Distribution Tie

General Recommendations

Distribution Ties are designed and manufactured to secure conductors in the top groove of insulators.

Distribution Ties provide an improved method of securing conductors compared to hand ties. Distribution 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 neoprene component surrounds the bare conductor with a resilient cushioning where the conductor would come into contact with the insulator and with the centre section of the tie. In the case of Distribution Ties being applied over Armor Rods, the tube is not necessary as contact with the bare conductor is prevented by the Armor Rod.

On vertically mounted insulators, Distribution Ties can normally accommodate line angles of up to 10° depending on insulator orientation. 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 the groove.

Due to the construction of Distribution Ties, if an impact load is applied to one side of the insulator and then released, the distribution ties retains a memory and will return to its original position.

For Application Procedures, visit the PLP website.
www.preformed.com.au

SAFETY CONSIDERATIONS

Do not modify this product in any way.

This product is intended for use by qualified linesmen only.

When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact.

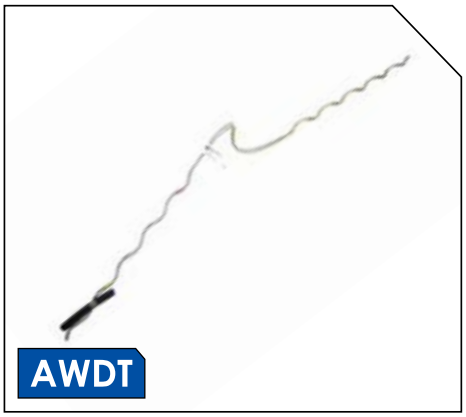
For proper performance and personal safety, be sure to select the proper size PREFORMED™ products before application.

PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

Distribution Tie




For Aluminium Based Conductors AAC, AAAC and ACSR

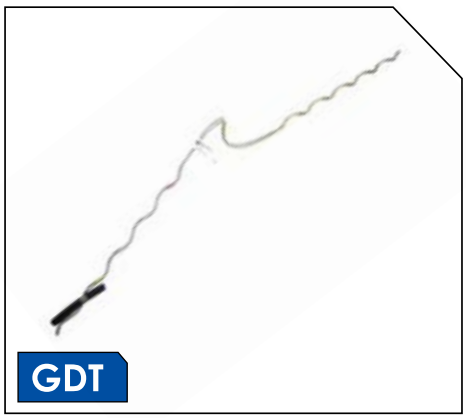


Insulator Colour Codes:
76mm neck - Yellow
112mm neck - Blue

Fittings to suit 112mm neck insulators are available, substitute suffix -76 for -112

Part Number	Conductor Diameter Range (mm)		Colour Code
AWDT-053-76	4.80 - 5.49		Purple
AWDT-060-76	5.50 - 6.19		White
AWDT-068-76	6.50 - 7.03		Brown
AWDT-075-76	7.04 - 7.99		Blue
AWDT-090-76	8.00 - 9.06		Red
AWDT-102-76	9.07 - 10.29		Purple
AWDT-113-76	10.30 - 11.65		Black
AWDT-125-76	11.66 - 13.19		Red
AWDT-140-76	13.20 - 14.99		Blue
AWDT-163-76	15.00 - 17.19		Orange
AWDT-180-76	17.20 - 19.19		Black
AWDT-210-76	19.20 - 21.60		Red
AWDT-220-76	21.70 - 22.59		Green
AWDT-240-76	22.60 - 24.59		Blue
AWDT-255-76	24.60 - 25.60		Orange
AWDT-270-76	27.00 - 27.50		Red
AWDT-290-76	27.80 - 31.40		Black

