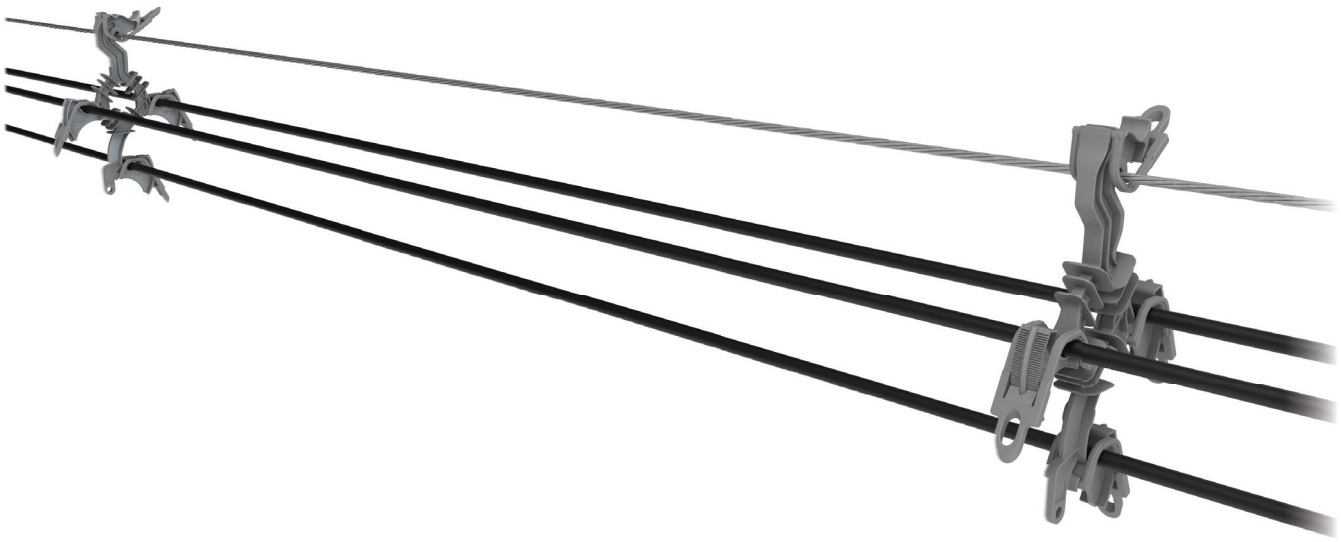
PRODUCT CATALOG



SPACER CABLE HARDWARE

Ratchet Spacers | Spacer Cable Hardware & Accessories | Ties
Polymer Insulators | Dead-Ends

ABOUT PLP

PLP protects the world's most critical connections by creating stronger and more reliable networks. Our precision-engineered solutions are trusted by energy and communications providers worldwide to perform better and last longer. With offices and manufacturing facilities in over 20 countries, PLP works as a united global corporation, delivering high-quality products and unparalleled service to customers around the world.

MANUFACTURING OPERATIONS

Headquartered in Cleveland, Ohio, PLP delivers high-quality, dependable solutions and market-leading customer service through our three U.S. manufacturing plants, 20+ global facilities, and a network of more than 3,500 team members.

PLP's facilities in Arkansas, North Carolina, and Ohio manufacture distribution system components in accordance with ISO quality systems, including formed wire dead-ends, tangent support attachments, motion control devices, and injection-molded products.

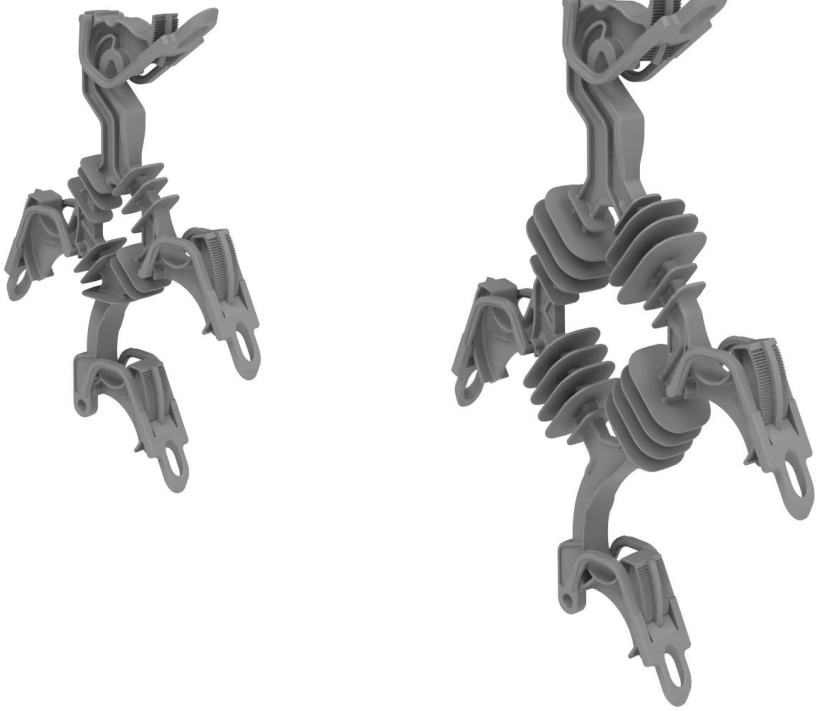
TESTING & QUALITY CONTROL

Thomas Peterson, the founder of PLP, believed in innovation and quality. That's why product testing has been an integral part of PLP since its beginning in 1947. In fact, not only do we test products during the development stage in our research laboratory at PLP's Global Headquarters, we also test products at all of our manufacturing facilities to ensure quality is never compromised.

Today, our state-of-the-art lab is one of the largest testing facilities of fiber connectivity devices for the communications industry as well as conductor and cable accessories for the power utility industry. While many competitors have reduced or eliminated their testing labs, we recently expanded ours by 50 percent, making it a 23,000 square foot facility.

CONTENTS

SPACER CABLE HARDWARE



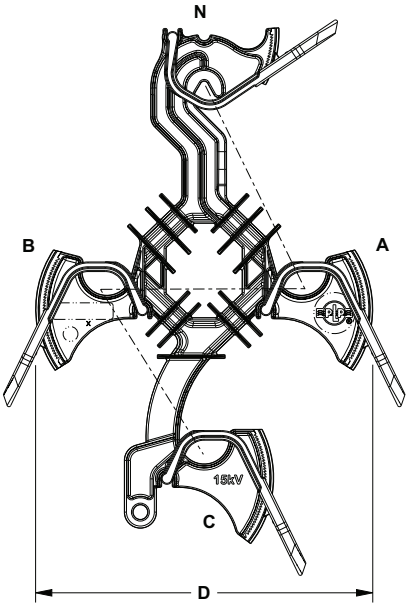
RATCHET SPACER

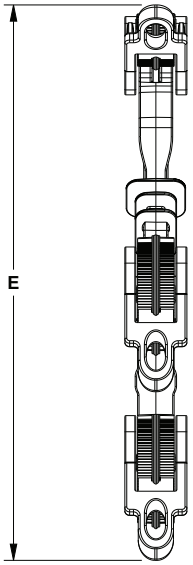
The **Ratchet Spacer** is intended for use on overhead spacer cable distribution systems that utilize jacketed conductors being supported by a messenger used as the system neutral. The messenger can be up to 0.750" in diameter and the phase conductors can be up to 2" in diameter. The PLP Ratchet Spacer meets industry-accepted electrical and mechanical criteria as well as ASTM material specifications for this application. The spacer utilizes adjustable ratcheting arms to secure the messenger and the covered phase conductors.

FEATURES AND BENEFITS

- Constructed of high-density polyethylene (HDPE) that is dielectrically compatible with and tested on HDPE jacketed conductors
- Track-resistant
- Proven UV-resistant
- Lightweight and shatter-resistant
- Three-phase compact diamond shape

SPECIFICATIONS





Catalog Number	Dimensions		Conductor Spacing			Minimum Leakage Distance	Messenger Range	Cable Range	Maximum System Voltage	Short Circuit Rating	Unit Weight
	D	E	AC & BC	AB	AN & BN						
	in		in			in	in	in	kV	kA	lb
TRS-15-R	13	21	8	8	8.5	12.5	0.375 – 0.75	0.4 – 2.0	15	10	2.10
TRS-46-R	17	27	11.5	12	12	20	0.375 – 0.75	0.4 – 2.0	46	12	2.95

ORDERING INSTRUCTIONS

Ratchet Spacer

Catalog Number	Description	Carton Quantity	Weight per Carton
			lb
TRS-15-R	15 kV Ratchet Spacer	16	40
TRS-46-R	46 kV Ratchet Spacer	12	53

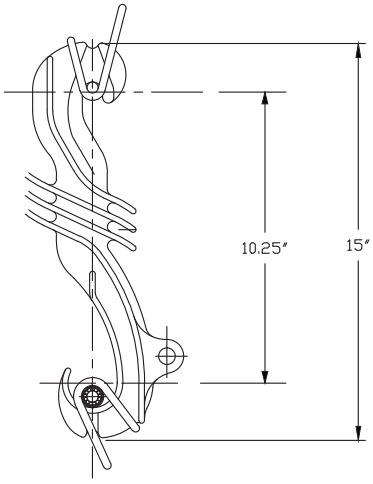
VERTICAL SPACER

The **Vertical Spacer** is made of a proprietary high-density polyethylene material (HDPE). It is gray in color, allowing the product to blend in with the environment. The Vertical Spacer provides excellent mechanical strength characteristics and meets all required UV resistance and electrical tracking performance levels. Each spacer includes flexible silicone ring ties that hold the jacketed conductor without damaging the outer jacket. The same ring ties are used to attach the spacer to the neutral or messenger.

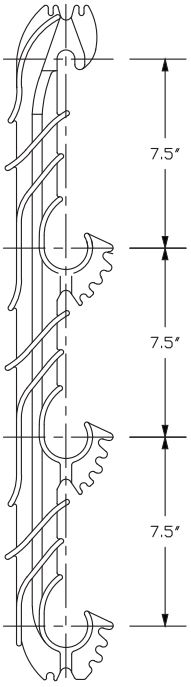
FEATURES AND BENEFITS

- Constructed of high-density polyethylene (HDPE) that is dielectrically compatible with and tested on HDPE jacketed conductors
- Track-resistant
- Proven UV-resistant
- Lightweight and shatter-resistant
- Easy to assemble

SPECIFICATIONS



15 kV Single-Phase Spacer with Ring Ties
Catalog Number: EM-03



15 kV Three-Phase Spacer with Ring Ties
Catalog Number: ECV-15A4

ORDERING INFORMATION

Vertical Spacer

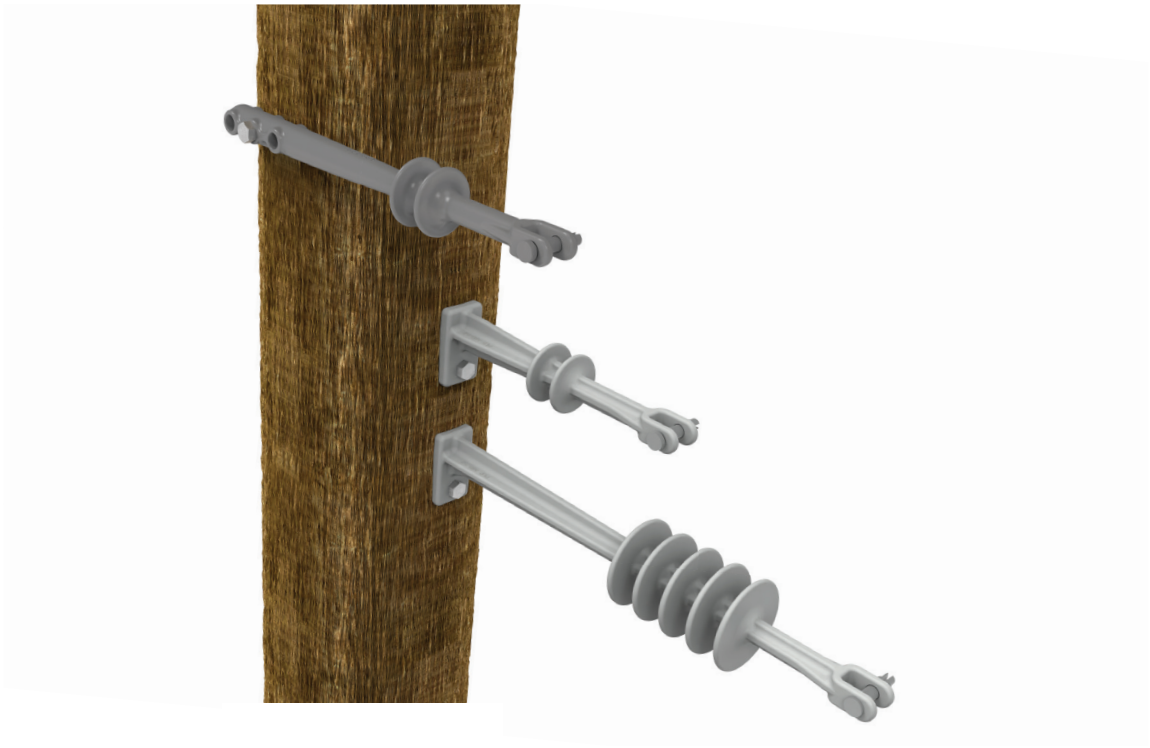
Catalog Number	Description	Dimensions		Unit Weight	Weight per Carton	Quantity per Carton
		Spacing	Overall Length			
		in		lb		
EM-03	15 kV Single-Phase Spacer with Ring Ties	10.25	15	2.95	25	24
ECV-15A4	15 kV Three-Phase Spacer with Ring Ties	7.5	27	1.25	20	12

The **Single-Phase Vertical Ring Tie Spacer** is specifically designed for applications on 15 kV class spacer cable systems that require taps and laterals. Supported on a messenger/neutral conductor, the spacer's function is to support a single covered conductor along a span while maintaining the dielectric strength of the network.

The **Three-Phase Vertical Ring Tie Spacer** is for use on 15 kV three-phase spacer cable systems where construction requires a vertical orientation rather than the standard compact diamond layout. Supported on a messenger/neutral conductor, the spacer supports the three jacketed phases along a span while maintaining the dielectric strength of the network.

ACCESSORY

Ring Tie 3.5"
Catalog Number: AN-01



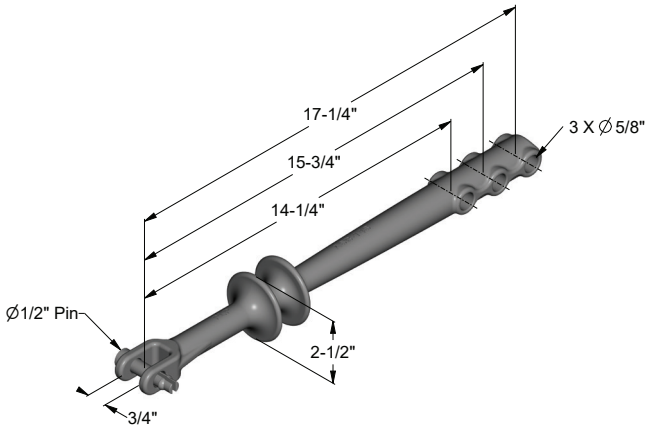
ANTI-SWAY BRACKETS

PLP **Anti-Sway Brackets** secure the bottom of cable spacers at tangent poles to prevent sway/swinging movement of the bundle. Bundle movement can cause stress and fatigue at the support, potentially resulting in component failure.

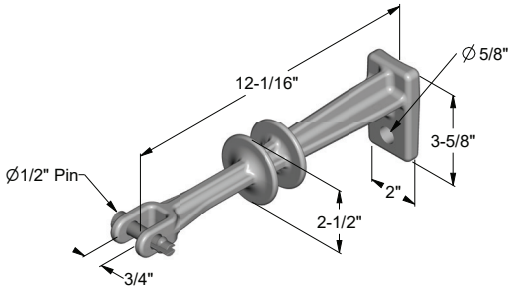
FEATURES AND BENEFITS

- Manufactured of high-strength, UV-resistant, environmentally resistant injection molded material
- Lightweight and shatter-resistant
- Incorporates an integrated molded clevis with clevis pin
- Compatible and interchangeable with other manufacturers' spacers

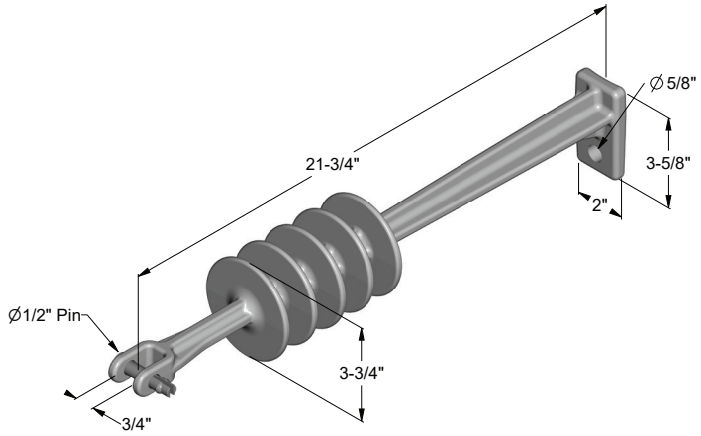
SPECIFICATIONS



Catalog Number: ASB-14S



Catalog Number: ASB-14FM

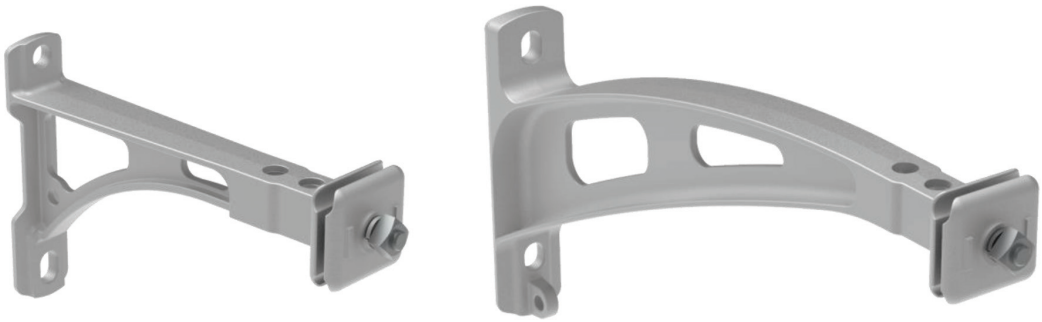


Catalog Number: ASB-24FM

ORDERING INFORMATION

Anti-Sway Brackets

Catalog Number	Description	Minimum Leakage Distance	Unit Weight	Quantity per Carton	Weight per Carton
		in	lb		lb
ASB-14S	14" Side Mount Anti-Sway Arm	14	0.90	25	22
ASB-14FM	14" Flush Mount Anti-Sway Arm	14	0.70		18
ASB-24FM	24" Flush Mount Anti-Sway Arm	33.50	1.20		32



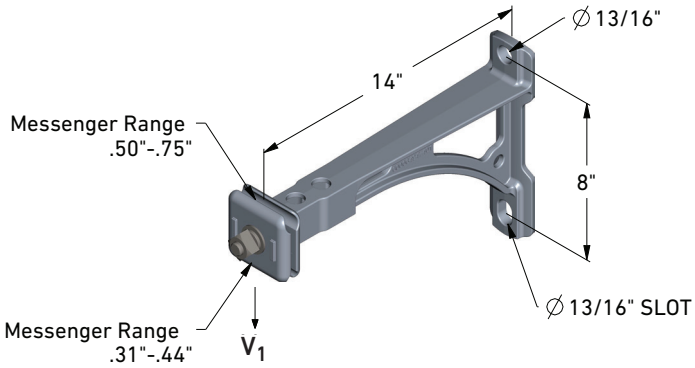
TANGENT BRACKET

Tangent Brackets are designed to support a spacer cable system's messenger. They are used in tangent applications and can accommodate line angles of up to 6 degrees. The brackets are interchangeable with other manufacturers' spacer cable systems. Proper utility grade hardware should be used. All Tangent Brackets are supplied with the MC-2 Messenger Clamp to accommodate messengers from 5/16" to 3/4" in diameter.

