1 1/0, 7W, Alum. Alloy                                     | 100        | 29       | 22-1/2                  | Yellow                        | Yellow     |
| WTF-0213                            | .412                    | .437 | 2/0, 7W-19W, All-Alum. 3/0, – 7W-19W, Comp.                       | 100        | 30       | 23-1/2                  | Yellow                        | Brown      |
| WTF-0214                            | .438                    | .463 | 2/0, 6/1-7/1 2/0, – 7W, Alum. Alloy                               | 100        | 31       | 24-1/2                  | Yellow                        | Blue       |
| WTF-0215                            | .464                    | .492 | 3/0, 7W-19W, All-Alum. 4/0, – 7W-19W, Comp.                       | 50         | 20       | 25-1/2                  | Yellow                        | Green      |
| WTF-0216                            | .493                    | .522 | 3/0, 6/1 3/0, 7W, Alum. Alloy 4/0, – 7W, All-Alum.                | 50         | 20       | 25-1/2                  | Yellow                        | Orange     |
| WTF-0217                            | .523                    | .554 | 3/0, AWAC, 5/2 4/0, 18/1 4/0, 19W, All-Alum. 266.8, 7W-19W, Comp. | 50         | 20       | 25-1/2                  | Yellow                        | Black      |
| WTF-0218                            | .555                    | .594 | 4/0, 6/1 4/0, 7W, Alum. Alloy 266.8, 7W-19W, All-Alum.            | 50         | 20       | 26-1/2                  | Yellow                        | Red        |
| WTF-0219                            | .595                    | .630 | 266.8, 18/1 300, – 19W-37W, All-Alum.                             | 50         | 22       | 28                      | Yellow                        | Purple     |
| <b>5/8", R. Groove (See Note 2)</b> |                         |      |   |            |          |                         |                               |            |
| WTF-0220                            | .631                    | .664 | 266.8, 26/7 266.8, 19W, Alum. Alloy                               | 50         | 22       | 29                      | Yellow                        | Yellow     |
| WTF-0221                            | .665                    | .705 | 336.4, 18/1-36/1 336.4, 19W, All-Alum. 350, 19W-37W, All-Alum.    | 50         | 22       | 29                      | Yellow                        | Brown      |
| WTF-0222                            | .706                    | .747 | 336.4, 26/7-30/7 397.5, 19W, All-Alum.                            | 50         | 23       | 30                      | Yellow                        | Green      |
| <b>3/4" R. Groove (See Note 2)</b>  |                         |      |   |            |          |                         |                               |            |
| WTF-0223                            | .748                    | .795 | 397.5, 24/7-26/7 397.5, 19W, Alum. Alloy 477, 19W-37W, All-Alum.  | 50         | 24       | 32-1/2                  | Yellow                        | Orange     |

Right-hand lay standard

(Continued on next page)

**EXPLANATORY NOTES:**

- (1) Nominal Conductor size indicates one of various conductors within each range.
- (2) For the succeeding conductors ranges, the insulator's top groove radius should be at least as large as shown above.
- (3) AWAC is a registered trademark of the Copperweld Co.

# WRAPLOCK® Tie

For use on:

ACSR, Compacted ACSR, Aluminum Alloy  
All-Aluminum, AWAC® Compacted All-Aluminum  
F-Neck Interchangeable Headstyle Insulators

ANSI 55-4 Pin

ANSI 55-5 Pin

ANSI 57-1 Post

ANSI 57-2 Post

ANSI 57-3 Post

2-7/8"  
Neck Diameter



| Catalog Number                              | Diameter Range (Inches) |       | Nominal Conductor Size                                       | Units      | Wt./Lbs. | Applied Length (Inches) | Insulator Identification Mark | Color Code |
|---|-------------------------|-------|--|------------|----------|-------------------------|-------------------------------|------------|
|   | Min.                    | Max.  |  | Per Carton |          |                         |                               |            |
| WTF-0224                                    | .796                    | .846  | 477, 18/1, 36/1 500, 19W, All-Alum.                          | 50         | 20       | 37                      | Yellow                        | Purple     |
| WTF-0225                                    | .847                    | .900  | 556.5, 18/1, 36/1 556.5, 19W, 37W All-Alum                   | 50         | 21       | 39                      | Yellow                        | Blue       |
| WTF-0226                                    | .901                    | .958  | 636, 18/1, 36/1 636, 37W All-Alum. 556.5, 19W Alum. Alloy    | 50         | 22       | 41                      | Yellow                        | Green      |
| WTF-0227                                    | .959                    | 1.018 | 666.6, 24/7, 54/7 750, 37W, All-Alum. 636, 37W, Alum. Alloy  | 50         | 22       | 43                      | Yellow                        | White      |
| <b>13/16" R. Groove (See Note 2)</b>        |                         |       |  |            |          |                         |                               |            |
| WTF-0228                                    | 1.019                   | 1.083 | 795, 36/1, 45/7 795, 37W, All-Alum.                          | 50         | 23       | 45                      | Yellow                        | Brown      |
| <b>7/8" R. or 1" R. Groove (See Note 2)</b> |                         |       |  |            |          |                         |                               |            |
| WTF-0229                                    | 1.084                   | 1.151 | 954, 36/1 954, 37W, All-Alum. 795, 37W, Alum. Alloy          | 50         | 24       | 47                      | Yellow                        | Orange     |
| WTF-0230                                    | 1.152                   | 1.223 | 954, 45/7, 54/7 1033.5, 37W, All-Alum. 954, 37W, Alum. Alloy | 50         | 25       | 49                      | Yellow                        | Purple     |
| WTF-0231                                    | 1.224                   | 1.240 |  | 50         | 29       | 59                      | Yellow                        | Black      |

