



# POWER LINE HARDWARE



## OMEGA CLAMPS

### Description:

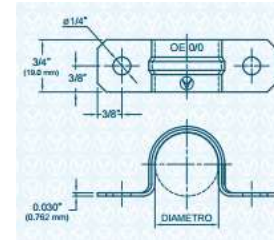
Ideal for electrical use and construction.

### Characteristics:

- Belt: Galvanized Carbon Steel
- Width: 0.750" (19.0 mm.)
- Density: 0.030" (0.762 mm.)

Inches	Millimeters
1/2	13
1	25

Other sizes available upon request.



## BACK PRESSURE CLAMPS 2" ANCHOR TUBE

### Description:

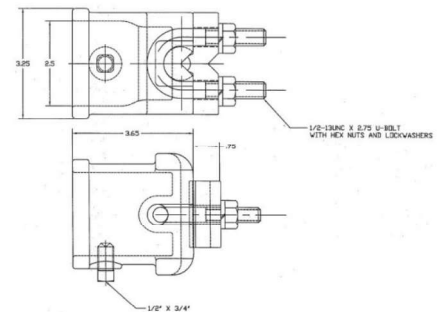
To support vertical wind pipe, malleable iron, galvanized, according to ASTM 123-78

### Dimensions:

Tube of 2", anchor 5/16

### Characteristics:

- Malleable iron
- Hot galvanized corrosion protection
- Minimum wind diameter 7 / 16—5 / 16 feet
- Diameter: 50.8 mm
- Galvanized coating > 100 microns



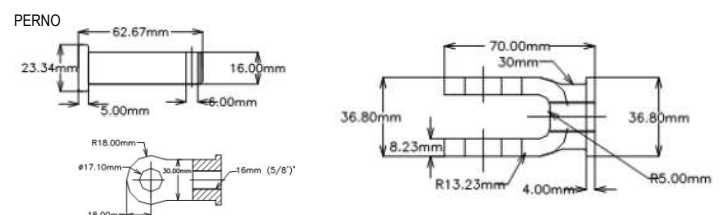
## PIN CLAMPS

### Description:

PIN-CLAMPS, galvanized steel according to ASTM153, with pin..

### Characteristics:

- Hot rolled steel
- Hot galvanized corrosion protection
- Galvanized coating > 87 microns



Screw (in.)	Separation (in.)	Pin (in.)	Mechanical Resistance	
			KN	lb.
5/8	13/16	5/8	60.3	13,550

## SQUARE FLAT WASHER

### Description:

Square flat washer are used in place of round washers when a larger load-bearing surface is required. Square Curved Washers are used most often on wooden poles in bolted connection. Hot dip galvanized meet ASTM A153.

Size	Orifice (in.)	For Screw (in.)	Weight (Kg / Pcs)
2 1/4 X 2 1/4 X 3/16	11/16	5/8	0.110
2 1/4 X 2 1/4 X 3/16	13/16	3/4	0.106
2 X 2 X 1/8	9/16	1/2	0.057
2 X 2 X 1/8	11/16	5/8	0.054
3 X 3 X 3/16	13/16	3/4	0.218
3 X 3 X 1/4	13/16	3/4	0.271
4 X 4 X 3/16	13/16	3/4	0.371
4 X 4 X 1/4	15/16	3/4	0.489
4 X 4 X 1/2	1 1/8	1	0.982



## SPRING LOCK WASHER

### Description:

Spring Lock Washer made of high grade spring steel to keep a bolt nut in tension, insuring a tight assembly under all temperatures. Hot Dip Galvanized meet ASTM A153.

Size	For Screw (in.)	Weight (Kg / Pcs)
0.141X0.094	3/8	0.004
0.171X0.125	1/2	0.007
0.203X0.156	5/8	0.012
0.234X0.188	3/4	0.020

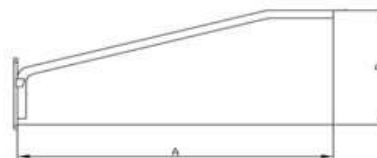


## LUMINARIA ARM

### Description:

Luminaire arms are used in metal or wooden post, the body is galvanized steel pipe. Hot dip galvanized under ASTM A153.

Size (pulg.)		Weight (Kg / Pcs)
A	B	
42	18	6.00
72	24	8.00
144	47	14.00



## NECKLACES TIE

Ideal for laying on fronts airline preassembled or concentric, are composed of a block of insulating material providing support expansion lug by the action steel nail. are available suitable models for drivers to beam 25 and 50 mm diameter, fixed through seals including plastics.