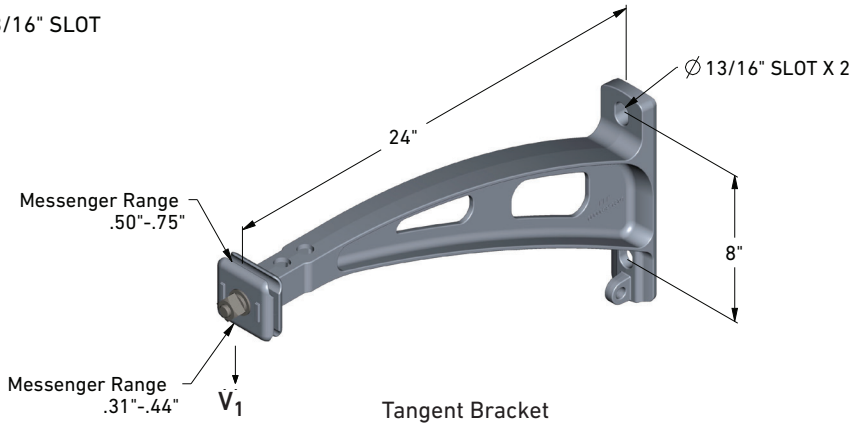
FEATURES AND BENEFITS

- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Allows for back-to-back double circuit construction
- Accepts standard short shank insulator pin (up to 3/4" shank diameter), insulator for single phase spacer cable angle construction and armless tree wire construction
- Ductile iron construction for strength and durability
- Works in conjunction with roll-by installation equipment and will allow continuous, uninterrupted pulling of cable past tangent structures

DIMENSIONS



Tangent Bracket
(Catalog Number: LTB-14C)



Tangent Bracket
(Catalog Number: LTB-24C)

ORDERING INFORMATION

Tangent Bracket

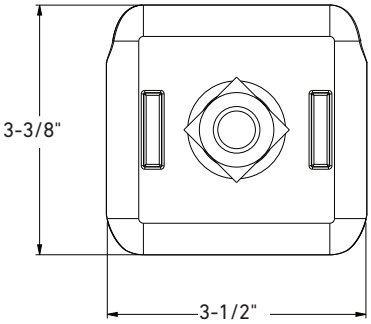
Catalog Number	System Voltage	Dimensions		Messenger Range		Minimum Ultimate Vertical Load	Weight per Unit	Material
		Length	Bolt Spacing	Minimum	Maximum	V1		
		in	in	in	in	lb	lb	
LTB-14C	15kV	14	8	0.31	0.75	3200	6.5	Ductile Iron
LTB-24C	46kV	24				6000	16.5	

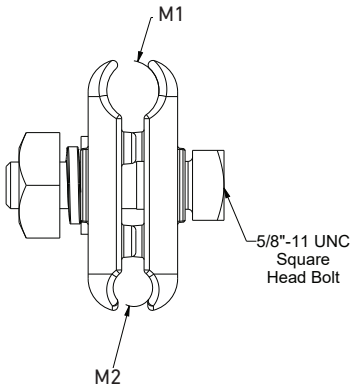
NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

TANGENT MESSENGER CLAMP

The **PLP Tangent Messenger Clamp** is designed for application on tangent brackets to support the messenger of jacketed aerial cable systems. The PLP Tangent Messenger Clamp allows for stringing operations that utilize roll-by blocks and messenger trolleys to smoothly roll past the tangent bracket. The broad messenger range is achieved by providing two clamping grooves that are 180 degrees apart.

The PLP Tangent Messenger Clamp and hardware is supplied with the PLP LTB series of Tangent Brackets. The appropriate groove should be used to ensure the proper clamping force on the messenger is maintained.





ORDERING INFORMATION

Dimensions

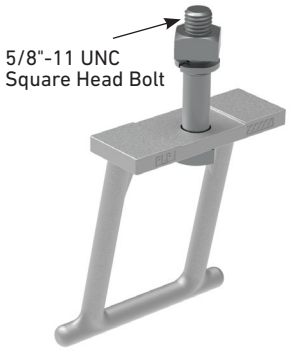
Catalog Number	Description	M1		M2		Weight	Material
		Minimum	Maximum	Minimum	Maximum		
		in		in		lb	
MC-2	Tangent Messenger Clamp	1/2	3/4	5/16	7/16	12	Galvanized Steel

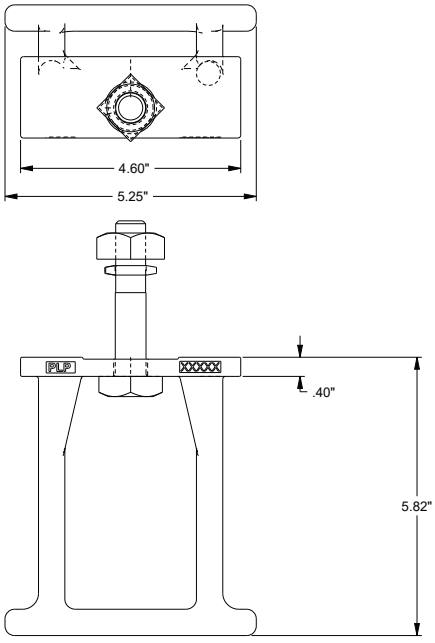
NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

TANGENT BRACKET STIRRUP

The **Tangent Bracket Stirrup** supports the messenger of the aerial spacer cable system at the tangent bracket. The stirrup is supplied with a 5/8" bolt, nut, and lock washer to attach it to the tangent bracket.

Application: The Tangent Bracket Stirrup is used with PLP LTB series Tangent Brackets. The stirrup should be attached to the tangent bracket using the hardware supplied. Stirrups should always be installed as the spacers are installed at the tangent bracket location. The stirrups are interchangeable with other manufacturer's spacer cable tangent brackets.





ORDERING INFORMATION

Dimensions

Catalog Number	Description	Minimum Ultimate Load	Weight	Material
		V1		
		lb	lb	
EST-01	Tangent Bracket Stirrup	3100	1.7	Ductile Iron

ANGLE BRACKET

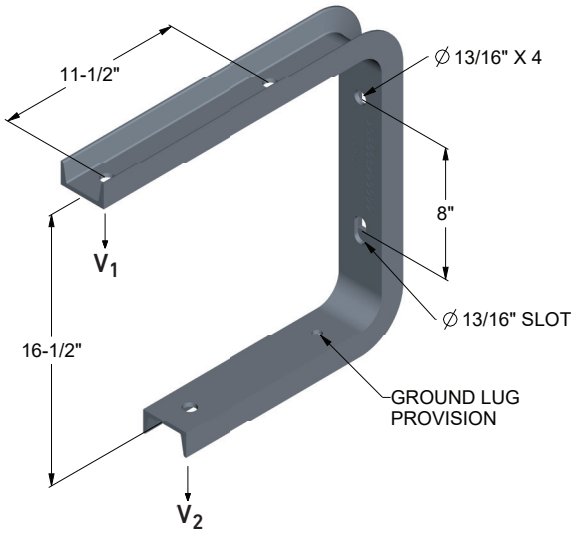
POLE MOUNTED MESSENGER CLAMP

Angle Brackets are designed to provide support for the spacer cable system under turning conditions to eliminate the need for more costly crossarm construction. They are used on utility poles to accommodate line angles from 6 degrees up to 90 degrees depending on construction and conductor size. The bracket is ideally suited to be used with INSULIGN® Tie Top Insulators with Coated Ties or INSULIGN Vise Top Insulators. The brackets are interchangeable with other manufacturers' spacer cable systems.

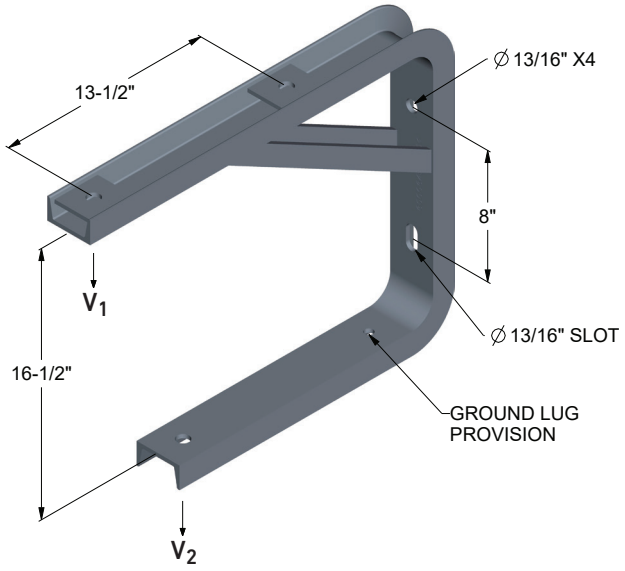
FEATURES AND BENEFITS

- Maintains the spacer cable system's configuration through angle poles
- Cost-effective alternative to crossarm transitions
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Utilizes a standard 8" mounting spacing for compatibility on predrilled poles
- Provisional ground lug hole

DIMENSIONS



Angle Bracket
(**Catalog Number: ABC-15**)



Angle Bracket
(**Catalog Number: ABC-35**)

Catalog Number	System Voltage	Line Angle Degrees	Conductor Size	Insulator(s)	Insulator Pin Length* in	Double Pin Mounting DIP-10 Insulator Plate
ABC-15	15kV	7 - 60	All	IP-15-X, IP-15-VTY, IP-15-PVTY	7	N/A
		61 - 90				Required
ABC-35	25kV	7 - 44	All	IP-25-XZ IP-25-VTYZ IP-25-PVTYZ	7	N/A
		45 - 60	Below 336.4			N/A
		45 - 60	336.4 or larger			Required
		61 - 90	All			Required
	35kV	7 - 44	All	IP-35-XZ IP-35-VTYZ IP-35-PVTYZ	7	N/A
		45 - 60	Below 336.4			N/A
		45 - 60	336.4 or larger			Required
		61 - 90	All			Required

*This is the minimum insulator pin length required for clearance of the insulator with the channel bracket

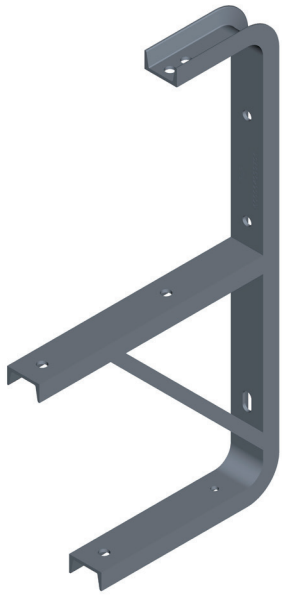
X = Neck size designation, **Y** = Vise Top insert material, **Z** = Insulator pin size – 1" or 1-3/8"

ORDERING INFORMATION

Angle Brackets – Pole Mounted Messenger Clamp

Catalog Number	System Voltage	Minimum Vertical Load lb V1	Minimum Vertical Load lb V2	Weight lb	Material
ABC-15	15kV	950	1200	21	Galvanized Steel
ABC-35	46kV	1700	1000	28	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)



ANGLE E BRACKET

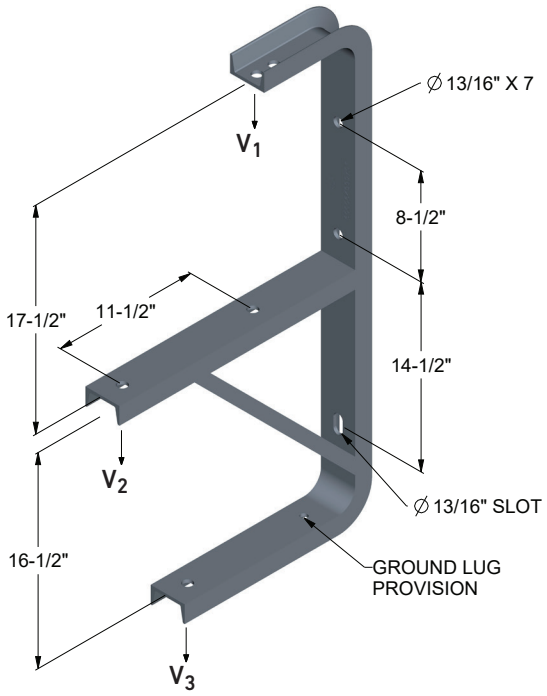
MESSENGER MOUNTING UNDER 60 DEGREES

The **Angle E Bracket with Messenger Mounting** can be used on structures where line angles do not exceed 60 degrees. The bracket provides the same benefits as the Angle Bracket for Pole Mounted Messengers but has an integrated point for attaching the MAC series messenger clamps reducing the overall cost of construction. The bracket is ideally suited to be used with INSULIGN® Tie Top Insulators with Coated Ties or INSULIGN Vise Top Insulators. The brackets are interchangeable with other manufacturers' spacer cable systems.

FEATURES AND BENEFITS

- Maintains the spacer cable system's configuration through angle poles and provides electrical shielding due to location of messenger clamp
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- The upper arm accepts the MAC-6201 directly or the MAC-6301 by using the U-563 U-bolt
- Provisional ground lug hole
- Cost-effective alternative to crossarm transitions

DIMENSIONS



Angle E Bracket with Messenger under 60 Degrees
(**Catalog Number: ABE-15**)

Catalog Number	System Voltage	Line Angle	Conductor Size	Insulator(s)	Insulator Pin Length*	Double Pin Mounting DIP-10 Insulator Plate
		Degrees			in	
ABE-15	15kV	up to 60	All	IP-15-X IP-15-VTY IP-15-PVTY	5	User discretion

*This is the minimum insulator pin length required for clearance of the insulator with the channel bracket
X = Neck size designation, **Y** = Vise Top insert material, **Z** = Insulator pin size – 1" or 1-3/8"

ORDERING INFORMATION

Angle E Bracket with Messenger Mounting Under 60 Degrees

Catalog Number	System Voltage	Minimum Yield Load			Weight	Material
		V1	V2	V3		
		lb			lb	
ABE-15	15kV & below	2500	800	1000	39	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

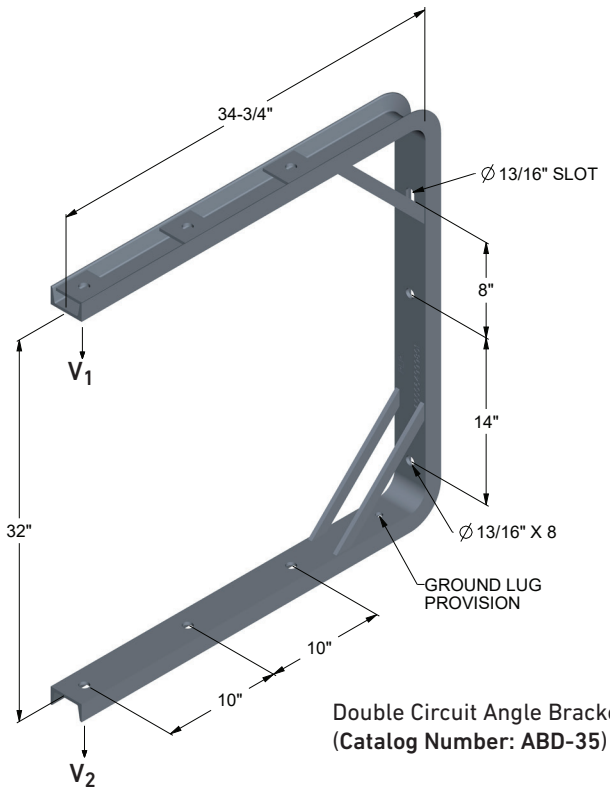
DOUBLE CIRCUIT ANGLE BRACKET

The **Double Circuit Angle Bracket** provides a streamline option for dual circuit application on a single pole. Designed for use on circuit voltages up to 35kV, the bracket is an effective use of space and hardware providing a cost-effective design. The bracket is ideally suited to be used with INSULIGN® Tie Top Insulators with Coated Ties or INSULIGN Vise Top Polymer Insulators. The brackets are interchangeable with other manufacturers' spacer cable systems.