For Galvanised Conductors - SC/GZ

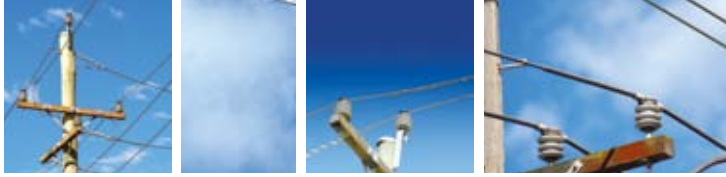


Insulator Colour Codes:
76mm neck - Yellow
112mm neck - Blue

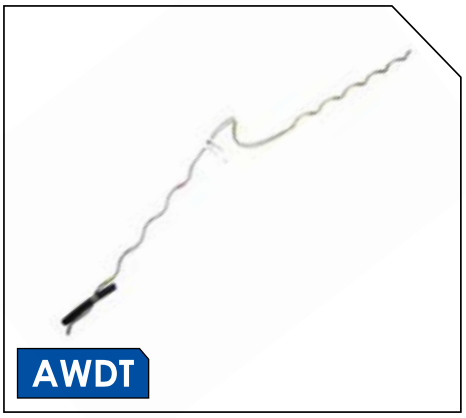
Fittings to suit 112mm neck insulators are available, substitute suffix -76 for -112

Part Number	Conductor Stranding	Conductor Diameter (mm)	
GDT-043-76	3/2.00	4.31	
GDT-048-76	7/1.60	4.80	
GDT-055-76	3/2.75	5.93	
GDT-060-76	7/2.00	6.00	
GDT-083-76	7/2.75	8.25	
GDT-090-76	7/3.25	9.00	
GDT-102-76	7/3.25 19/2.00	9.75 10.00	
GDT-113-76	7/3.75	11.30	
GDT-120-76	7/4.00	12.00	
GDT-138-76	19/2.75	13.80	
GDT-145-76	19/2.90	14.50	
GDT-150-76	19/3.00	15.00	
GDT-163-76	19/3.25	16.30	

Distribution Tie



For Aluminium Based Conductors
AAC, AAAC and ACSR over Armoured Conductor



Note: The range of a tie for armoured conductor is the diameter with armouring not the bare conductor.

Insulator Colour Codes:
76mm neck - Yellow
112mm neck - Blue

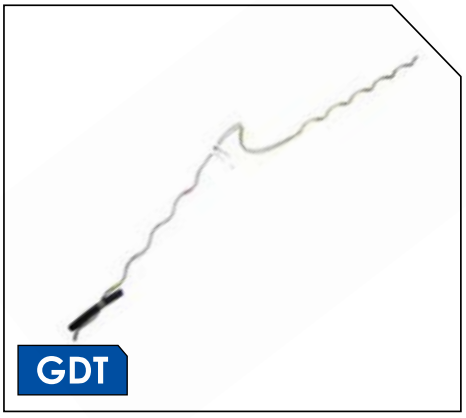
These Distribution Ties are designed to be applied over PLP Preformed Armor Rods. These are the preferred package for the support point on medium to long spans in distribution and medium voltage line designs. The package gives maximum protection and holding capacity at the support point, where wind sway or arc-over could be considered a problem. Where there is a known vibration issue, it is highly recommended that a PLP spiral damper (SVD) be installed.

Fittings to suit 112mm neck insulators are available, substitute suffix -76 for -112.

Part Number (Distribution Tie)	Part Number (Armor Rods)	Conductor Stranding	Conductor Diameter (mm)
AWDT-113A-76	AAR-053	7/1.75	5.25
AWDT-125A-76	AAR-063	7/2.00	6.00
AWDT-140A-76	AAR-075	7/2.50	7.50
AWDT-163A-76	AAR-090	7/3.00	9.00
AWDT-210A-76	AAR-113	7/3.75	11.25
AWDT-220A-76	AAR-135	7/4.50	13.50
AWDT-240A-76	AAR-143	7/4.75	14.25
AWDT-255A-76	AAR-163	19/3.25	16.25
AWDT-270A-76	AAR-175	30/7/2.50	17.50
AWDT-290A-76	AAR-188	19/3.75	18.75

Note: Typical Armor-Rods to be used with the above ties.