Right-hand lay standard

**EXPLANATORY NOTES:**

- (1) Nominal Conductor size indicates one of various conductors within each range.
- (2) For the succeeding conductors ranges, the insulator's top groove radius should be at least as large as shown above.
- (3) AWAC is a registered trademark of the Copperweld Co.



# WRAPLOCK® Tie

**For use on:**  
**ACSR, Compacted ACSR, Aluminum Alloy**  
**All-Aluminum, AWAC® Compacted All-Aluminum**  
**J-Neck Interchangeable Headstyle Insulators**



**ANSI 55-6**  
**Single Skirt Pin**  
**ANSI 55-7**                      **3-1/2" Neck Diameter**  
**Single Skirt Pin**  
**ANSI 56-1**  
**Double Skirt Pin**

| Catalog Number                        | Diameter Range (Inches) |       | Nominal Conductor Size  | Units      | Wt./Lbs. | Applied Length (Inches) | Insulator Identification Mark | Color Code |
|---------------------------------------|-------------------------|-------|---|------------|----------|-------------------------|-------------------------------|------------|
|                                       | Min.                    | Max.  |   | Per Carton |          |                         |                               |            |
| <b>9/16" R Groove (See Note 2)</b>    |                         |       |   |            |          |                         |                               |            |
| WTJ-0400                              | .248                    | .259  | #4, 6/1-7/1 – #4, 7W, Alum. Alloy                                 | 100        | 29       | 21                      | Green                         | Orange     |
| WTJ-0401                              | .260                    | .269  | #4, AWAC, 5/2 – #3, 7W, All-Alum. – #2, 7W, Comp.                 | 100        | 29       | 21                      | Green                         | Green      |
| WTJ-0402                              | .270                    | .280  | #3, 7W, Alum. Alloy – #3, AWAC, 6/1                               | 100        | 29       | 21                      | Green                         | Yellow     |
| WTJ-0403                              | .281                    | .291  | #4, AWAC, 4/3 – #3, 6/1 – #2, 6/1 Comp.                           | 100        | 32       | 21                      | Green                         | White      |
| WTJ-0404                              | .292                    | .303  | #3, AWAC, 5/2 – #2, 7W, All-Alum. – #2, 7/1, Comp.                | 100        | 32       | 22                      | Green                         | Purple     |
| WTJ-0405                              | .304                    | .314  | #4, AWAC, 3/4 – #2, AWAC, 6/1                                     | 100        | 33       | 22                      | Green                         | Brown      |
| WTJ-0406                              | .315                    | .327  | #2, 6/1-7/1 – #2, 7W, Alum. Alloy                                 | 100        | 33       | 23                      | Green                         | Red        |
| WTJ-0407                              | .328                    | .340  | #2, AWAC, 5/2 – #1, 7W, All-Alum. 1/0, 7W, Comp.                  | 100        | 33       | 23                      | Green                         | Blue       |
| WTJ-0408                              | .341                    | .353  | #3, AWAC, 3/4 – #1, 7W, Alum. Alloy                               | 100        | 33       | 24                      | Green                         | Orange     |
| WTJ-0409                              | .354                    | .367  | #2, AWAC, 4/3 – #1, 6/1 1/0, 6/1, Comp.                           | 100        | 33       | 24                      | Green                         | Green      |
| WTJ-0410                              | .368                    | .381  | 1/0, 7W, All-Alum. 2/0, 7W, Comp.                                 | 100        | 33       | 25                      | Green                         | Black      |
| WTJ-0411                              | .382                    | .394  | #2, AWAC, 3/4 1/0, AWAC, 6/1                                      | 100        | 34       | 23                      | Green                         | White      |
| WTJ-0412                              | .395                    | .411  | 1/0, 6/1 1/0, 7W, Alum. Alloy                                     | 100        | 34       | 24                      | Green                         | Yellow     |
| WTJ-0413                              | .412                    | .437  | 2/0, 7W-19W, All-Alum. 3/0, 7W-19W, Comp.                         | 100        | 35       | 25                      | Green                         | Brown      |
| WTJ-0414                              | .438                    | .463  | 2/0, 6/1-7/1 2/0, 7W, Alum. Alloy                                 | 100        | 35       | 26                      | Green                         | Blue       |