FEATURES AND BENEFITS

- Keeps conductor spacing close for narrow corridors
- Center mounting hole doubles as mount for the Angle Messenger Clamp
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Double circuit angle capabilities in one bracket
- Provisional ground lug hole

DIMENSIONS



Double Circuit Angle Bracket
(**Catalog Number: ABD-35**)

Catalog Number	System Voltage	Line Angle Degrees	Conductor Size	Insulator(s)	DIP-10 Insulator Plate
ABD-35	15kV	7 - 60	All	IP-15-X IP-15-VTY IP-15-PVTY	N/A
		61 - 90			Required
	25kV	7 - 44	All	IP-25-XZ IP-25-VTYZ IP-25-PVTYZ	N/A
		45 - 60	Below 336.4		N/A
		45 - 60	336.4 or larger		Required
		61 - 90	All		Required
	35kV	7 - 44	All	IP-35-XZ IP-35-VTYZ IP-35-PVTYZ	N/A
		45 - 60	Below 336.4		N/A
		45 - 60	336.4 or larger		Required
		61 - 90	Not Recommended		

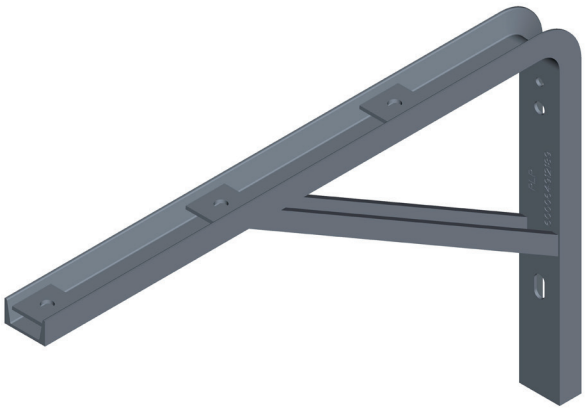
*This is the minimum insulator pin length required for clearance of the insulator with the channel bracket

X = Neck size designation, **Y** = Vise Top insert material, **Z** = Insulator pin size – 1" or 1-3/8"

ORDERING INFORMATION

Double Circuit Angle Bracket

Catalog Number	System Voltage	Minimum Yield Load		Weight	Material
		V1	V2		
		lb	lb	lb	
ABD-35	up to 35kV	1000	1000	46.5	Galvanized Steel



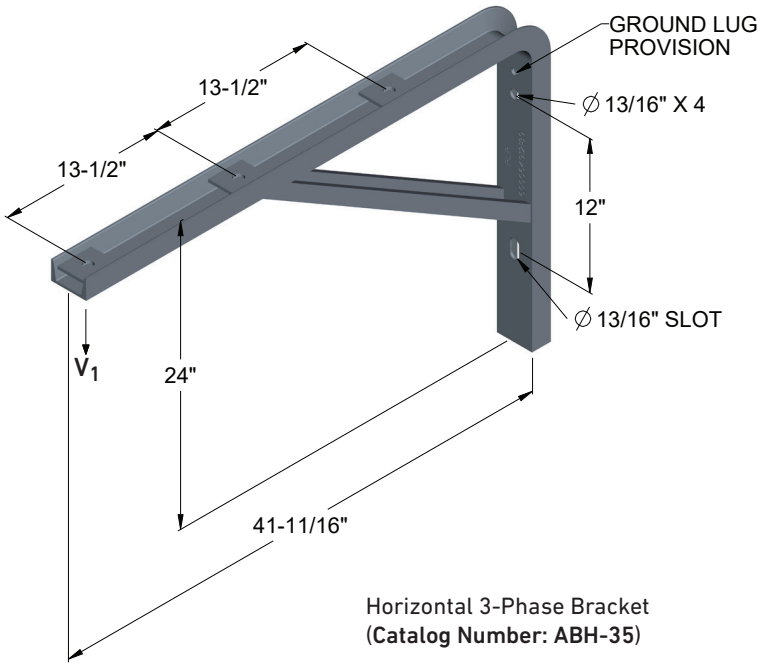
HORIZONTAL 3-PHASE BRACKET

The **Horizontal 3-Phase Bracket** is used when there is a transition to a horizontal configuration requiring uniform spacing of the phases. It is designed to support the largest spacer cable conductors used in systems rated to 35kV. Being a streamlined tangent bracket, the Horizontal 3-Phase Bracket allows for crossing circuits with minimal impact at the pole. The bracket is ideally suited to be used with INSULIGN® Tie Top Insulators with Coated Ties or INSULIGN® Vise Top Polymer Insulators. The brackets are interchangeable with other manufacturers' spacer cable systems.

FEATURES AND BENEFITS

- Phase spacing is conducive for tap connection installation
- Cost-effective alternative to crossarm transitions
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Crossing circuit connections are efficiently accomplished
- Provisional ground lug hole

DIMENSIONS



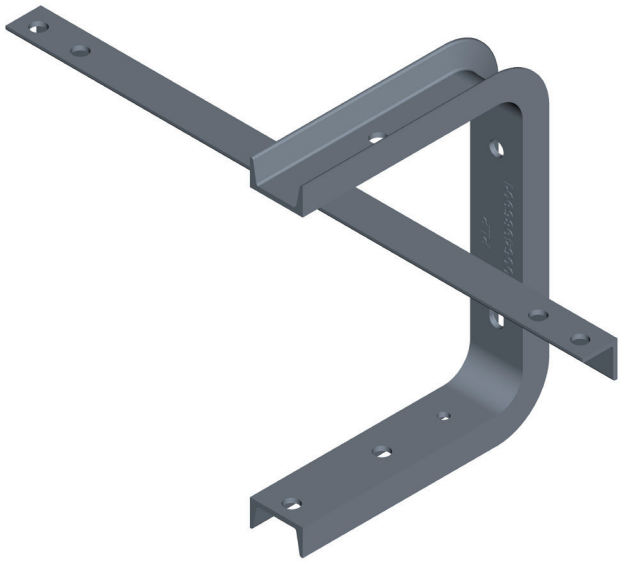
Horizontal 3-Phase Bracket
(**Catalog Number: ABH-35**)

ORDERING INFORMATION

Horizontal 3-Phase Bracket

Catalog Number	System Voltage	Minimum Yield Load	Weight	Material
		V1		
		lb	lb	
ABH-35	up to 35kV	500	40	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)



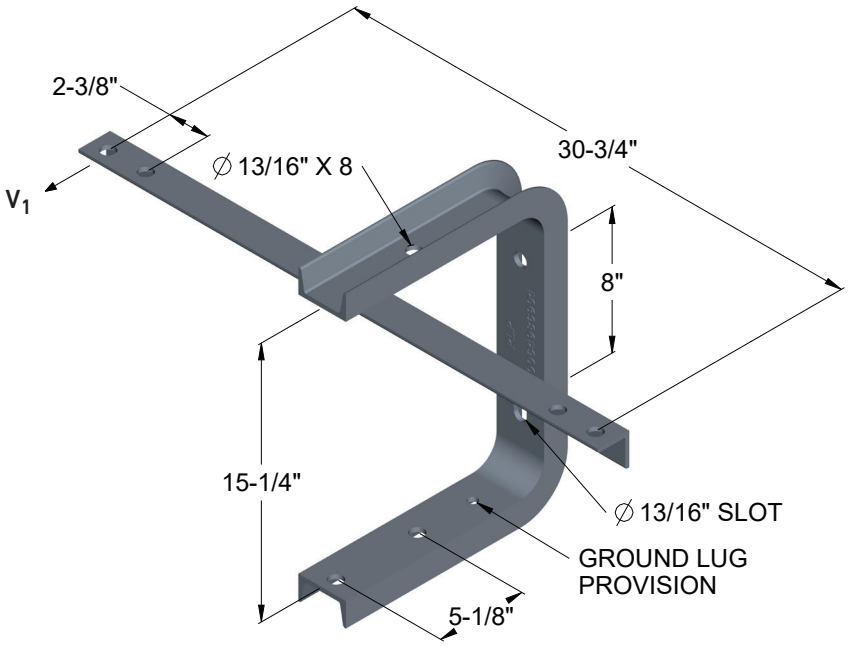
DEAD-END BRACKET

The **Dead-End Bracket** is designed for the purpose of circuit termination. The messenger is terminated through the pole ensuring proper mechanical support as well as maintaining the spacer cable shape and its electrical shielding characteristics. Provisions for phase conductor termination eliminate the requirement for bulky crossarm construction.

FEATURES AND BENEFITS

- Maintains the spacer cable system's configuration into the termination pole
- Allows for double dead-end circuit termination construction - inline or heavy turning angle applications
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Utilizes a standard 8" mounting spacing for compatibility on predrilled poles
- Provides individual termination points for phase conductors
- Provisional ground lug hole

DIMENSIONS



Dead-End Bracket
(Catalog Number: DEB-35)

ORDERING INFORMATION

Dead-End Bracket

Catalog Number	System Voltage	Minimum Yield Load	Weight	Material
		V1		
		lb	lb	
DEB-35	35kV	1000	27	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

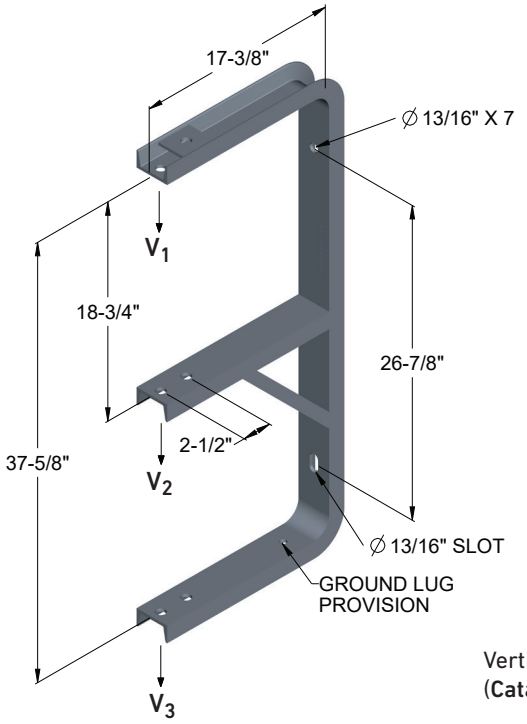
VERTICAL TAP/ANGLE BRACKET

The **Vertical Tap Angle Bracket** converts compact diamond to a vertical orientation for use as a termination point for lateral taps and turning angles for the phase conductors of the aerial spacer cable system. The Vertical Tap/Angle Bracket provides a cost-effective solution compared to standard crossarm construction. The bracket is ideally suited to be used with INSULIGN® Tie Top Insulators with Coated Ties or INSULIGN Vise Top Polymer Insulators in conjunction with the DIP-10 insulator plate when angles require double pin construction. The brackets are interchangeable with other manufacturers' spacer cable systems.

FEATURES AND BENEFITS

- Lateral termination point for convenient circuit tapping
- Cost-effective alternative to crossarm transitions
- Vertical orientation to facilitate heavy line angles and simplified taps
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Provisional ground lug hole

DIMENSIONS



Vertical Tap/Angle Bracket
(**Catalog Number: ABV-35**)

Catalog Number	System Voltage	Line Angle Degrees	Conductor Size	Insulator(s)	DIP-10 Insulator Plate
ABV-35	15kV	7 - 60	All	IP-15-X IP-15-VTY IP-15-PVTY	N/A
		61 - 90			Required
	25kV / 35kV	7 - 44	All	IP-25-XZ IP-25-VTYZ IP-25-PVTYZ IP-35-XZ IP-35-VTYZ IP-35-PVTYZ	N/A
		45 - 60	Below 336.4		N/A
		45 - 60	336.4 or larger		Required
		61 - 90	All		Required

*This is the minimum insulator pin length required for clearance of the insulator with the channel bracket
X = Neck size designation, **Y** = Vise Top insert material, **Z** = Insulator pin size – 1" or 1-3/8"

ORDERING INFORMATION

Vertical Tap/Angle Bracket

Catalog Number	System Voltage	Minimum Yield Load			Weight	Material
		V1	V2	V3		
		lb	lb	lb	lb	
ABV-35	46kV and below	1150	1600	1100	38	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

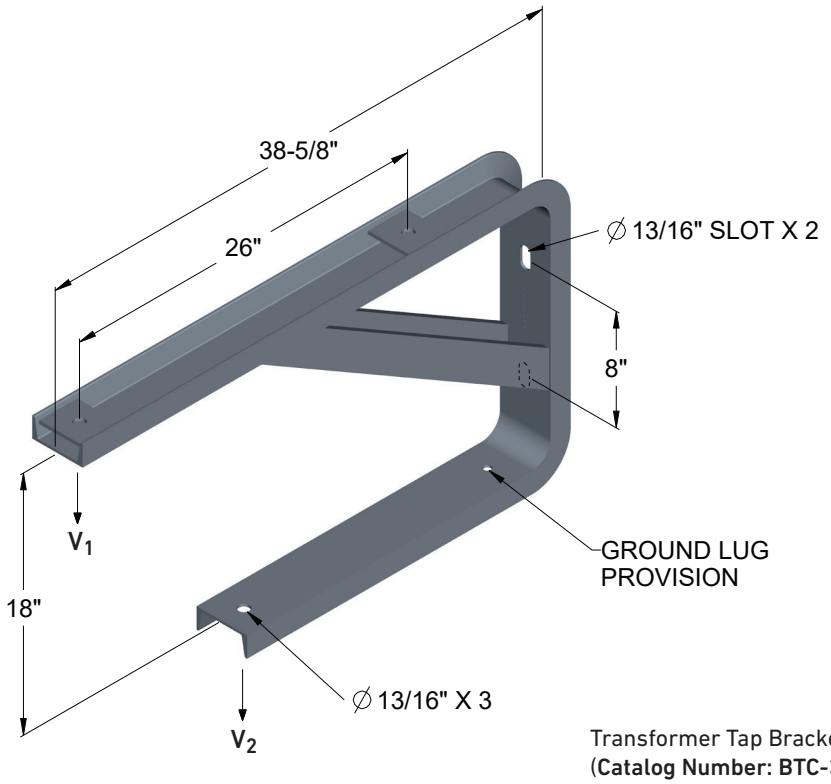
TRANSFORMER TAP BRACKET

The **Transformer Tap Bracket** provides increased phase spacing for the purpose of energizing electrical equipment on the distribution system. It can be used in tangent as well as angle applications. Angle applications are limited to 60 degrees. The bracket is ideally suited to be used with INSULIGN® Tie Top Insulators with Coated Ties or INSULIGN Vise Top Polymer Insulators. It is used in conjunction with the DIP-10 insulator plate when angles require double pin construction. The brackets are interchangeable with other manufacturers' spacer cable systems.

FEATURES AND BENEFITS

- Maintains the spacer cable system's configuration through angle poles
- Provides increased spacing between phases to facilitate electrical equipment tapping
- Utilizes a standard 8" mounting spacing for compatibility on predrilled poles
- Pole mounting is achieved by using either 5/8" or 3/4" double arming or through bolts (not included)
- Provisional ground lug hole

DIMENSIONS



Transformer Tap Bracket
(**Catalog Number: BTC-35**)

Catalog Number	System Voltage	Line Angle Degrees	Conductor Size	Insulator(s)	DIP-10 Insulator Plate
BTC-35	15kV	7 - 60	All	IP-15-X IP-15-VTY IP-15-PVTY	N/A
		61 - 90			Required
	25kV / 35kV	7 - 44	All	IP-25-XZ IP-25-VTYZ IP-25-PVTYZ IP-35-XZ IP-35-VTYZ IP-35-PVTYZ	N/A
		45 - 60	Below 336.4		N/A
		45 - 60	336.4 or larger		Required
		61 - 90	All		Required

*This is the minimum insulator pin length required for clearance of the insulator with the channel bracket

X = Neck size designation, **Y** = Vise Top insert material, **Z** = Insulator pin size – 1" or 1-3/8"

ORDERING INFORMATION

Transformer Tap Bracket

Catalog Number	System Voltage	Minimum Yield Load		Weight	Material
		V1	V2		
		lb	lb	lb	
BTC-35	46kV and below	1000	1400	38	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

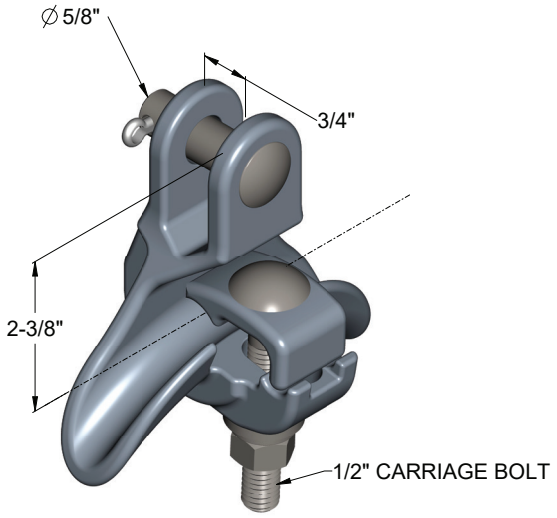
ANGLE MESSENGER CLAMP

Angle Messenger Clamps are designed to support the messenger of a spacer cable system in medium to heavy turning angle applications. These clamps are used in conjunction with angle channel brackets for angles up to 60 degrees. For angles from 61 degrees to 90 degrees it is recommended to terminate the messenger. The clamp can be mounted directly to the channel bracket or with the U-563 U-bolt assembly or directly to the pole using an eye nut and through bolt. The messenger clamps are interchangeable with other manufacturers' spacer cable systems.