For Galvanised Conductors - SC/GZ over Armoured Conductor



Fittings to suit 112mm neck insulators are available, substitute suffix -76 for -112

Part Number (Distribution Tie)	Part Number (Armor Rods)	Conductor Stranding	Conductor Diameter (mm)
GDT-102A-76	GAR-055	3/2.75	5.93
GDT-104A-76	GAR-060	7/2.00	6.00
GDT-125A-76	GAR-075	7/2.50	7.50
GDT-163A-76	GAR-100	7/3.25	9.75

Insulator Colour Codes:
76mm neck - Yellow
112mm neck - Blue

Note: The range of a tie for armoured conductor is the diameter with armouring not the bare conductor.

Note: Typical Armor-Rods to be used with the above ties.

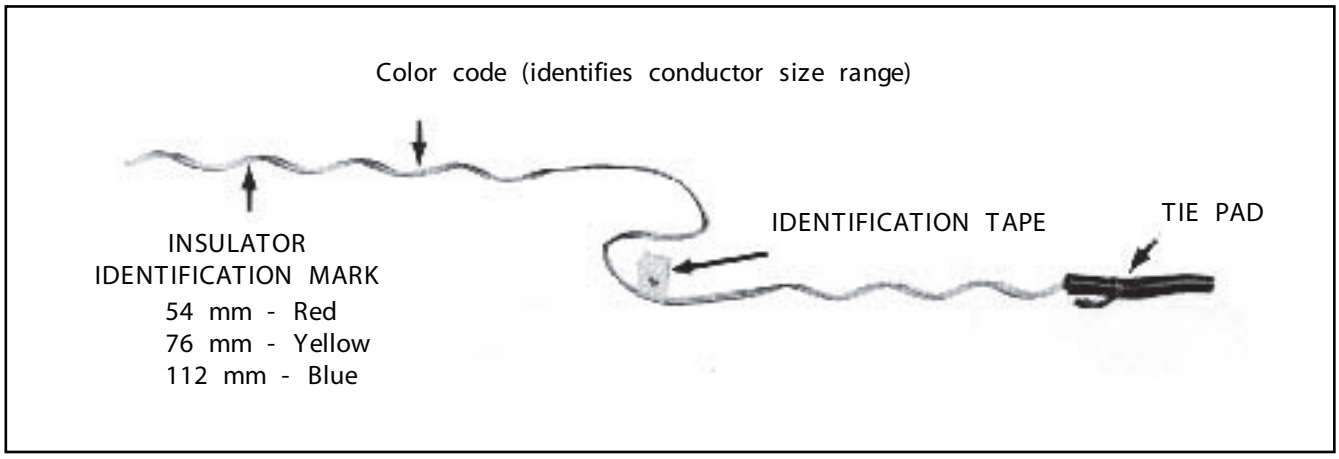
Application Procedure & Safety Considerations

PREFORMED LINE PRODUCTS

DISTRIBUTION TIE

Completely read and understand this procedure before applying products. Special attention should be given to the Safety Considerations located on the last page. We advise the reader to review those considerations now, and then again during the general review of this procedure

These products are designed and tested to be used only on insulators complying with the dimensional requirements of AS2947.2 – 1989.

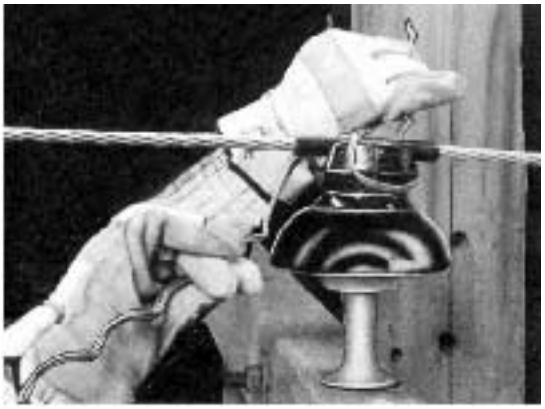


DISTRIBUTION TIE as received in the field.
NOTE: Tie pad may be covering insulator identification mark.