| WTJ-0415                              | .464                    | .492  | 3/0, 7W-19W, All-Alum. 4/0, 7W-19W, Comp.                         | 50         | 21       | 28                      | Green                         | Green      |
| WTJ-0416                              | .493                    | .522  | 3/0, 6/1 3/0, 7W, Alum. Alloy 4/0, 7W, All-Alum.                  | 50         | 21       | 28                      | Green                         | Orange     |
| WTJ-0417                              | .523                    | .554  | 3/0, AWAC, 5/2 4/0, 18/1 4/0, 19W, All-Alum. 266.8, 7W-19W, Comp. | 50         | 21       | 28                      | Green                         | Black      |
| WTJ-0418                              | .555                    | .594  | 4/0, 6/1 4/0, 7W, Alum. Alloy 266.8, 7W-19W, All-Alum.            | 50         | 22       | 29                      | Green                         | Red        |
| WTJ-0419                              | .595                    | .630  | 266.8, 18/1 300, 19W-37W, All-Alum.                               | 50         | 24       | 30                      | Green                         | Purple     |
| <b>5/8" R Groove (See Note 2)</b>     |                         |       |   |            |          |                         |                               |            |
| WTJ-0420                              | .631                    | .664  | 266.8, 26/7 266.8, 19W, Alum. Alloy                               | 50         | 24       | 31                      | Green                         | Yellow     |
| WTJ-0421                              | .665"                   | .705" | 336.4, 18/1-36/1 336.4, 19W, All-Alum. 350, 19W-37W, All-Alum.    | 50         | 24       | 31                      | Green                         | Brown      |
| WTJ-0422                              | .706"                   | .747" | 336.4, 26/7-30/7 397.5, 19W, All-Alum.                            | 50         | 25       | 32                      | Green                         | Green      |
| <b>3/4" R Groove (See Note 2)</b>     |                         |       |   |            |          |                         |                               |            |
| WTJ-0423                              | .748"                   | .795" | 397.5, 24/7-26/7 397.5, 19W, Alum. Alloy 477M, 19W-37W, All-Alum. | 50         | 26       | 34                      | Green                         | Orange     |
| WTJ-0424                              | .796                    | .846  | 477, 18/1, 36/1 500, 19W, All-Alum.                               | 50         | 32       | 39-1/2                  | Green                         | Purple     |
| WTJ-0425                              | .847                    | .900  | 556.5, 18/6, 36/1 556.5, 19W, 37W, All-Alum.                      | 50         | 33       | 41                      | Green                         | Blue       |
| WTJ-0426                              | .901                    | .958  | 636, 18/1, 36/1 636, 37W, All-Alum. 556.5, 19W, Alum. Alloy       | 25         | 18       | 43                      | Green                         | Green      |
| WTJ-0427                              | .959                    | 1.018 | 666.6, 24/7, 54/7 750, 37W, All-Alum. 636, 37W, Alum. Alloy       | 50         | 35       | 45                      | Green                         | White      |
| <b>13/16" R Groove (See Note 2)</b>   |                         |       |   |            |          |                         |                               |            |
| WTJ-0428                              | 1.019                   | 1.083 | 795 36/1, 795 45/7, 795 37W AAC                                   | 25         | 18       | 47                      | Green                         | Brown      |
| <b>7/8" or 1" Groove (See Note 2)</b> |                         |       |   |            |          |                         |                               |            |
| WTJ-0429                              | 1.084                   | 1.151 | 795 26/7, 795 37W AAC, 954 36/1, 954 37W AAC                      | 25         | 19       | 49                      | Green                         | Orange     |
| WTJ-0430                              | 1.152                   | 1.223 | 954, 45/7, 54/7 1033.5, 37W, All-Alum.                            | 25         | 19       | 51                      | Green                         | Purple     |
| WTJ-0431                              | 1.224                   | 1.240 |   | 25         | 20       | 59-1/2                  | Green                         | Black      |

Right-hand lay standard

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