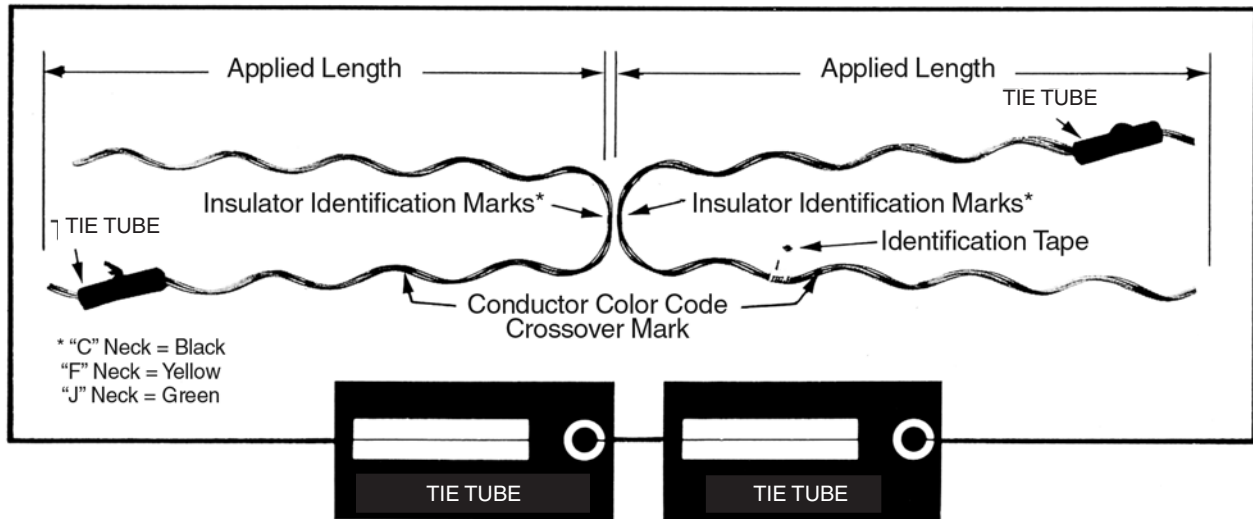




Double Side Tie

NOMENCLATURE

RUS Accepted



Tie Assembly: A Double Side Tie assembly consists of two metal tie components plus two tie tubes.

TieTube: Each Double Side Tie assembly is supplied with two elastomeric tie tubes, designed for abrasion protection.

Cross-Over Marks: C-Neck indicates starting point for application on smaller diameter C-Neck insulators.

F-Neck indicates alternate starting point for application on larger diameter F-Neck insulators.

J-Neck has only one cross-over mark.

Insulator Identification Mark: Identifies the correct insulator headstyle by colors corresponding to information on catalog pages.

Color Code and Applied Length: Assist in identification of conductor size, corresponding to tabular information appearing on catalog pages.

Identification Tape: Shows catalog number and nominal conductor sizes.

GENERAL RECOMMENDATIONS

INTENDED USE: Double Side Tie, manufactured of aluminum-covered steel wire, is designed to secure conductors on double-arm construction in the side groove of interchangeable headstyle insulators. They are intended for larger line angles than top groove style ties, such as, Double-Support Ties.

LINE ANGLES – GENERAL GUIDELINES: On vertically-mounted insulators at double crossarms or brackets, the Double Side Tie can normally accommodate line angles of between 0° and 80°, with no more than a 40° angle at each insulator. When insulators are mounted at various degrees of cant from the vertical, various line angles may be accommodated, depending upon the actual cant of the insulators.

A technical report (TM-197E) is available which describes these permissible line angles for Double Side Ties as a function of the insulator's 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.

INTERCHANGEABLE Headstyle INSULATORS: Double Side Ties are designed for installation on double insulator construction in the side groove of interchangeable insulators. To insure proper fit and service life, it is recommended only insulators with uniform dimensions as described by the ANSI insulator standards be used. Consult PLP for application on nonstandard insulators.

(Continued)

Double Side Tie

GENERAL RECOMMENDATIONS CONTD.

DOUBLE SIDETIE: Double Side Ties feature a elastomeric tube which surrounds the bare conductor with a resilient cushion. This tube provides superior abrasion protection for the conductor under all types of motion, including low frequency sway oscillation and high frequency aeolian vibration. As a result, Double Side Ties provide a vastly improved method of securing conductors compared to hand ties over protective rods, since they eliminate abrasion (and the need for protective rods) rather than sacrificing outside surfaces to abrasion. For applications on jacketed conductors, the tube may be discarded.