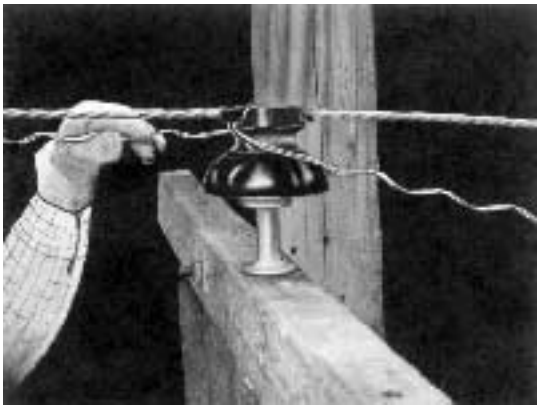
COLD APPLICATION

1) Apply the Tie Pad to conductor so that conductor does not come into direct contact with insulator.

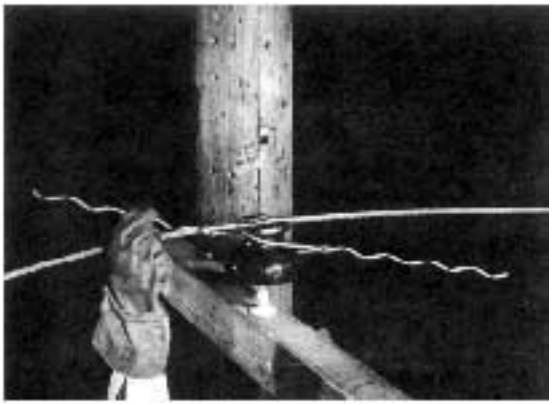
2) Position Distribution Tie on insulator as shown, so that both legs are parallel to the conductor.



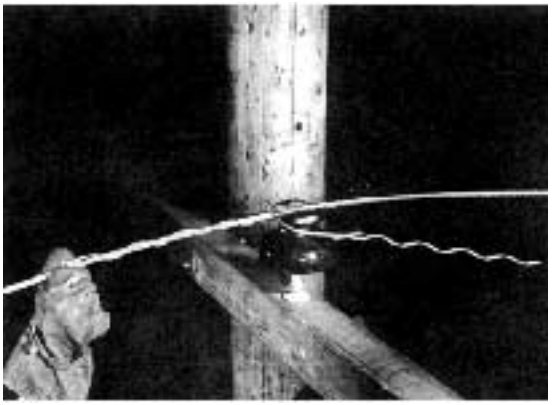
3) Rotate the Distribution Tie in a counter clockwise direction, making certain that both legs go under the conductor as shown.



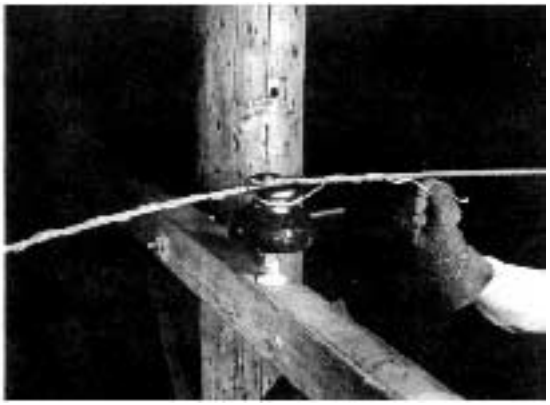
4) Continue to rotate the legs and the Distribution Tie will seat itself, as shown.



5) Start to wrap on one leg of the Distribution Tie as shown.



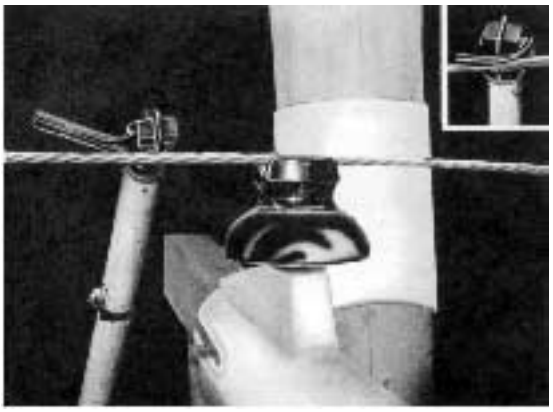
6) Continue to apply the first leg to completion. Be sure to snap the end of the leg into place with slight thumb pressure.