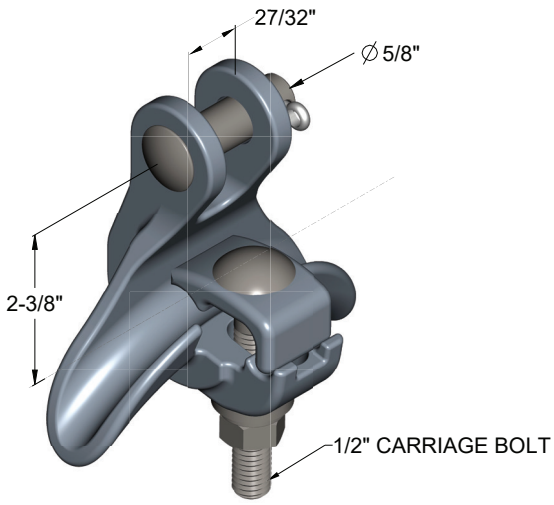
FEATURES AND BENEFITS

- Eliminates the need to terminate the messenger at the pole saving on construction costs
- Horizontal and vertical mounting clevis options provide greater versatility of configurations
- Covers the full range of common messenger conductors

DIMENSIONS



Messenger Clamp with Horizontal Mount
(**Catalog Number: MAC-6201**)



Messenger Clamp with Vertical Mount
(**Catalog Number: MAC-6301**)

ORDERING INFORMATION

Angle Messenger Clamp

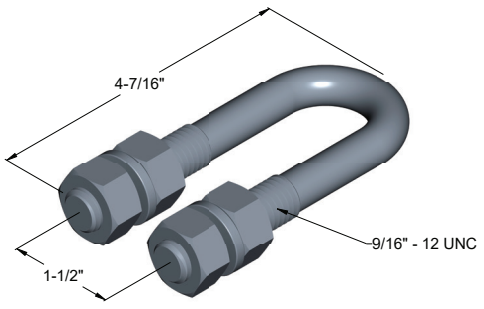
Catalog Number	Description	Messenger Range		Weight	Material
		Minimum	Maximum		
		in		lb	
MAC-6201	Angle Messenger Clamp – Horizontal Mount	0.22	0.75	2.3	Ductile Iron
MAC-6301	Angle Messenger Clamp – Vertical Mount			2.5	

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

ACCESSORIES

U-Bolt

The **U-Bolt** is used with channel brackets when a requirement exists to mount the MAC-6201 Messenger Angle Clamp due to a turning angle into the pole. It is typically used with the ABE-15 or the Pole Top Extensions.

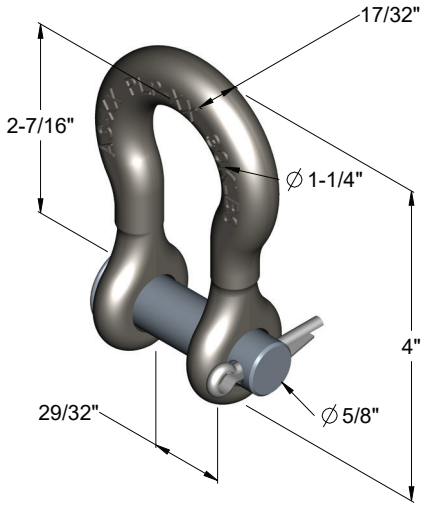


Catalog Number	Description	Minimum Ultimate Load	Weight	Material
		lb	lb	
U-563	9/16" U-Bolt	10,000	1.2	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

DIMENSIONS

ANCHOR SHACKLE



Component	Material
Body	Forged steel, hot dip galvanized
Hardware	Galvanized steel
Cotter Pin	Stainless steel

ORDERING INFORMATION

Anchor Shackle

Catalog Number	Description	Minimum Ultimate Load	Weight	Material
	in (mm)	lb	lb	
AS-5L	Anchor Shackle	30,000	0.75	Galvanized Steel

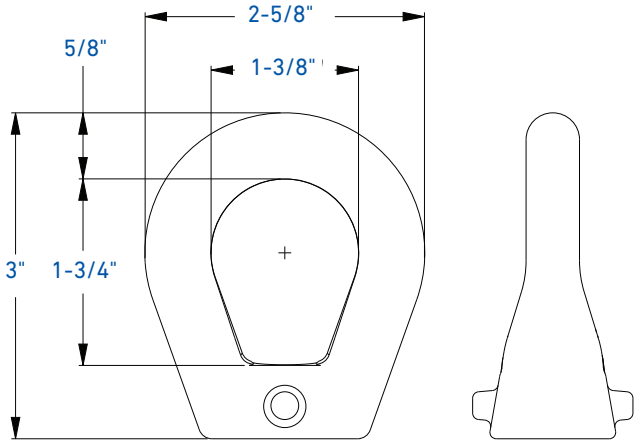
OVAL EYE NUT

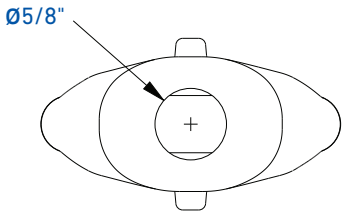
The **Oval Eye Nut** is designed as a termination point for a messenger or grounded conductor. This nut can be secured using a 5/8" threaded utility double arming bolt or through bolts. The Oval Eye Nut is used on applications to wood or composite poles, spacer cable brackets, or lattice tower structures.

FEATURES AND BENEFITS

- UTS of 12,500 lb
- Ideal for use with thimble clevis/factory formed dead-end combination
- Use with thimble and factory formed dead-ends
- Manufactured from galvanized ductile iron

SPECIFICATIONS



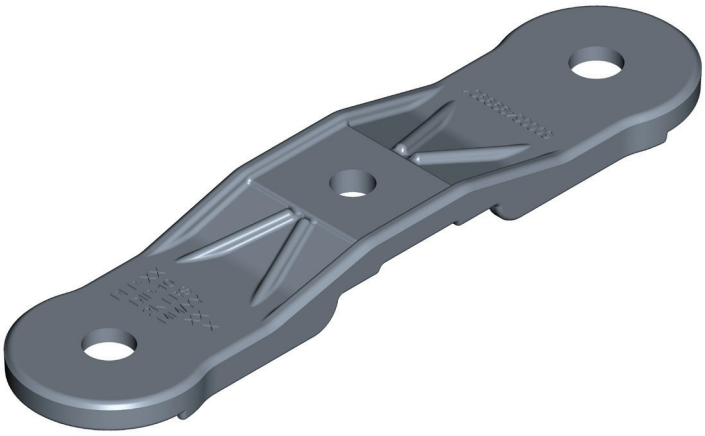


Material	Strength
Ductile Iron	12,500 lb

ORDERING INFORMATION

Oval Eye Nut

Catalog Number	Description	Units per Carton	Weight per Unit	Weight per Carton
			lb	
EN-5	5/8" Eye-Nut	50	0.64	32



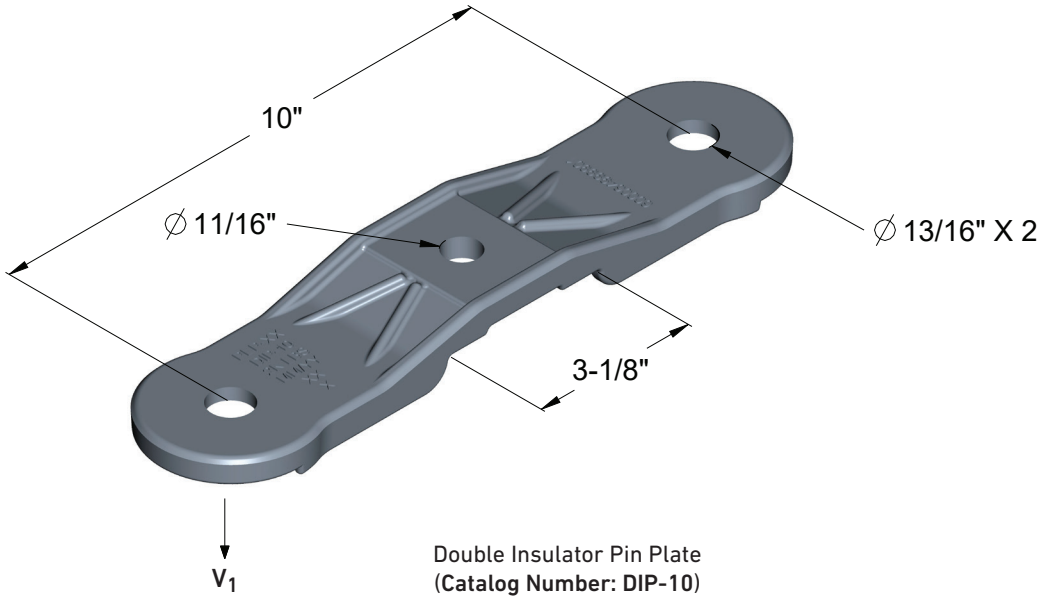
DOUBLE INSULATOR PIN PLATE

The **Double Insulator Pin Plate** turns any channel bracket into a double pin application for the purpose of turning a heavy angle. Cast of ductile iron for strength and durability, the Double Insulator Pin Plate is hot dip galvanized to protect against corrosion. Proper utility-grade hardware should be used to attach the Double Insulator Pin Plate to any channel bracket. The Double Insulator Pin Plate is interchangeable with other manufacturers' spacer cable systems.

FEATURES AND BENEFITS

- Accepts standard short shank insulator pin (up to 3/4" shank diameter)
- Ductile iron construction for strength and durability
- Compatible with 3" and 4" brackets
- Accepts 5/8" HDG hardware for attachment to the bracket

DIMENSIONS



Double Insulator Pin Plate
(**Catalog Number: DIP-10**)

Catalog Number	System Voltage	Line Angle Degrees	Conductor Size	Insulator(s)	DIP-10 Insulator Plate
DIP-10	15kV	7 - 60	All	IP-15-X IP-15-VTY IP-15-PVTY	N/A
		61 - 90			Required
	25kV / 35kV	7 - 44	All	IP-25-XZ IP-25-VTYZ IP-25-PVTYZ IP-35-XZ IP-35-VTYZ IP-35-PVTYZ	N/A
		45 - 60	Below 336.4		N/A
		45 - 60	336.4 or larger		Required
		61 - 90	All		Required

*This is the minimum insulator pin length required for clearance of the insulator with the channel bracket

X = Neck size designation, **Y** = Vise Top insert material, **Z** = Insulator pin size – 1" or 1-3/8"

ORDERING INFORMATION

Double Insulator Pin Plate

Catalog Number	Description	Minimum Yield Load V1 lb	Weight lb	Material
DIP-10	Double Insulator Pin Plate	1750	3.5	Ductile Iron

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

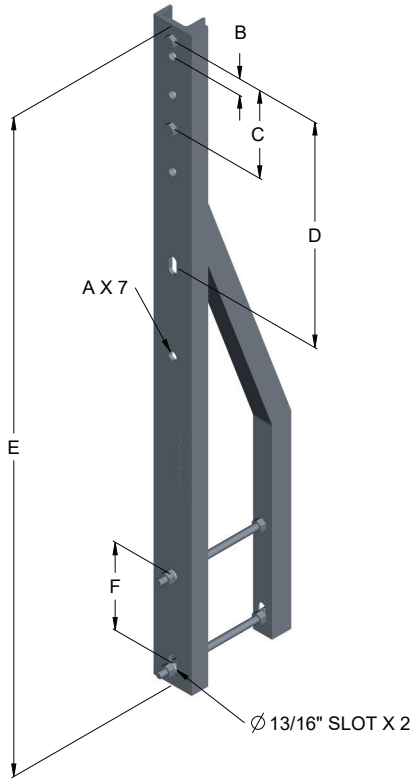
POLE TOP EXTENSION BRACKET

The **Pole Top Extension Bracket** can be utilized to increase or obtain the required clearances when adding circuits on an existing pole line. The Pole Top Extension is compatible with tangent and angle structures. The brackets are constructed of a 4" channel section and formed angle member to provide the strength for the addition of a circuit or other hardware. Hardware for assembly and pole mounting is provided. The brackets are interchangeable with other manufacturers' spacer cable systems. Proper guying practices are always to be followed as is defined in the National Electric Safety code and the customer standards.

FEATURES AND BENEFITS

- Costly pole replacements can be defered or eliminated
- Clearance between standard construction of primary underbuilds is achieved
- Pole mounting is achieved by using the provided 5/8" double arming bolts
- The provided 5/8" double arming bolts can be changed out for 3/4" double arming or through bolts (not included)
- Utilizes a standard 8" mounting spacing for compatibility on predrilled poles
- Maximum pole diameter is 8 inches

DIMENSIONS



Pole Top Extension Bracket
(**Catalog Number: PTX-60 and PTX-75**)

ORDERING INFORMATION

Pole Top Extension Bracket

Catalog Number	Dimensions						Weight	Material
	A	B	C	D	E	F		
	in						lb	
PTX-60	13/16	1.5	8	20.5	60	8	42	Galvanized Steel
PTX-75	13/16	1.5	8	20.5	75	8	55	Galvanized Steel

NOTE: Hot dip galvanized per ASTM A153 or A123 (latest version)

INSULIGN® POLYMER INSULATOR

TIE TOP PIN TYPE

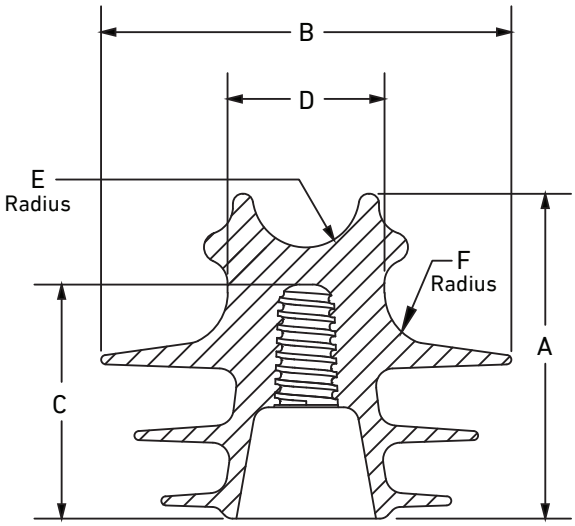
The **INSULIGN® Tie Top Pin Type Polymer Insulators** are designed to match the head, neck and mounting pin requirements of the applicable ANSI C29.5 and ANSI C29.6 insulator designs. “C” (2 -1/4" nominal), “F” (2-7/8" nominal) and "J" (3-1/2" nominal) neck sizes are available.

By using ANSI head and neck dimensional standards, PLP metal or plastic formed wire ties install easily and will provide superior holding and electrical performance on PLP's INSULIGN Tie Top Polymer Insulators.

FEATURES AND BENEFITS

- Tie top designs are ideal for use with PLP formed wire ties
- Ideal for use with Tree Wire construction
- Matched dielectric properties
- Superior moisture and contamination shedding
- UV-stabilized material
- High-impact resistance
- Lightweight design
- ANSI-compliant head dimensions
- Dramatically reduces abrasion damage to conductor
- Ideal for jumpers and stinger wires
- 100% recyclable
- 1” or 1-3/8” pins

SPECIFICATIONS



INSULIGN Tie Top Pin Type Polymer Insulators

Nominal Insulator Dimensions						
Insulator Type Catalog Number	**IP-15-C**	**IP-15-F**	**IP-25-F1/2**	**IP-25-J1/2**	**IP-35-F1/2**	**IP-35-J1/2**
ANSI Class	**55-3**	**55-4**	**55-5**	**56-1**	**55-6 / 55-7**	**55-6 / 55-7**
A (in)	5.00	5.25	5.70	6.70	7.50	7.50
B (in)	5.50	5.50	6.10	7.00	7.50	7.50
C (in)	3.75	3.75	4.35	4.90	5.50	5.50
D (in)	2.25	2.88	2.88	3.50	2.88	3.50
E (Radius) (in)	0.75	1.00	1.00	1.00	1.00	1.00
F (Radius-in)	0.65	0.65	0.65	1.00	0.75	1.00
Number of Skirts	3	4	3	3	4	4
Maximum Conductor OD, Top Groove (in)	1.50	1.88	2.00	2.00	2.00	2.00
Maximum Conductor OD, Side Groove (in)	1.30	1.30	1.30	2.00	1.50	2.00

ORDERING INFORMATION

INSULIGN Tie Top Pin Type Polymer Insulators

Catalog Number	ANSI Class*	Application	Mounting Pin Diameter	Insulator Weight	Units per Carton	Weight per Carton
			in	lb		lb
15 kV						
IP-15-C	55-3	C Neck Tie Top	1	0.9	18	24
IP-15-F	55-4	F Neck Tie Top	1	1.2		24
25 kV						
IP-25-F1	55-5	F Neck Tie Top	1	1.3	18	35
IP-25-F2	55-5†	F Neck Tie Top	1.375	1.3		35.5
IP-25-J1	56-1†	J Neck Tie Top	1	2		37
IP-25-J2	56-1	J Neck Tie Top	1.375	1.96		36
35 kV						
IP-35-F1	55-6†	F Neck Tie Top	1	2.8	12	37
IP-35-F2	55-7†	F Neck Tie Top	1.375	2.8		36
IP-35-J1	55-6	J Neck Tie Top	1	2.42		33
IP-35-J2	55-7	J Neck Tie Top	1.375	2.46		32