MECHANICAL STRENGTH: The Double Side Tie is designed to provide superior mechanical strength and resiliency during conductor motion and cyclic loading conditions. Longitudinal holding strengths consistently exceed the requirements of the National Electric Safety Code. **TM-170E** covers the mechanical testing of the Double Side Tie and is available upon request.

RADIO INTERFERENCE: The RIV/TVI characteristics of Double Side Ties are equivalent to those of a well made hand tie, as originally installed. The precontoured loop and formed legs of the Double Support Tie assures continued fit, which will provide better RIV/TVI performance than a loosened hand-tie wire.

VIBRATION DAMPERS: The Double Side Tie is designed to outperform other tie devices during conductor motion activity, such as aeolian vibration and galloping. However,

on some lines the use of dampers may be required to prevent damage. Utilities that have experienced conductor motion or expect to, should consider adding dampers. Consult PLP® for general guidelines and advice concerning conductor motion and dampers. Also, consult the Motion Control section.

TAPPING: Taps should not be made directly over the legs or loop of the Double Side Tie.

CONDUCTOR COMPATIBILITY: Double Side Ties should be used only on the size, type, and lay direction for which they are designed. When using conductors not mentioned in the catalog, consult PLP.

During installation and at all times, care should be taken to avoid gouging or damaging the wires of the Double Side Tie or conductor.

Double Side Ties should not be used as tools, i.e., come-alongs, pulling-grips, etc.

Consult the Double Side Tie Application Procedure for additional installation information.

When in doubt about usage of Double Side Ties, consult your PREFORMED™ Sales Representative or Preformed Line Products.

SAFETY CONSIDERATIONS

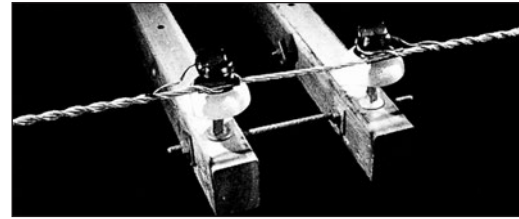
1. This product is intended for a single (one-time) use and for the specified application. **CAUTION: DO NOT REUSE OR MODIFY THIS PRODUCT UNDER ANY CIRCUMSTANCES.**
2. This product is intended for use by trained craftspeople only. This product **SHOULD NOT BE USED** by anyone who is not familiar with 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 PREFORMED Double Side Tie before application.
5. PREFORMED Double Side Ties are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



Double Side Tie

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

**C-Neck & F-Neck Interchangeable
 Headstyle Insulators**



**ANSI 55-2 PIN
 ANSI 55-3 PIN
 ANSI 55-4 PIN
 ANSI 55-5 PIN
 ANSI 57-1 POST
 ANSI 57-2 POST
 ANSI 57-3 POST**

**2-1/4" & 2-7/8"
 Neck Diameters**

Catalog Number	Diameter Range (Inches)		Nominal Conductor Size	Units	Wt./Lbs.	Applied Length (Inches)	Insulator Identification Mark	Color Code
	Min.	Max.		Per Carton				
9/16" R. GROOVE (See Note 2)								
DBST-1100	.245	.277	#4, 6/1-7/1 – #4, 7W Alum. Alloy	50	21	16	Black/Yellow	Orange
DBST-1101	.278	.315	#3, 7W Alum. Alloy #2, 7W All Alum.	50	21	16	Black/Yellow	Purple
DBST-1102	.316	.357	#2, 6/1, 7/1 – #2, 7W Alum. Alloy – #1, 6/1	50	21	17	Black/Yellow	Red
DBST-1103	.358	.405	1/0, 7W All Alum. 1/0, 6/1 1/0, 7W Alum. Alloy	50	21	16	Black/Yellow	Yellow
DBST-1104	.406	.459	2/0, 7W All Alum. 2/0, 6/1 2/0, 7W Alum. Alloy	50	21	18	Black/Yellow	Blue
DBST-1105	.460	.520	3/0, 7W All Alum. 3/0, 6/1 3/0, 7W Alum. Alloy	50	36	19	Black/Yellow	Orange
DBST-1106	.521	.588	4/0, 7W All Alum. 4/0, 6/1 4/0, 7W Alum. Alloy	50	36	19	Black/Yellow	Red
DBST-1107	.589	.665	266.8, 37W All Alum. 266.8, 18/1	50	38	20	Black/Yellow	Purple
DBST-1108	.666	.755	336.4, 18/1 336.4, 19W All Alum. 397.5, 19W, All Alum.	50	39	20	Black & Yellow	Brown
DBST-1109	.756	.858	477, 19W, 37W, All Alum. 477, 18/1, 24/7, 26/7	50	39	20	Black & Yellow	Red
5/8" R. GROOVE (See Note 2)								
DBST-1110	.859	.968	556.5, 26/7 636, 18/1 700, 37W, 61W, All Alum.	50	42	22	Black & Yellow	Blue
11/16" R. GROOVE (See Note 2)								
DBST-1111	.969	1.096	795, 37W, 61W, All Alum. 715.5, 24/7 795, 54/7	50	44	24	Black & Yellow	Green
3/4" R. GROOVE (See Note 2)								
DBST-1112	1.097	1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Alum.	50	44	24	Black & Yellow	Yellow