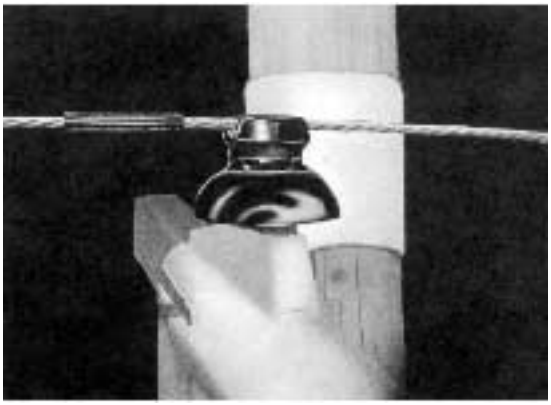
7) Wrap on the other leg of the Distribution Tie as shown and snap the leg into position in the same manner

8) Completed application of the Distribution Tie.

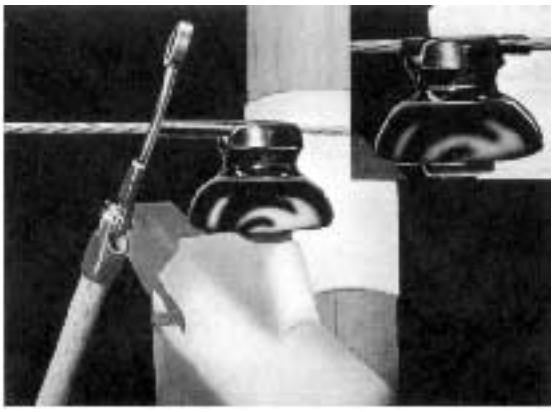
HOT APPLICATION



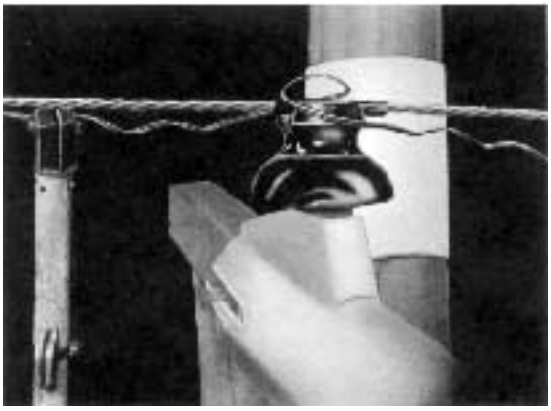
1) The method of securing Distribution Tie pad onto the conductor, preparatory to the application of the Distribution Tie.



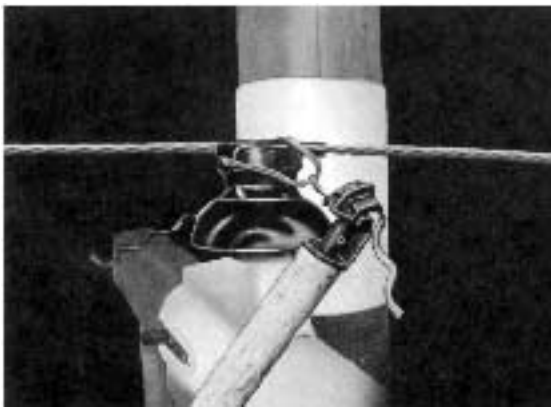
2) After applying pad with jumper holding tool, slide the...