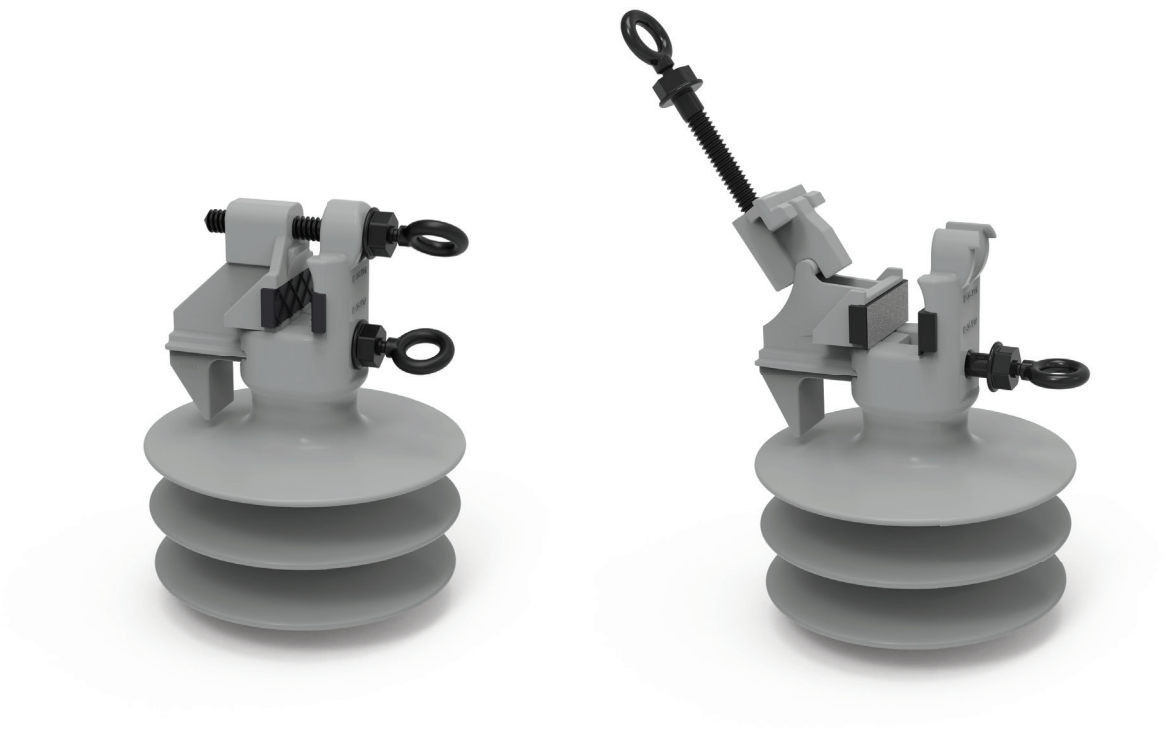
*Nominal ANSI C29.5 or C29.6 Class designation - These ANSI specifications are for Wet Processed Porcelain
†Meets the electrical requirements of the ANSI Class designation but a physical characteristic differs from the specification

TESTING RESULTS

INSULIGN Tie Top Pin Type Polymer Insulators

Test Results Based on ANSI C29 Standard																
	15 kV Applications				25 kV Applications						35 kV Applications					
Insulator Data	PLP	ANSI C29.5 55-3	PLP	ANSI C29.5 55-4	PLP		ANSI C29.5 55-5	PLP		ANSI C29.6 56-1	PLP		ANSI C29.5 55-6	PLP PI		ANSI C29.5 55-7
Catalog Number and Application	IP-15-C	N/A	IP-15-F	N/A	IP-25-F1	IP-25-F2	N/A	IP-25-J1	IP-25-J2	N/A	IP-35-F1	IP-35-J1	N/A	IP-35-F2	IP-35-J2	N/A
Nominal ANSI Class	55-3	55-3	55-4	55-4	55-5	55-5	55-5	56-1	56-1	56-1	55-6	55-6	55-6	55-7	55-7	55-7
Neck Size/ Style	C	C	F	F	F	F	F	J	J	J	F	J	F	F	J	J
Typical Operating Voltage Application, kV (L-L)	15	15	15	15	25	25	25	25	25	25	35	35	35	35	35	35
Leakage Distance (in)	12.7	7	14.5	9	14.1	14.1	12	17.4	17.2	13	20.9	21.1	15	20.9	20.8	15
Dry Arcing Distance (in)	6.2	4.5	6.3	5	7.5	7.5	6.25	8.7	8.5	7	9.5	9.6	8	9.5	9.3	8
Pin Hole Diameter (in)	1	1	1	1	1	1.375	1	1	1.375	1.375	1	1	1	1.375	1.375	1.375
Suggested Minimum Pin Length (in)	6	5	6	5	6	6	6	6	6	6	7.5	7.5	7.5	7.5	7.5	7.5
60Hz Dry Flashover (kV)	77	55	93	65	89 (1)	89	85	107 (1)	107	95	126 (1)	113 (1)	100	126	113	100
60Hz Wet Flashover (kV)	45	30	50	35	55 (1)	55	45	71 (1)	71	60	82 (1)	75 (1)	50	82	75	50
Positive Impulse Flashover (kV)	124	90	114	105	142 (1)	142	140	152 (1)	152	150	175 (1)	157 (1)	150	175	157	150
Negative Impulse Flashover (kV)	-160	-110	-144	-130	-223 (1)	-223	-170	-222 (1)	-222	-190	-238 (1)	-238 (1)	-170	-238	-254	-170
Low Frequency Puncture (kV)	208	90	160	95	218	201	115	179	184	130	223	223	135	235	194	135
RIV @ 1 MHZ																
10 kV to grd, µV	<5	<50 µV @10 kV	<5	<5 0µV @10 kV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15 kV to grd, µV	N/A	N/A	N/A	N/A	<2 (1)	<2	100 µV @15 kV	<29 (1)	<29	100 µV @15 kV	N/A	N/A	N/A	N/A	N/A	N/A
22 kV to grd, µV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<39 (1)	<26 (1)	100 µV @22 kV	<39	<26	100 µV @22 kV
Cantilever Strength (lb)	3,000	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Approximate Weight (lb)	0.9	N/A	1.3	N/A	1.3	1.3	N/A	2	2	N/A	2.8	2.5	N/A	2.8	2.5	N/A
Maximum Operating Temperature (°C)	120	N/A	120	N/A	120	120	N/A	120	120	N/A	120	120	N/A	120	120	N/A

(1) Electrical test data extrapolated from similar design of Polymer Insulator Pin Hole 1-3/8".



INSULIGN® POLYMER INSULATOR

VISE TOP PIN TYPE

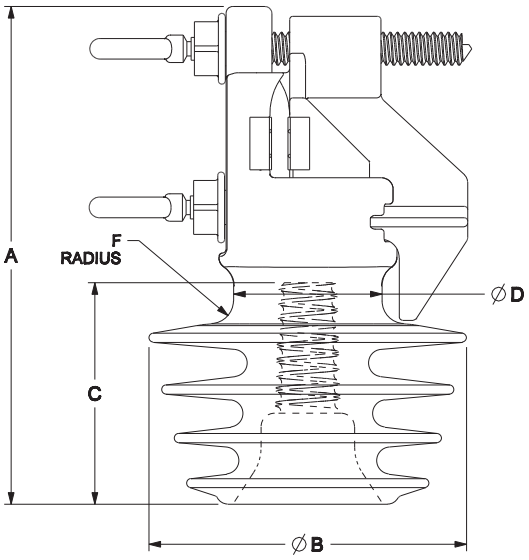
The Patented **Vise Top and Pivot Vise Top Polymer Insulator** utilizes a unique plastic clamp mechanism and nylon torque bolts to secure the conductor. The nylon torque bolt with a break-away ring is designed to ensure that the optimal holding force is applied while providing for a fast conductor clamping. Nylon inserts are offered for use with jacketed conductors. PLP also offers a patented universal insert design which is compatible with all conductors. It is recommended that the utility determine the suitability of the Vise Top/Pivot Vise Top Polymer Insulators for their application before installation.

The Pivot Top version eliminates the need to remove the top bolt when seating the conductor in the clamp mechanism.

FEATURES AND BENEFITS

- Superior moisture and contamination shedding
- UV-stabilized material
- High-impact resistance material
- Lightweight design
- Ideal for jumpers and stinger wires
- 100% recyclable
- 1" or 1-3/8" pins
- Universal insert design[1] to reduce the number of different insulators required
- Ideal for use with shot gun sticks
- Vise Top Stringing Tool available
- Pivot Top version features no loose hardware, reducing installation time

SPECIFICATIONS



INSULIGN Vise Top Pin Type Polymer Insulator / Pivot Vise Top Pin Type Polymer Insulator

Nominal Insulator Dimensions			
Catalog Number (Vise Top)	**IP-15-VTX***	**IP-25-VTX-Y***	**IP-35-VTX-Y***
Catalog Number (Pivot Vise Top)	**IP-15-PVTX***	**N/A**	**IP-35-PVTX-Y***
A (in)	8.50	8.40	10.13
B (in)	5.50	7.30	8.00
C (in)	3.75	4.50	5.38
D (in)	2.50	2.50	2.50
F (Radius-in)	0.50	0.50	0.50
Number of Skirts	4	3	3
Tangent Vise Attachment Maximum Conductor OD (in)	1.86	1.86	1.86
Side Groove, Maximum Conductor OD (in)	1.00	1.00	1.00

* **X** references insert material
  N = nylon insert
  U = universal insert
* **Y** references mounting pin diameter
  1 = 1" Pin
  2 = 1-3/8" Pin

ORDERING INFORMATION

INSULIGN Vise Top Pin Type Polymer Insulator / Pivot Vise Top Pin Type Polymer Insulator

Catalog Number	Catalog Number	ANSI Class[1]	Insert	Application	Mounting Pin Diameter	Insulator Weight	Units per Carton	Weight per Carton
					in	lb	lb	lb
15 kV								
IP-15-VTU	IP-15-PVTU	55-3, 55-4	Universal[2]	All Conductor Applications	1	2	18	39
IP-15-VTN	IP-15-PVTN		Nylon	Jacketed Conductors				
25 kV								
IP-25-VTU1	N/A	55-5	Universal[2]	All Conductor Applications	1	2.2	12	31
IP-25-VTU2	N/A				1-3/8			
IP-25-VTN1	N/A		Nylon	Jacketed Conductors	1	2.3		32
IP-25-VTN2	N/A				1-3/8			
35 kV								
IP-35-VTU1	IP-35-PVTU1	55-6	Universal[2]	All Conductor Applications	1	3.2	12	43
IP-35-VTU2	IP-35-PVTU2	55-7			1-3/8			
IP-35-VTN1	IP-35-PVTN1	55-6	Nylon	Jacketed Conductors	1			
IP-35-VTN2	IP-35-PVTN2	55-7			1-3/8			

[1] Insulators meet the electrical criteria defined in the applicable specification.
[2] Patented

ACCESSORIES

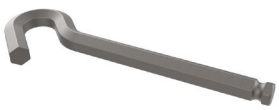
Torque Bolt
Catalog Number: PT-01

Stringing Tool
Catalog Number: IP-VLST-01

Torque Bolt

Two torque bolts are supplied with each Vise Top Insulator. The breakaway torque ring is designed to ensure that the proper torque and optimum holding force to the conductor will be applied during initial installation.

New torque bolts should be used whenever conductors are removed from the Vise Top Insulator, or any time the bolts are unscrewed and initial torque is lost.



Hook Tool
Catalog Number: VTHT-01

Torque Bolt Hook Tool

An aluminum hook tool accessory is offered for use with hydraulic or power wrenches for easy installation of torque bolts.

Vise Top Stringing Tool

The polyurethane Vise Top String Tool (VLST) is offered to aid jacketed conductor installation. The VLST temporarily installs in the vise top clamp, by hand or with hot sticks, and is designed to permit short-span, low-tension, jacketed conductor stringing without the need for stringing blocks.

NOTE: The VLST is not recommended for use with bare conductors, long spans, or line or sag angles over 10 degrees. A properly sized stringing block should be used at the first and last pole at large line or sag angles, or long spans throughout the pull, rather than the stringing tool.

It is recommended that harsh material pulling ropes, such as nylon, be avoided to minimize excessive wear to the inner surface of the stringing tool. It is also suggested that low pulling speeds be used when pulling rope or cable through the tool to avoid excessive wear. The stringing tool can be reused; it is recommended the tool be inspected after each pull to ensure it is suitable for further use. Areas of wear on the tool from previous pulls can be rotated away from where the rope and conductors will rest in the bore during subsequent pulls. Do not reuse the tool if excessive wear is present throughout all areas of the inner bore.

TESTING RESULTS

INSULIGN Vise Top Pin Type Polymer Insulator / Pivot Vise Top Pin Type Polymer Insulator

Test Results Based on ANSI C29 Standard									
	15 kV Applications		25 kV Applications			35 kV Applications			
Insulator Data	PLP	ANSI C29.5 55-3/55.4	PLP	PLP	ANSI C29.5 55-5	PLP	ANSI C29.5 55-6	PLP	ANSI C29.5 55-7
Catalog Number and Application	IP-15-VT(N/U) IP-15-PVT(N/U)	N/A	IP-25-VT(N/U)-1	IP-25-VT(N/U)-2	N/A	IP-35-VT(N/U)-1 IP-35-PVT(N/U)-1	N/A	IP-35-VT(N/U)-2 IP-35-PVT(N/U)-2	N/A
Nominal ANSI Class	55-3	55-3/55-4	55-5	55-5	55-5	55-6	55-6	55-7	55-7
Neck Size/Style	N/A	C/F	N/A	N/A	F	N/A	F/J	N/A	F/J
Typical Operating Voltage Application, kV	15	15	25	25	25	35	35	35	35
Leakage Distance (in)	16.1	7/9	18.1	17.9	12	23.5	15	23.3	15
Dry Arcing Distance (in)	7	4.5/5	8.7	8.5	6.25	10.5	8	10.4	8
Pin Hole Diameter (in)	1	1	1	1-3/8	1	1	1	1-3/8	1-3/8
Suggested Minimum Pin Length (in)	6	5	6	6	6	7.5	7.5	7.5	7.5
60Hz Dry Flashover (kV)	101	55/65	88 (1)	88	85	128 (1)	100	128	100
60Hz Wet Flashover (kV)	50	30/35	55 (1)	55	45	72 (1)	50	72	50
Positive Impulse Flashover (kV)	147	90/105	150 (1)	150	140	188 (1)	150	188	150
Negative Impulse Flashover (kV)	201	-110/-130	-219 (1)	-219 (1)	-170	-272 (1)	-170	-272	-170
Low Frequency Puncture (kV)	174	90/95	228	191	115	206	135	219	135
RIV @ 1 MHZ									
10 kV to grd, µV	<4	<50 µV @10 kV	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15 kV to grd, µV	N/A	N/A	<0.5 (1)	<0.5	100 µV @15 kV	N/A	N/A	N/A	N/A
22 kV to grd, µV	N/A	N/A	N/A	N/A	N/A	<6 (1)	100 µV @15 kV	<6	100 µV @22 kV
Cantilever Strength (lb)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Approximate Weight (lb)	2	N/A	2.3	2.3	N/A	3	N/A	3.2	N/A
Maximum Operating Temperature (°C)	120	N/A	120	120	N/A	120	N/A	120	N/A

(1) Electrical test data extrapolated from similar design of Polymer Insulator Pin Hole 1-3/8".

COATED TOP TIE

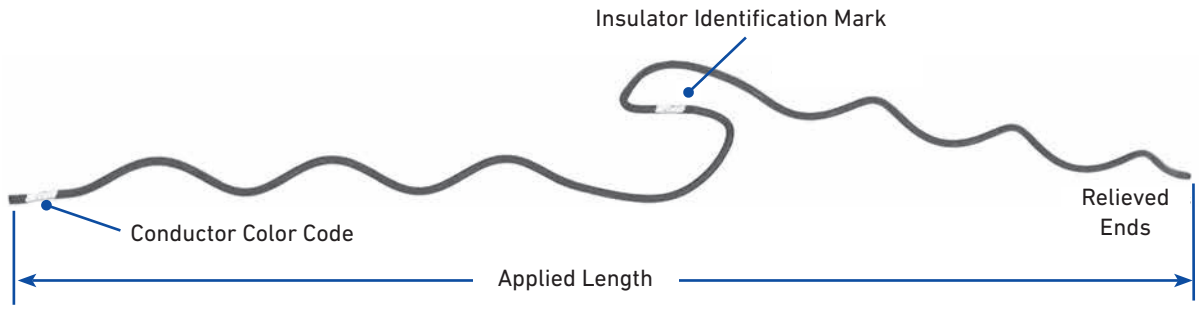
The **Coated Top Tie** is intended for use with plastic jacketed conductors and tie top ANSI C29-compliant insulators only. They are suitable for use with any plastic jacketed conductor such as tree wire or spacer cable. The Coated Top Tie is designed to permit controlled and limited movement of unbroken conductor and under certain conditions, return the conductor to its originally installed position. The ability of the tie to give and return under differential loading conditions is called "resiliency" and is designed into each Coated Top Tie.

Coated Ties incorporate a semi-conductive plastic coating, selected for its superior electrical tracking resistance properties, covering a formed steel wire.

FEATURES AND BENEFITS

- Semi-conductive plastic coating with superior electrical tracking-resistant properties covers the formed steel wire
- Can normally accommodate line angles up to 10 degrees. Larger angles may be accommodated when the insulator is mounted at varying degrees of cant from the vertical
- To ensure proper fit and performance, it is recommended that only ANSI C29.5-compliant insulators having nominal neck diameters corresponding to 2-1/4" C-Neck or 2-7/8" F-Neck be used.
- Ideal for use with Tree Wire construction

CHARACTERISTICS



Coated Top Tie

Characteristic	Description
Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Relieved Ends	Eases installation without damaging the conductor jacket and eliminates electrical tracking
Insulator Identification Mark	Identifies the correct insulator head-style by colors corresponding to information on catalog pages
Conductor Color Code	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages

NOTE: Since the Coated Top Tie is black, no additional black mark is applied to the Coated Top Ties.