Right-hand lay standard

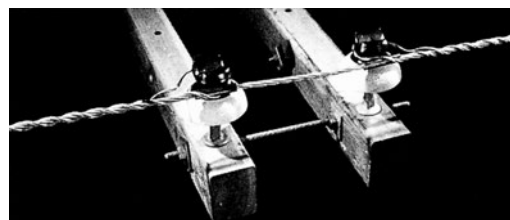
EXPLANATORY NOTES:

- (1) Diameter Range indicates the size of conductors that utilize the same tie.
- (2) For the succeeding ranges, the insulator's side groove radius should be at least as large as shown above.
- (3) The loop of the Double Side Ties on this page can accommodate either C or F neck insulators.
- (4) Nominal Conductor size indicates one of various conductors within each range.
- (5) AWAC is a registered trademark of the Copperweld Co.

Double Side Tie

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

J-Neck Interchangeable
Headstyle Insulators



ANSI 55-6

Single Skirt Pin

ANSI 55-7

Single Skirt Pin

ANSI 56-1

Double Skirt Pin

3-1/2"
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.						
9/16" R. GROOVE (See Note 2)								
DBST-1300	.245	.277	#4, 6/1-7/1 – #4, 7W Alum. Alloy	50	24	19	Green	Orange
DBST-1301	.278	.315	#3, 7W Alum.Alloy – #2, 7W All Alum.	50	21	17	Green	Purple
DBST-1302	.316	.357	#2, 6/1, 7/1 – #2, 7W Alum. Alloy – #1, 6/1	50	27	22	Green	Red
DBST-1303	.358	.405	1/0, 7W - 19W All Alum. 1/0, 6/1 1/0, 7W Alum. Alloy	50	26	21	Green	Yellow
DBST-1304	.406	.459	2/0, 7W - 19W All Alum. 2/0, 6/1 2/0, 7W Alum. Alloy	50	36	19	Green	Blue
DBST-1305	.460	.520	3/0, 7W All Alum. 3/0, 6/1 3/0, 7W Alum. Alloy	50	37	20	Green	Orange
DBST-1306	.521	.588	4/0, 7W All Alum. 4/0, 6/1 4/0, 7W Alum. Alloy	50	39	21	Green	Red
DBST-1307	.589	.665	266.8, 37W All Alum. 266.8, 18/1	50	45	24	Green	Purple
DBST-1308	.666	.755	336.4, 18/1 336.4, 19W All Alum. 397.5, 19W, All Alum.	50	46	25	Green	Brown
DBST-1309	.756	.858	477, 19W, 37W, All Alum. 477, 18/1, 24/7, 26/7	50	44	24	Green	Red
5/8" R. GROOVE (See Note 2)								
DBST-1310	.859	.968	556.5, 26/7 636, 18/1 700, 37W, 61W, All Alum.	50	43	23	Green	Blue
11/16" R. GROOVE (See Note 2)								
DBST-1311	.969	1.096	795, 37W, 61W, All Alum. 715.5, 24/7 795, 54/7	50	43	23	Green	Green
DBST-1312	1.097	1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Alum.	50	48	25	Green	Yellow

Right-hand lay standard

EXPLANATORY NOTES:

- (1) Diameter Range indicates the size of conductors that utilize the same tie.
- (2) For the succeeding ranges, the insulator's side groove radius should be at least as large as shown above.
- (3) The loop of the Double Side Ties on this page can accommodate J-neck insulators.
- (4) Nominal Conductor size indicates one of various conductors within each range.
- (5) AWAC is a registered trademark of the Copperweld Co.