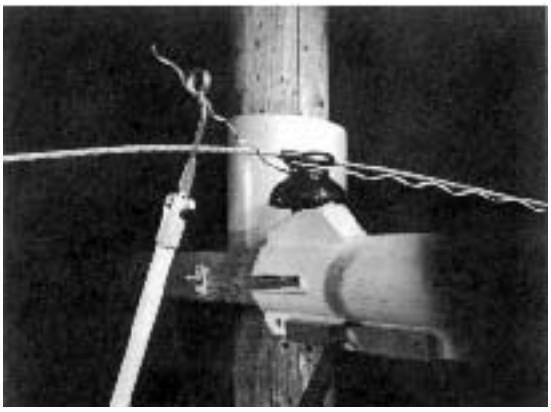
3) ...pad over so that it rest in the insulator groove (see inset).



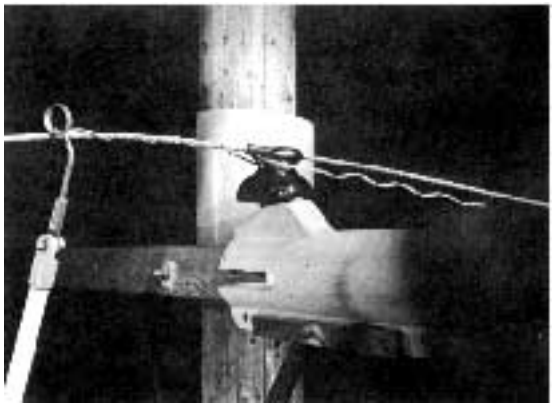
4) Position Distribution Tie on insulator as shown, so that both legs are parallel to the conductor.



5) Rotate the Distribution Tie in a counter clockwise direction, making certain that both legs go under the conductor as shown.



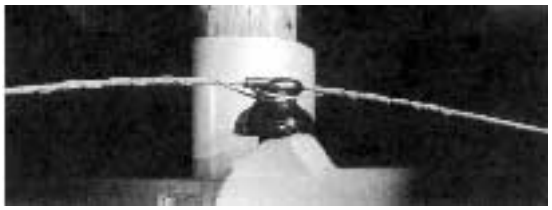
6) With the PREFORMED Applicator Ring start to wrap on one leg of the Distribution Tie



7) Continue wrapping to completion. Then snap the end of the leg into place

8) Follow the same procedure stated in step #6

9) Follow the same procedure stated in step #7.



10) Completed Hotstick application of the Distribution Tie.

SAFETY CONSIDERATIONS

1) For proper performance and personal safety be sure to select the proper size PREFORMED Distribution Tie before application.

2) PREFORMED Distribution Tie are precision devices. To ensure tight assembly, they should be stored in cartons under cover and handled carefully.

3) 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. Failure to follow these procedures and restrictions may result in personal injury.

4) When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

5) This product is intended for use by trained linesmen only. This product should not be used by any one who is not familiar with and trained in the use of it.

PREFORMED
LINE PRODUCTS
(AUSTRALIA) PTY LTD
A.B.N. 27 004 533 877

190 Power st. Glendenning, NSW Australia 2761
PO Box 106, Glendenning Business Centre, NSW Australia 2761
Phone: (02) 8805 0000 intl 61 2 8805 0000 Fax: (02) 8805 0090 intl 61 2 8805 0090
Email: plpaus@preformed.com.au
Web: www.preformed.com.au