INSULATOR APPLICATION INFORMATION

For use on Plastic Jacketed Conductor

Insulator Description	Specification	Neck Diameter
C-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-3 Pin Type	2-1/4"
	ANSI C29.18 Class 51-1C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
F-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-4 Pin Type	2-7/8"
	ANSI C29.5 Class 55-5 Pin Type	
	ANSI C29.7 Class 57-1 Post Type	
	ANSI C29.7 Class 57-2 Post Type	
	ANSI C29.7 Class 57-3 Post Type	
	ANSI C29.18 Class 51-1F Post Type	
	ANSI C29.18 Class 51-2F Post Type	
	ANSI C29.18 Class 51-3F Post Type	
	ANSI C29.18 Class 51-4F Post Type	

ORDERING INFORMATION

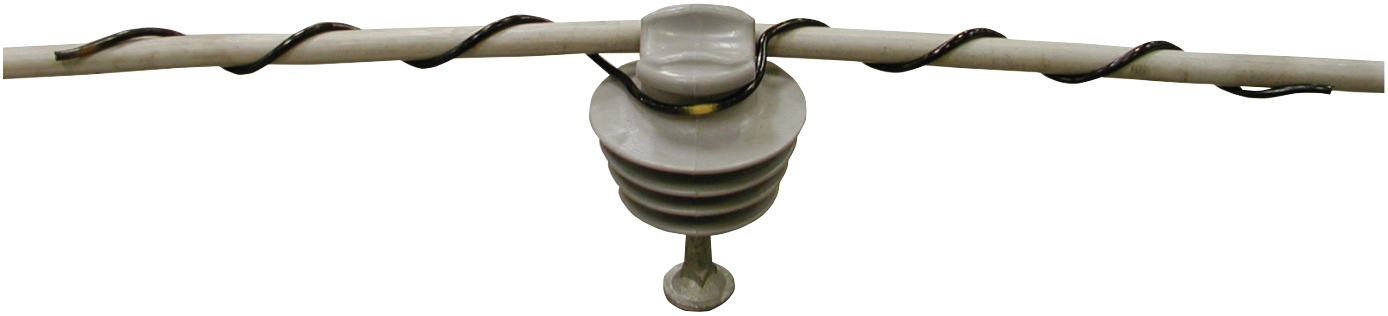
C-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CTC-0201	0.278	0.315	15	28	Purple	50	Black/None
CTC-0202	0.316	0.357	15	28	Red		
CTC-0203	0.358	0.405	16	30	Yellow		
CTC-0204	0.406	0.459	17	30	Blue		
CTC-0205	0.460	0.520	17	32	Orange		
CTC-0206	0.521	0.588	18	33	Red		
CTC-0207	0.589	0.665	18	34	Purple		
CTC-0208	0.666	0.755	19	36	Brown		
CTC-0209	0.756	0.858	20	36	Red		
CTC-0210	0.859	0.968	21	40	Blue		
CTC-0211	0.969	1.096	23	44	Green		
CTC-0212	1.097	1.240	25	48	Yellow		
CTC-0213	1.241	1.402	27	48	Orange		
CTC-0214	1.403	1.585	28	48	Black/None		

ORDERING INFORMATION

F-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CTF-0101	0.278	0.315	16	28	Purple	50	Yellow
CTF-0102	0.316	0.357	16	28	Red		
CTF-0103	0.358	0.405	17	30	Yellow		
CTF-0104	0.406	0.459	18	30	Blue		
CTF-0105	0.460	0.520	18	32	Orange		
CTF-0106	0.521	0.588	19	33	Red		
CTF-0107	0.589	0.665	19	34	Purple		
CTF-0108	0.666	0.755	20	36	Brown		
CTF-0109	0.756	0.858	21	36	Red		
CTF-0110	0.859	0.968	22	40	Blue		
CTF-0111	0.969	1.096	23	44	Green		
CTF-0112	1.097	1.240	35	48	Yellow		
CTF-0113	1.241	1.402	26	48	Orange		
CTF-0114	1.403	1.585	28	48	Black/None		



COATED SIDE TIE

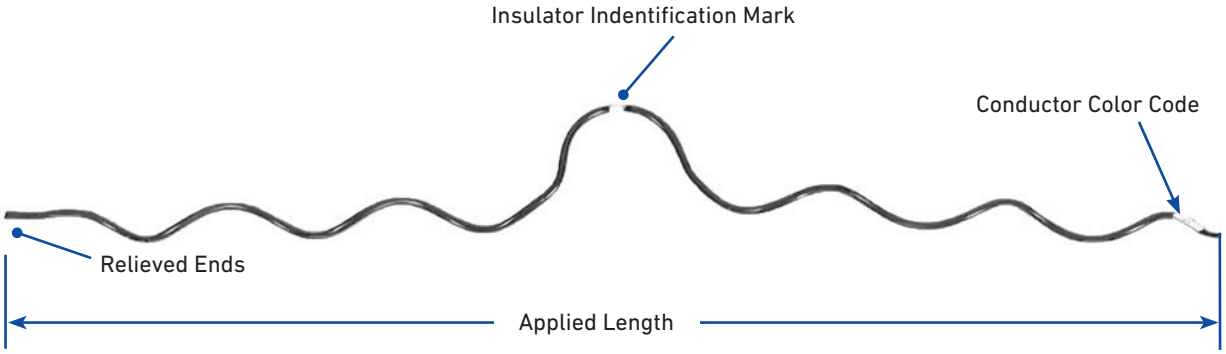
The **Coated Side Tie** is intended for use with plastic jacketed conductors and tie top ANSI C29 compliant insulators only. They are suitable for use on any plastic jacketed conductor. The Coated Side Tie retains the conductor in the side groove of the insulator when line angles require the use of the insulator's side groove.

Coated Ties incorporate a semi-conductive plastic coating, selected for its superior electrical tracking resistance properties, covering a formed steel wire.

FEATURES AND BENEFITS

- Easily applied by hand or with hot sticks
- Fully UV-stabilized
- Various applications can achieve 40 degree line angles
- Relieved ends eliminate tracking and ease application
- Long service life without deterioration of material properties
- C and F Neck insulator application
- Ideal for use with Tree Wire construction

CHARACTERISTICS



Coated Side Tie

Characteristic	Description
Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Relieved Ends	Eases installation without damaging the conductor jacket and eliminates electrical tracking
Insulator Identification Mark	Identifies the correct insulator head-style by colors corresponding to information on catalog pages
Conductor Color Code	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages

NOTE: Since the Coated Side Tie is black, no additional black mark is applied to the Coated Side Ties.

INSULATOR APPLICATION INFORMATION

For use on Plastic Jacketed Conductor

Insulator Description	Specification	Neck Diameter
C-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-3 Pin Type	2-1/4"
	ANSI C29.18 Class 51-1C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
F-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-4 Pin Type	2-7/8"
	ANSI C29.5 Class 55-5 Pin Type	
	ANSI C29.7 Class 57-1 Post Type	
	ANSI C29.7 Class 57-2 Post Type	
	ANSI C29.7 Class 57-3 Post Type	
	ANSI C29.18 Class 51-1F Post Type	
	ANSI C29.18 Class 51-2F Post Type	
	ANSI C29.18 Class 51-3F Post Type	
	ANSI C29.18 Class 51-4F Post Type	

ORDERING INFORMATION

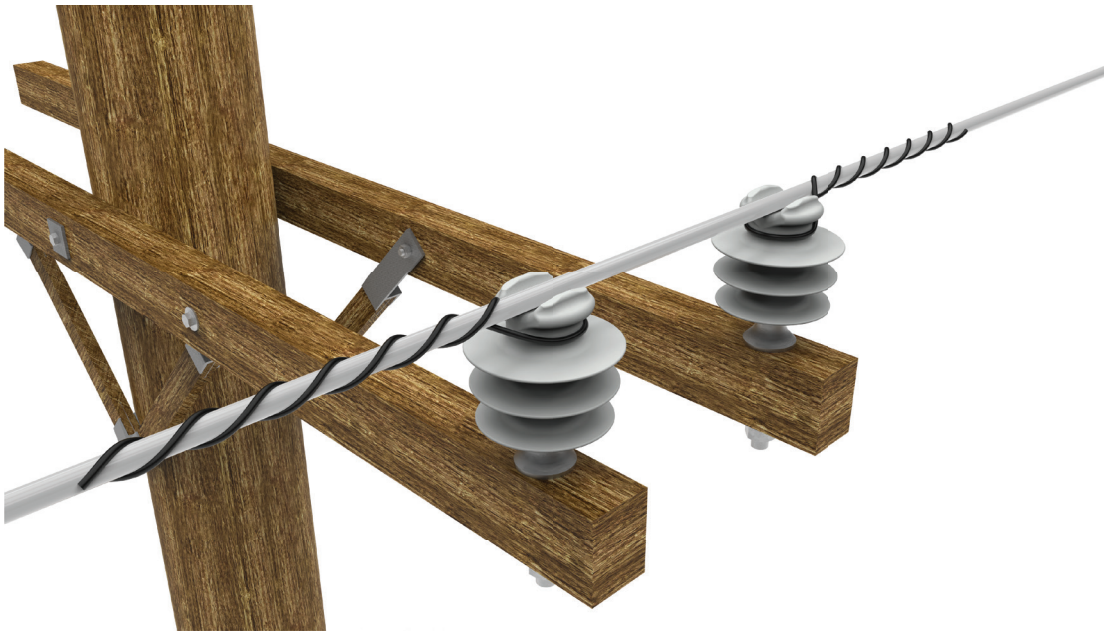
C-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CSTC-0201	0.278	0.315	12	24	Purple	50	Black/None
CSTC-0202	0.316	0.357	13	25	Red		
CSTC-0203	0.358	0.405	14	23	Yellow		
CSTC-0204	0.406	0.459	14	25	Blue		
CSTC-0205	0.460	0.520	14	27	Orange		
CSTC-0206	0.521	0.588	15	28	Red		
CSTC-0207	0.589	0.665	17	31	Purple		
CSTC-0208	0.666	0.755	17	33	Brown		
CSTC-0209	0.756	0.858	18	35	Red		
CSTC-0210	0.859	0.968	18	36	Blue		
CSTC-0211	0.969	1.096	19	38	Green		
CSTC-0212	1.097	1.240	19	39	Yellow		
CSTC-0213	1.241	1.402	19	40	Orange		
CSTC-0214	1.403	1.585	19	40	Black/None		

ORDERING INFORMATION

F-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CSTF-0101	0.278	0.315	12	24	Purple	50	Yellow
CSTF-0102	0.316	0.357	12	25	Red		
CSTF-0103	0.358	0.405	13	23	Yellow		
CSTF-0104	0.406	0.459	14	25	Blue		
CSTF-0105	0.460	0.520	14	27	Orange		
CSTF-0106	0.521	0.588	15	28	Red		
CSTF-0107	0.589	0.665	16	31	Purple		
CSTF-0108	0.666	0.755	16	35	Brown		
CSTF-0109	0.756	0.858	17	36	Red		
CSTF-0110	0.859	0.968	17	37	Blue		
CSTF-0111	0.969	1.096	18	39	Green		
CSTF-0112	1.097	1.240	18	40	Yellow		
CSTF-0113	1.241	1.402	19	42	Orange		
CSTF-0114	1.403	1.585	19	42	Black/None		



COATED DOUBLE TOP TIE

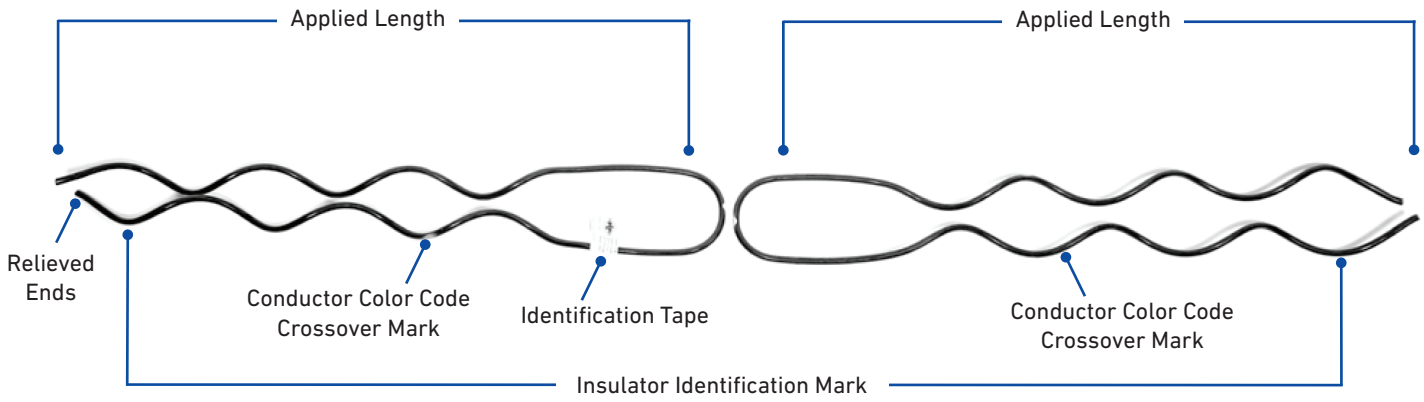
Coated Double Top Ties are intended for use with plastic jacketed conductors and tie top ANSI C29 compliant insulators only. They are suitable for use on any plastic jacketed conductor. Coated Double Top Ties are designed for installation on double insulator construction in the top groove of interchangeable insulators.

Coated Ties incorporate a semi-conductive plastic coating, selected for its superior electrical tracking resistance properties, covering a formed steel wire.

FEATURES AND BENEFITS

- Easily applied by hand or with hot sticks
- Fully UV-stabilized
- Can accommodate line angles between 0 and 20 degrees
- Relieved ends eliminate tracking and ease application
- Long service life without deterioration of material properties
- Ideal for use with Tree Wire construction

CHARACTERISTICS



Coated Double Top Tie

Characteristic	Description
Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Relieved Ends	Eases installation without damaging the conductor jacket and eliminates electrical tracking.
Insulator Identification Mark	Identifies the correct insulator head-style by colors corresponding to information on catalog pages
Identification Tape	Identifies the product name and part number
Conductor Color Code / Crossover Mark	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages

NOTE: Since the Coated Double Top Tie is black, no additional black mark is applied to the Coated Double Top Ties

INSULATOR APPLICATION INFORMATION

For use on Plastic Jacketed Conductor

Insulator Description	Specification	Neck Diameter
C-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-3 Pin Type	2-1/4"
	ANSI C29.18 Class 51-1C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
F-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-4 Pin Type	2-7/8"
	ANSI C29.5 Class 55-5 Pin Type	
	ANSI C29.7 Class 57-1 Post Type	
	ANSI C29.7 Class 57-2 Post Type	
	ANSI C29.7 Class 57-3 Post Type	
	ANSI C29.18 Class 51-1F Post Type	
	ANSI C29.18 Class 51-2F Post Type	
	ANSI C29.18 Class 51-3F Post Type	
	ANSI C29.18 Class 51-4F Post Type	

ORDERING INFORMATION

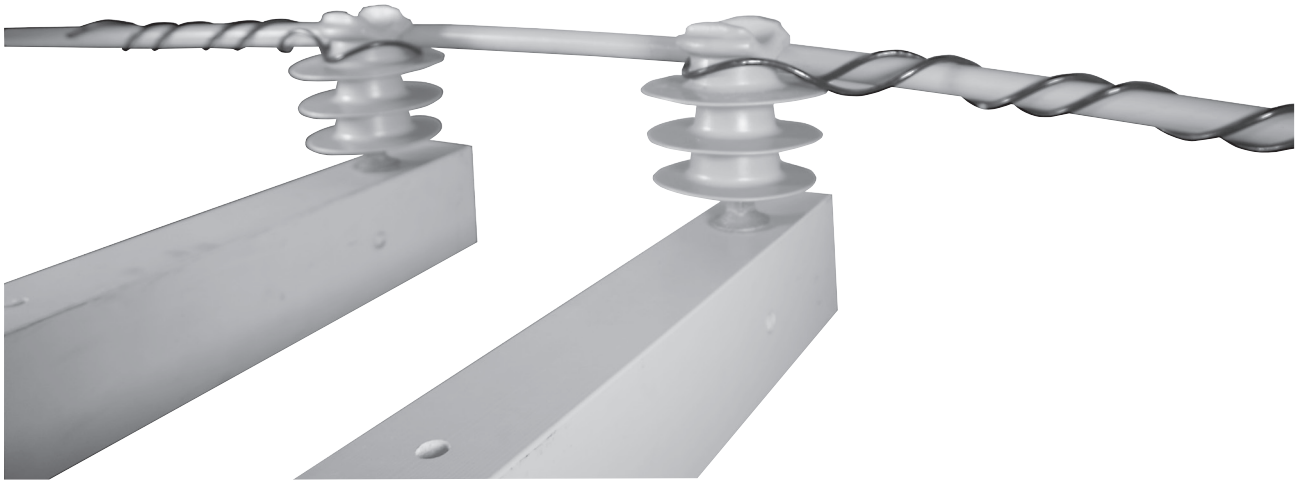
C-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CDTC-0201	0.278	0.315	11	31	Purple	25	Black/None
CDTC-0202	0.316	0.357	12	32	Red		
CDTC-0203	0.358	0.405	13	32	Yellow		
CDTC-0204	0.406	0.459	14	30	Blue		
CDTC-0205	0.460	0.520	16	31	Orange		
CDTC-0206	0.521	0.588	17	33	Red		
CDTC-0207	0.589	0.665	18	36	Purple		
CDTC-0208	0.666	0.755	19	38	Brown		
CDTC-0209	0.756	0.858	20	46	Red		
CDTC-0210	0.859	0.968	22	48	Blue		
CDTC-0211	0.969	1.096	23	50	Green		
CDTC-0212	1.097	1.240	24	54	Yellow		
CDTC-0213	1.241	1.402	24	59	Orange		
CDTC-0214	1.403	1.585	25	65	Black/None		

ORDERING INFORMATION

F-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CDTF-0101	0.278	0.315	11	31	Purple	25	Yellow
CDTF-0102	0.316	0.357	12	32	Red		
CDTF-0103	0.358	0.405	13	32	Yellow		
CDTF-0104	0.406	0.459	14	30	Blue		
CDTF-0105	0.460	0.520	16	31	Orange		
CDTF-0106	0.521	0.588	17	33	Red		
CDTF-0107	0.589	0.665	18	36	Purple		
CDTF-0108	0.755	0.755	19	38	Brown		
CDTF-0109	0.858	0.858	20	46	Red		
CDTF-0110	0.859	0.968	22	48	Blue		
CDTF-0111	0.969	1.096	23	50	Green		
CDTF-0112	1.097	1.240	24	54	Yellow		
CDTF-0113	1.241	1.402	25	59	Orange		
CDTF-0114	1.403	1.585	26	65	Black/None		



COATED DOUBLE SIDE TIE

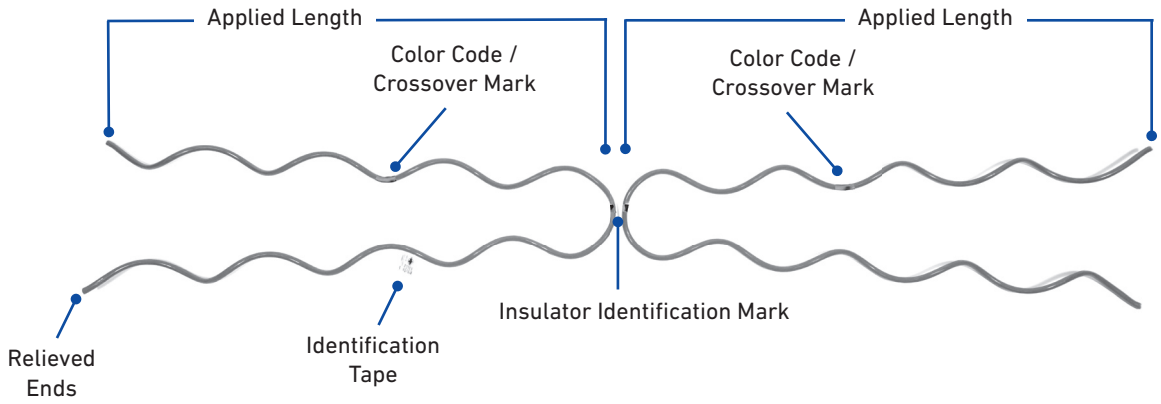
Coated Double Side Ties are intended for use with plastic jacketed conductors and tie top ANSI C29 compliant insulators only. They are suitable for use on any plastic jacketed conductor. Coated Double Side Ties are designed for installation on double insulator construction in the side groove of interchangeable insulators.

Coated Ties incorporate a semi-conductive plastic coating, selected for its superior electrical tracking resistance properties, covering a formed steel wire.

FEATURES AND BENEFITS

- Easily applied by hand or with hot sticks
- Fully UV-stabilized
- Can accommodate line angles between 0 and 80 degrees
- Relieved ends eliminate tracking and ease application
- Long service life without deterioration of material properties
- Ideal for use with Tree Wire construction

CHARACTERISTICS



Coated Double Side Tie

Characteristic	Description
Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Relieved Ends	Eases installation without damaging the conductor jacket and eliminates electrical tracking
Insulator Identification Mark	Identifies the correct insulator head-style by colors corresponding to information on catalog pages
Identification Tape	Identifies the product name and part number
Color Code / Crossover Mark	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages

NOTE: Since the Coated Double Side Tie is black, no additional black mark is applied to the Coated Double Side Tie

INSULATOR APPLICATION INFORMATION

For use on Plastic Jacketed Conductor

Insulator Description	Specification	Neck Diameter
C-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-3 Pin Type	2-1/4"
	ANSI C29.18 Class 51-1C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
	ANSI C29.18 Class 51-2C Post Type	
F-Neck Interchangeable Head-style Insulators	ANSI C29.5 Class 55-4 Pin Type	2-7/8"
	ANSI C29.5 Class 55-5 Pin Type	
	ANSI C29.7 Class 57-1 Post Type	
	ANSI C29.7 Class 57-2 Post Type	
	ANSI C29.7 Class 57-3 Post Type	
	ANSI C29.18 Class 51-1F Post Type	
	ANSI C29.18 Class 51-2F Post Type	
	ANSI C29.18 Class 51-3F Post Type	
	ANSI C29.18 Class 51-4F Post Type	

ORDERING INFORMATION

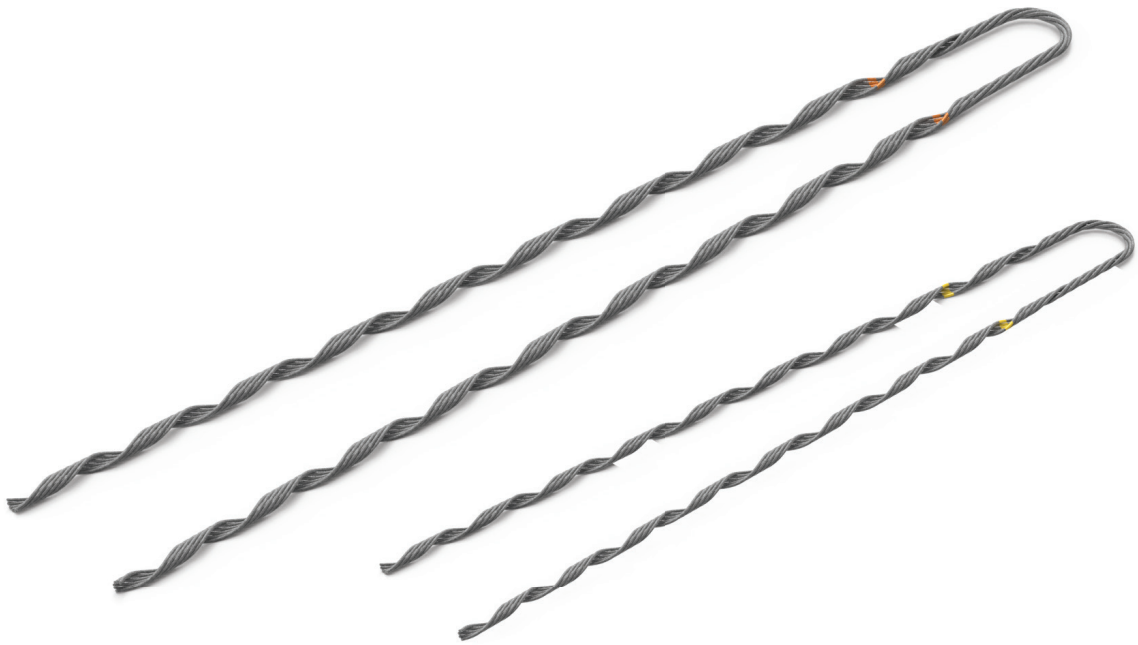
C-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CDSC-0201	0.278	0.315	11	17	Purple	25	Black/None
CDSC-0202	0.316	0.357	12	18	Red		
CDSC-0203	0.358	0.405	13	17	Yellow		
CDSC-0204	0.406	0.459	14	19	Blue		
CDSC-0205	0.460	0.520	16	21	Orange		
CDSC-0206	0.521	0.588	17	20	Red		
CDSC-0207	0.589	0.665	18	22	Purple		
CDSC-0208	0.666	0.755	19	22	Brown		
CDSC-0209	0.756	0.858	20	22	Red		
CDSC-0210	0.859	0.968	22	24	Blue		
CDSC-0211	0.969	1.096	23	25	Green		
CDSC-0212	1.097	1.240	24	25	Yellow		
CDSC-0213	1.241	1.402	24	29	Orange		
CDSC-0214	1.403	1.585	25	32	Black/None		

ORDERING INFORMATION

F-Neck Insulator Applications, Semi-Conductive

Catalog Number	Diameter Range		Weight per carton	Applied Length	Conductor Color Code	Units per carton	Insulator Color Mark
	Minimum	Maximum					
	in		lb	in			
CDSF-0201	0.278	0.315	11	17	Purple	25	Yellow
CDSF-0202	0.316	0.357	12	18	Red		
CDSF-0203	0.358	0.405	13	17	Yellow		
CDSF-0204	0.406	0.459	14	19	Blue		
CDSF-0205	0.460	0.520	16	21	Orange		
CDSF-0206	0.521	0.588	17	20	Red		
CDSF-0207	0.589	0.665	18	22	Purple		
CDSF-0208	0.666	0.755	19	22	Brown		
CDSF-0209	0.756	0.858	20	22	Red		
CDSF-0210	0.859	0.968	22	24	Blue		
CDSF-0211	0.969	1.096	23	25	Green		
CDSF-0212	1.097	1.240	24	25	Yellow		
CDSF-0213	1.241	1.402	25	29	Orange		
CDSF-0214	1.403	1.585	26	32	Black/None		



MESSENGER TERMINATIONS

GUY-GRIP® Dead-Ends may be used to terminate structural supporting strands and cables. Whether used on a guy or pole, or to terminate a lashed or spacer cable messenger, the GUY-GRIP Dead-End is a unique, one piece termination that is neat in appearance and free from bolts or other high-stress holding devices.

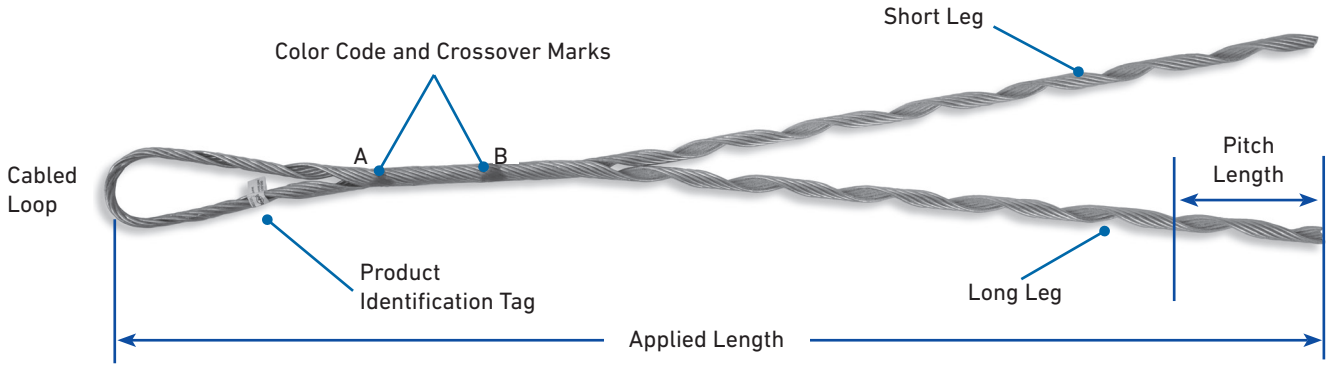
Big Grip Dead-Ends are designed for use on transmission, antenna, communications, and other types of guyed structures that require use of large diameter guy strand. Whether used on an anchor or pole, or to terminate a lashed or spacer cable messenger, the Big Grip Dead-End is a unique, one piece termination that is neat in appearance and free from bolts or other high-stress holding devices.

Rated Holding Strength: GUY-GRIP Dead-Ends and Big Grip Dead-Ends are rated at 100% of the strand's published rated breaking strength.

FEATURES AND BENEFITS

- Longitudinal holding strength equal to messenger ultimate tensile strength
- Uniform radial pressure exerted on the messenger minimizing potential damage
- Color coded for ease of selection in field
- See Ordering Information for applications on specific messenger sizes and types

CHARACTERISTICS



GUY-GRIP® Dead-End / Big Grip Dead-End

Characteristics	Description
Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Crossover Marks	Two colored crossover marks (A & B) indicate possible starting points for application. This feature allows for a smaller and larger seat diameter ranges
Cabled Loop	Furnished as standard on all sizes to ensure proper contact with mating hardware
Pitch Length	One complete wrap
Color Code	Assists in identifying strand size, corresponding to tabular information that appears on catalog pages
Product Identification Tag	Shows catalog number, nominal strand sizes and applications
Short Leg	During application, the short leg should be applied first
Long Leg	During application, the long leg should be applied second

HARDWARE ACCESSORY GUIDELINES

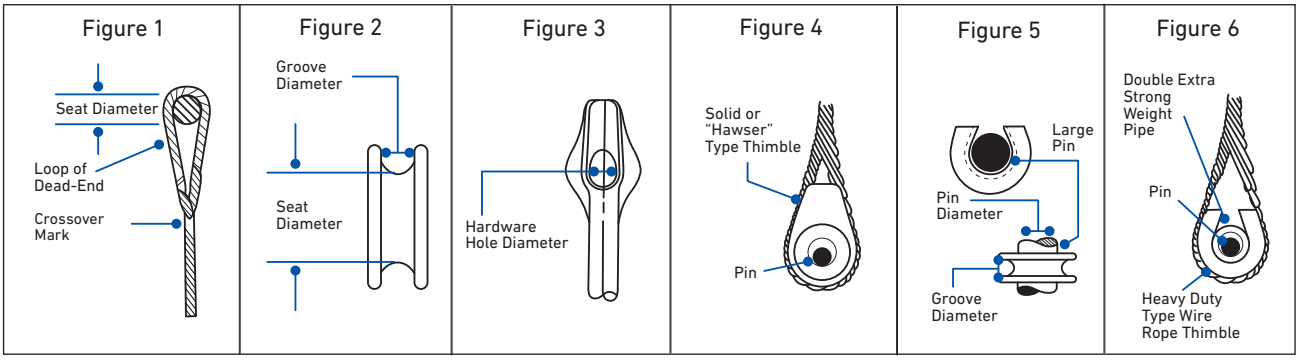
Suggested Hardware Dimensions for GUY-GRIP® Dead-Ends / Big Grip Dead-Ends

Dead-End Diameter Range (in)		Nominal Strand Sizes		Seat Dimensions (Figures 1 & 2)			Figure 2	Figure 3	Figure 4 & 5		Figure 6		
Min	Max	Galvanized Steel	Aluminum-Clad Steel	Minimum seat diameter at first crossover mark	Maximum seat diameter at first crossover mark	Maximum seat diameter at second crossover mark	Minimum Groove Diameter	Minimum Hole Diameter*	Pin Diameters		Double Extra Strong Weight Pipe		
											in		
				in	in	in	in	in	Min	Max	Nominal Size	OD	ID
.123	.143	1/8	-	3/4	1-3/4	-	3/16	1/4	-	-	-	-	-
.144	.173	5/32	-	3/4		2-1/2	1/4	5/16	-	-	-	-	-
.174	.203	3/16	-	1-0			1/4	3/8	-	-	-	-	-
.204	.230	7/32	3 #10, 4M3	1-1/8			5/16	3/8	-	-	-	-	-
.231	.259	1/4	7 #12, 6M				5/16	7/16	-	-	-	-	-
.260	.291	9/32	7 #11, 8M				3/8	1/2	-	-	-	-	-
.292	.336	5/16	7 #10, 10M	1-1/4			3/8	9/16	-	-	-	-	-
.337	.394	3/8	7 #8, 14M, 16M	1-3/8			7/16	5/8	-	-	-	-	-
.395	.474	7/16	7 #7, 18M, 20M		2-3/8	-	1/2	11/16	-	-	-	-	-
.475	.515	**	7 #6		2-3/8	-	9/16	3/4	1	1-5/8	1-1/4	1.66	.896
.516	.570	**	7 #5, 25M	1-1/2	2-5/8	-	5/8	15/16	1-1/8	1-5/8	1-1/4	1.66	.896
.571	.635	5/8		2	3-1/8	-	2-5/8	1	1-1/2	1-7/8	1-1/4	1.66	.896
.636	.772	3/4		2-1/2	3-5/8	-	3-1/8	1-3/16	1-7/8	2-1/8	1-1/2	1.9	1.1
.773	.868			2-1/2	4-1/8	-	3-5/8	1-3/8	2	2-3/8	2	2.375	1.503
.869	1.024	7/8 or 1		3	5-1/8	-	4-1/8	1-3/8	2-3/8	2-3/4	2	2.375	1.503
1.025	1.27			3-1/2	5-1/8	-	5-1/8	1-3/4	2-3/4	3-1/4	2-1/2	2.875	1.771
1.30				4		-	5-1/8	1-15/16	2-7/8	3-3/8	2-1/2	2.875	1.771

*Depending on geometric shape of the hole, a hole diameter less than specified may be acceptable.

**Use Big Grip Dead-Ends.

† Guying of transmission structures and metal towers require Big Grip Dead-Ends or VARI-GRIP™ Dead-Ends.



* Depending on geometric shape of the hole, the legs of the PLP Dead-End may be inserted into a hole diameter smaller than specified.

ORDERING INFORMATION

GUY-GRIP® Dead-End / Big Grip Dead-Ends: Aluminum Clad Steel Strand

Catalog Number	Strand		Units per Carton	Weight per Carton	Length	Color Code
	Mean Diameter	Construction				
	in			lb	in	
AWDE-4120	.363	14M	50	63	31	Blue
AWDE-4122	.350 - .394	252 AWA 7 # 8 16M	50	50	55	Orange
AWDE-4124	.417	18M	25	37	34	Black
AWDE-4125	.433	7/16" - 7 # 7	25	40	36	Green
AWDE-4126	.444	20M	10	22	37	Yellow
AWDE-4128	.475 - .494	052 AWA 7 # 6		23	39	Blue
AWDE-4131	.546	0052 AWA 7 # 5		32	44	Yellow
BG-4176	.636 - .661	19 # 8		50	56	Black
BG-4179	.713 - .741	000127 AWA 19 # 7 37 # 10		70	63	Black
BG-4183	.801, .810, .827	37 # 9 19 # 6 19x, 1660"	5	69	84	Green
BG-4186	.899	37 # 8	5	76	91	Yellow

NOTES:

1 Left-hand lay is standard

2 Cabled Loop design is furnished as standard for all sizes. Refer to Hardware Accessory Guidelines for acceptable fittings.

3 Rated holding strength is 100% of all grades of aluminum clad steel strand and messenger.

4 Consult PLP for sizes and stranding not shown.

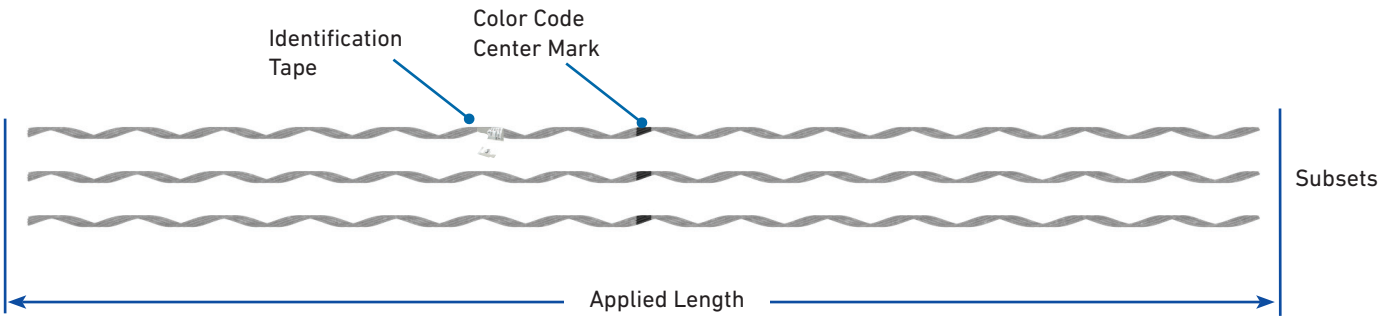
STRAND SPLICE

The **Strand Splice** is used to connect or repair guy wire or messenger strand. The strand splice has a rated holding strength which is equivalent to the rating of the wire or strand to which it is applied. When repairing the guy wire or messenger strand, the strand splice is centered over the point of damage and will renew the full tensile strength of wire or strand.