NOTES

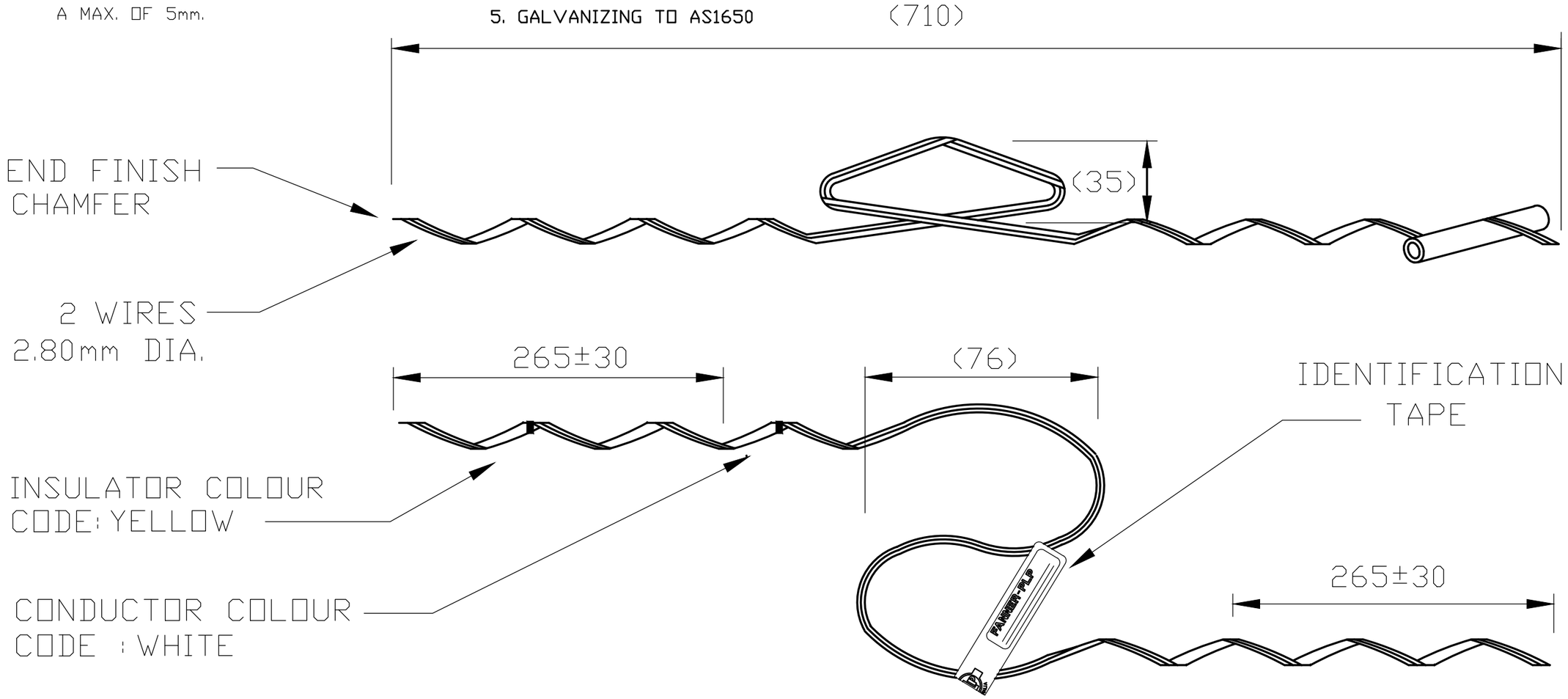
1 ALL DIMENSIONS IN MILLIMETRES

2 TOLERANCES UNLESS OTHERWISE STATED:-
- a. HOLE DIAMETER ±0.5mm
- b. LINEAR DIMS. UP TO 30mm ±1.5mm
- c. LINEAR DIMS. OVER 30mm ±5% UP TO A MAX. OF 5mm.

3. BRACKETED DIMS. DO NOT AFFECT INTERCHANGEABILITY OR COUPLING & ARE FOR GUIDANCE ONLY.

4. MATERIAL TO AS1154.

5. GALVANIZING TO AS1650



LAY : RIGHT HAND.

MATERIAL : GALVANIZED STEEL

PRODUCT TAPE COLOUR : WHITE

TAPE REQUIRED.

A	CW	16/6/91
CHK		
INITIAL ISSUE		
DSC NO._____		

CAT. NO: GDT-055-76
GALVANIZED
DISTRIBUTION TIE

FANNER-PLP PTY. LTD.

DRAWN	CW	PASSED		DATE	16/6/91	ISSUE	A	SCALE	N.T.S.

DRAWING NUMBER
075-005-RD