FEATURES AND BENEFITS

- Manufactured from Aluminum-clad wire
- Longitudinal holding strength equal to messenger ultimate tensile strength
- Uniform radial pressure exerted on the messenger, minimizing potential damage
- Designed to hold 100% of the strand's published rated breaking strength
- Color coded for ease of selection in field
- See Ordering Information for applications on specific messenger sizes and types

CHARACTERISTICS



Strand Splice

Characteristics	Description
Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Subsets	Individual rods assembled and gritted into groups. The number of subsets per splice corresponds to the tabular information appearing on the catalog pages
Identification Tape	Shows catalog number, nominal sizes
Color Code Center Mark	Establishes recommended alignment of strand size, corresponding to tabular information appearing on catalog page

ORDERING INFORMATION

Strand Splice for Messenger

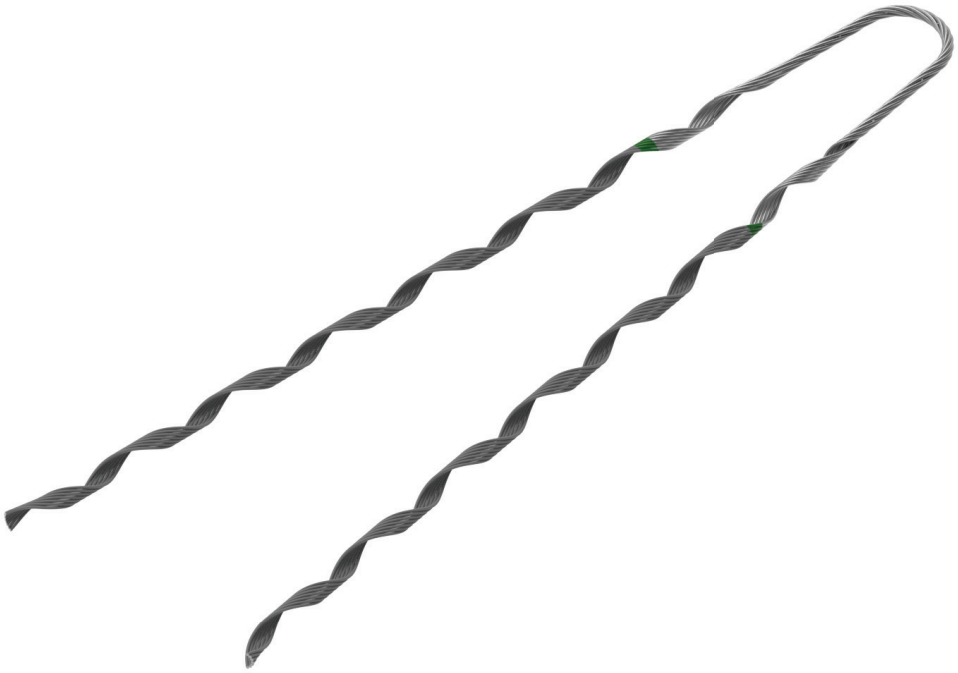
Catalog Number	Strand		Length	Color Code	Number of Subsets	Units per Carton	Weight per Carton
	Construction	Mean Diameter					
		in	in				lb
AWLS-4120	14M	.330	36	Blue	3	25	32
AWLS-4122	252 AWA 16M	.392 .385 .386	38	Orange			34
AWLS-4124	18M	.417	41	Black			45
AWLS-4125	7/16" - 7 # 7	.433	50	Green			55
AWLS-4126	20M	.444	53	Yellow			30
AWLS-4128	0052 AWA 7 # 6	.475 - 494	55	Blue			76
LSMS5272	0052 AWA	.537 - .555	63	Yellow			110
LSMS3816	19 #8 AW	.642	79	Purple		10	78
LSMS3258	0000127 AWA	.721	88	Green	4		80

NOTES:

1 Left-hand lay standard.

2 Rated holding strengths are 100% of the published rating of the strand/messenger.

3 Consult PLP for any messenger sizes or types not shown.



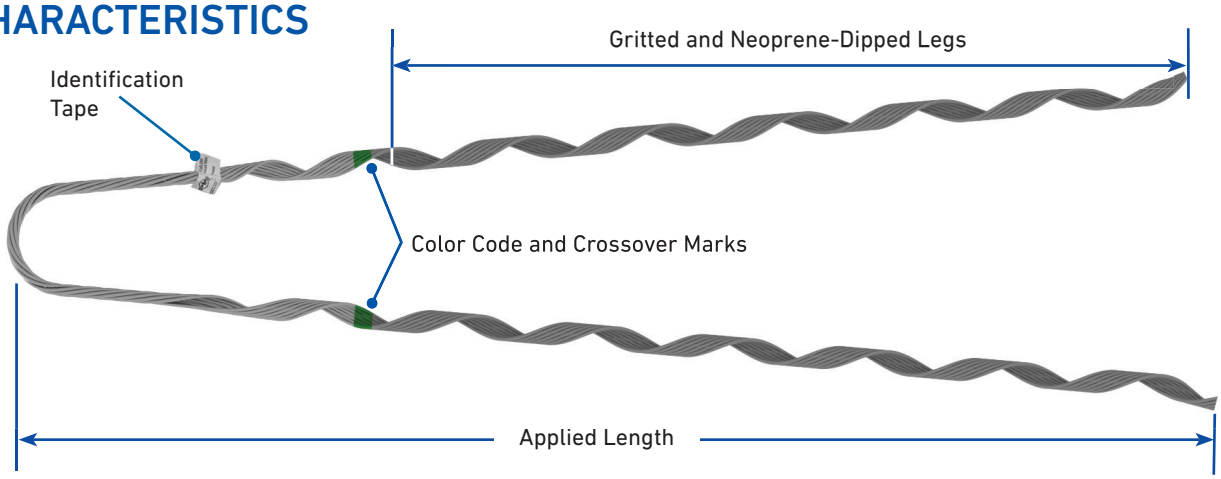
COATED DEAD-END

The **Coated Dead-End** is designed for direct application over conductors jacketed with neoprene, polyethylene, vinyl, or rubber. The sub-setted rods in each leg, bonded together with neoprene, exert a low radial pressure to prevent damage to the jacket. Because it is not necessary to skin the plastic covering, the same dead-end can be used for either aluminum-based or copper-based covered conductors.

FEATURES AND BENEFITS

- Designed for direct application over conductors jacketed with neoprene, polyethylene, vinyl, or rubber.
- Manufactured from aluminum alloy wire.
- Color-coded for ease of selection in field

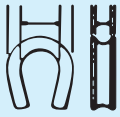
CHARACTERISTICS



Strand Splice

Characteristics	Description
Crossover Marks	Indicate starting point for application
Identification Tape	Shows catalog number and range of outside diameters
Color Code and Applied Length	Assists in identification of conductor size, corresponding to tabular information appearing on catalog pages
Gritted and Neoprene-Dipped Legs	Grit is permanently embedded in a coating of neoprene

HARDWARE ACCESSORY GUIDELINES

Acceptable Fittings					Size
Cast 	Spool Insulator 	Drop-Forged 	Thimbles 		Conductor Outside Diameter Maximum
			Diameters	Groove Width Minimum	
			in	in	in
¾" Groove Width	NEMA 53-1 NEMA 53-2 NEMA 53-3 Diameters 1-½" to 2-¾"	¾" Groove Width	1-¼ to 2-⅜	5/16	Sizes up to .310
			1-¼ to 2-⅜	⅜	Sizes up to .374
			1-¼ to 2-⅜	7/16	Sizes up to .428
			1-¼ to 2-⅜	½	Sizes up to .507
			1-¼ to 2-⅜	⅝	Sizes up to .608
			1-¼ to 2-⅜	¾	Sizes up to .783
⅞" Groove Width			1-½ to 2-⅜	⅞	Sizes up to .888
1-½" Groove Width			1-½ to 2-⅜	1	Sizes up to 1.005
			1-½ to 2-⅜	1-⅛	Sizes up to 1.138
			1-½ to 2-⅜	1-½	Sizes up to 1.550

ORDERING INFORMATION

Coated Dead-End

Catalog Number	Diameter Range* Size in		Applied Length in	Conductor Color Code	Units per Carton	Weight per Carton lb
ND-0114	0.61	0.65	33	Blue	25	24
ND-0115	0.65	0.69	34	Green		26
ND-0116	0.69	0.74	35	Black		30
ND-0118	0.78	0.83	38	Blue		34
ND-0119	0.84	0.89	40	Black		40
ND-0120	0.89	0.95	42	Yellow		44
ND-0121	0.95	1.01	44	Green		52
ND-0122	1.01	1.07	45	Red	10	24
ND-0123	1.07	1.14	47	Blue		24
ND-0124	1.14	1.21	48	Orange		30
ND-0125	1.21	1.29	49	Black		30
ND-0126	1.29	1.37	51	Yellow		32
ND-0127	1.37	1.46	53	Green		38
ND-0128	1.46	1.55	56	Red		40
NDMS5825	1.55	1.65	60	Blue		47
NDMS6595	1.65	1.72	62	Black	5	25
NDMS11918	1.72	1.80	68	Red	3	23
NDMS5849	1.80	1.89	68	Blue	5	31
NDMS3578	1.96	1.99	74	White	3	24

Conductor may be right-hand lay or left-hand lay.

• Application is based on covered conductor outside diameter.

THIMBLE CLEVIS

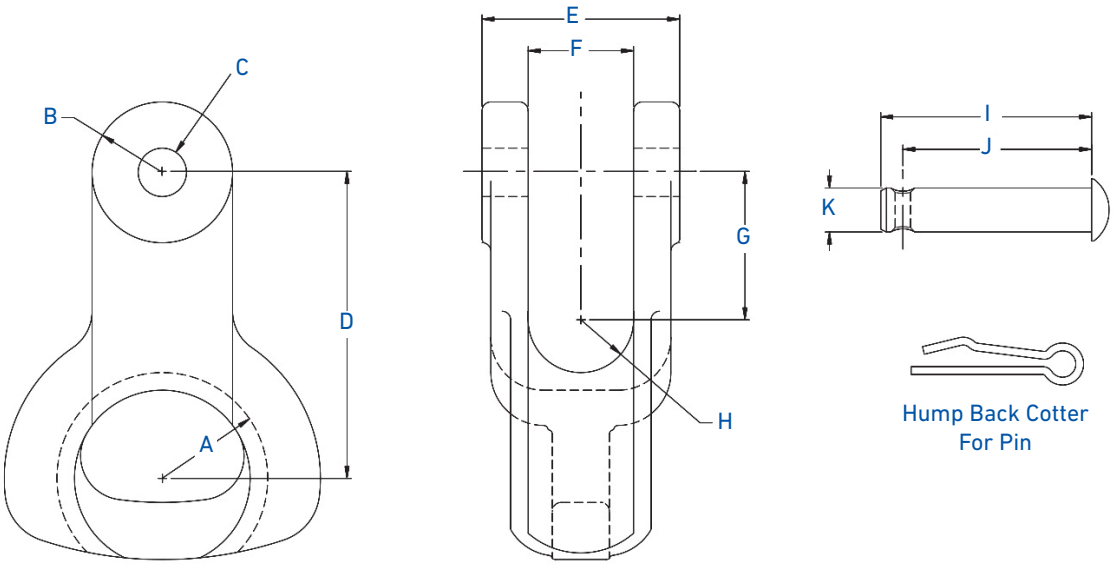
The **Thimble Clevis** is designed for use in conjunction with PLP Dead-Ends for cable termination purposes. The thimble provides a smooth internal contour to prevent stress concentration within the loop of a PLP Dead-End. The Clevis includes a steel pin which links the clevis through the eye of the insulator or other mounting point and the pin is secured with a humpbacked cotter key.

Refer to the individual dead-end sections for the appropriate application recommendations.

FEATURES AND BENEFITS

- Provides a smooth contoured seating surface for the dead-end
- Prevents stress concentration within the loop of the formed wire dead-end
- Permits insulator replacement without removal of the dead-end

SPECIFICATIONS

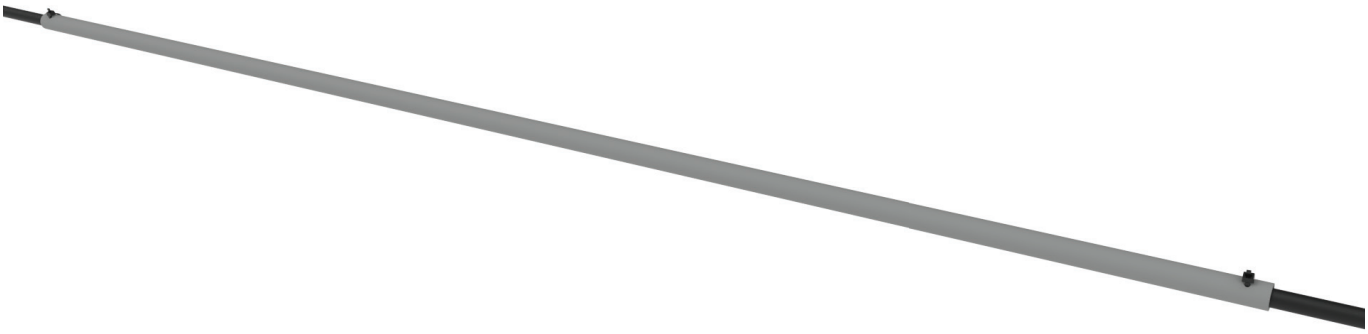


Dimensions											
Catalog Number	A	B	C Diameter	D	E	F	G	H	I	J	K
						in					
TC-5A	1-1/8	1-1/4	11/16	3	1-3/4	15/16	1-13/32	1/2	2-15/16	2-3/16	5/8
ATC-20M	1-1/2	1		4-11/32	2-13/16	1-1/2	2-3/32	3/4	3-3/8	3-1/16	
TC-5F	1-1/8	1-1/4		3	1-5/8	15/16	1-13/32	1/2	2-15/16	2-3/16	
TC-17	13/16	3/4		2-5/16	1-3/8	3/4	1-1/8	3/8	1-7/8	1-5/8	
TC-6F	1-1/4	1-1/2		3-1/2	2-1/16	1-1/16	1-23/32	17/32	2-3/4	2-7/16	3/4

ORDERING INFORMATION

Thimble Clevis

Catalog Number	Weight per Unit	Carton Weight	Units per Carton	RHS	Material
	lb				
TC-5A	0.75	43	50	12,000	Aluminum
ATC-20M	1.80	38	20	20,000	
TC-5F	1.60	50	25	26,900	Iron
TC-17	1.00	23	20	15,000	
TC-6F	2.40	62	20	42,400	



SPACER CABLE ABRASION PROTECTOR

The **Spacer Cable Abrasion Protector** is a slit polyethylene tube that is placed over the cable and serves to protect the cable jacket from abrasion caused by structures, trees, and other cables.

FEATURES AND BENEFITS

- Manufactured from a high-impact, UV-stabilized, low-density polyethylene (LDPE)
- Materials are resistant to extreme abrasion and weather conditions
- Fast, easy installation without disconnecting the conductor
- Can be cut to size in the field
- Reusable if in good condition
- Not designed for insulation purposes

ORDERING INFORMATION

Select the appropriate **Spacer Cable Abrasion Protector** from the table below based on the cable's diameter.

Spacer Cable Abrasion Protector

Catalog Number	Description	Diameter	Overall Length	Units per Carton	Weight per Carton
		in			
SCAP-1	Spacer Cable Abrasion Protector-Black	1	96	25	19
SCAP-1G	Spacer Cable Abrasion Protector-Gray				
SCAP-2	Spacer Cable Abrasion Protector-Black	1.5			28
SCAP-2G	Spacer Cable Abrasion Protector-Gray				

PROTECTOR TUBING

Protector Tubing has an overlapping design with 360 degree coverage and is slit for ease of application. Protector Tubing serves different functions. It protects the cable jacket from abrasion caused by structures, trees, and other cables, as well as protects energized lines from incidental contact with wildlife and vegetation.

FEATURES AND BENEFITS

- Overlapping slit tubing configuration permits easy installation on existing conductor
- Durable EPDM material with a minimum thickness of 125 mils
- 500 V/mil dielectric strength
- Excellent resistance to ozone and petroleum-based solvents
- Overlapping profile follows bends and turns without risk of splitting open
- Profile accommodates a wide range of conductor applications
- Ideal for transformer stinger wires, arrestor connections and aerial jacketed conductor
- Available in continuous rolls. Contact PLP with your specific requirements.

ORDERING INFORMATION

Protector Tubing

Catalog Number	Conductor Diameter Range		Length[1]	Weight per Unit
	Minimum	Maximum		
	in		ft	lb
PT-0375	0.162	0.375	8	0.85
PT-0375-50			50	5.5
PT-0625	0.376	0.625	8	1.5
PT-0625-50			50	10
PT-0938	0.626	0.938	8	2.3
PT-0938-50			50	14
PT-1300	0.939	1.30	8	2.7
PT-1300-50			50	17
PT-1750	1.31)	1.75	8	5.7
PT-1750-50			50	36

[1]Contact PLP for additional length options

WARNING: Protector Tubing should not be used to protect humans from electrical shock.

NOTES:

NOTES:

GLOBAL HEADQUARTERS
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