Beam diameter Conductor	Seals	Perforating by depth
Hasta 25 mm	1	Φ 8 x 38 mm
Hasta 2 x 25 mm	2	Φ 8 x 38 mm
Hasta 50 mm	1	Φ 12 x 65 mm
Hasta 2 x 50 mm	2	Φ 12 x 65 mm



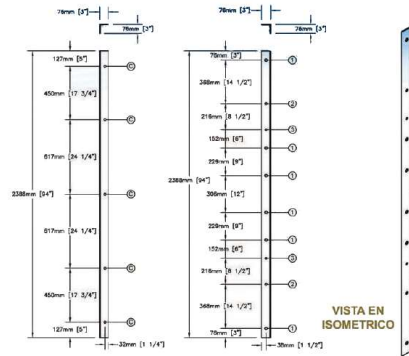
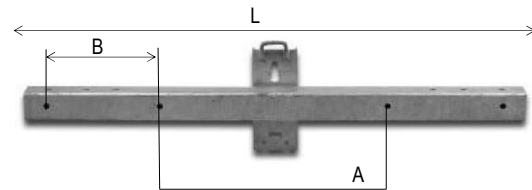
## CROSS ARMS

### Description:

Cross Arms hot galvanized steel angle are used for the construction of support structures airline power distribution, and installation of equipment in urban and rural areas.

Section	L	A	B	Wt. Lbs / ea
4 x 4 x .150	3'6"	-	-	38
4 x 4 x .150	4'6"	-	15"	46
4 x 4 x .150	5'6"	-	15"	55
4 x 4 x .150	7'6"	36"	18"	72
4 x 4 x .188	7'6"	36"	18"	80
4 x 4 x .188	7'6"	36"	18"	103
4 x 4 x .3125	9'6"	36"	18"	152
4 x 6 x .3120	10'6"	36"	18"	217
4 x 6 x .3750	12'6"	48"	18"	298

Description	Length mm (in.)	Resistance point N.m (lb. foot)	Weight avg. kg (lb)
3" x 3" x 1/4" x 80" E. N.	2000 (80)	6051 (4462.98)	14.79 (32.6)
3" x 3" x 1/4" x 94" E. N.	2388 (94)	6051 (4462.98)	17.42 (38.4)
3" x 3" x 1/4" x 120" E. N.	3000 (120)	6051 (4462.98)	22.24 (49.02)
3" x 3" x 1/4" x 185" E. N.	4700 (185)	6051 (4462.98)	34.26 (75.54)
3" x 3" x 1/4" x 236" E. N.	6000 (236)	6051 (4462.98)	43.74 (96.43)



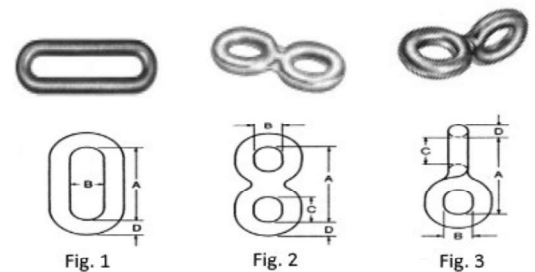
## CHAIN LINKS

### Description:

Links are used to maintain proper tower clearance and connect associated hardware within an insulator string.

Material: Galvanized steel

Description	Dimensions (pulg.)				Weight (Lbs)
	A	B	C	D	
Fig. 1	2 1/4	1	-	1/2	30,000
Fig. 1	3 1/4	1	-	5/8	40,000
Fig. 2	3 3/8	7/8	1 1/8	9/16	30,000
Fig. 3	3 3/8	7/8	1 1/8	9/16	40,000



## STAINLESS STEEL STRAPPING

### Description:

Stainless Steel Strapping nonmagnetic (bands) are used flexibly for any size hose, together with buckle (clip) and subject with tool belts.

### Use:

Used mostly for insulation, mounting of traffic signs, commercial signs, decorations, etc.

Package: kraft paper box or plastic bag

Common sizes are as follows:



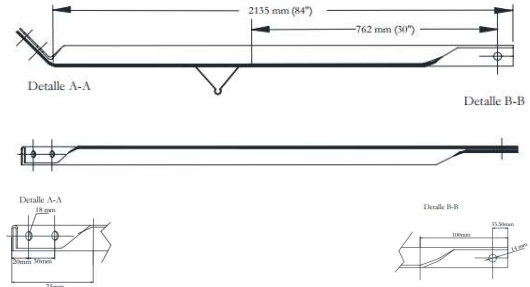
Strapping		304SS	304SS	316SS	316SS
In.	mm	Thickness	Thickness	Thickness	Thickness
3/8"	9.5	0.4	0.6mm	n/a	0.4
1/2"	12.7	0.4	0.7	0.5	0.8
5/8"	16.0	0.4	0.7	0.5	0.75
3/4"	19.0	0.4	0.7	0.5	0.8
1"	25.4	1.0mm	1.2mm	n/a	n/a



## GALVANIZED STEEL DIAGONAL STRAP

### Description:

Diagonal straps are used in the construction of support structures for electrical power distribution lines and structures for the installation of equipment, for the reinforcement and stability of the spreaders. Hot galvanized steel with a thickness of 85 u, according to the ASTM A-123 standard. Angled bar.



This hardware can be manufactured according to the customer's dimensional requirement.

Description	Dimensions	
	mm	In.
Outline L	45 x 45 x 45	1 3/4" x 1 3/4" x 3/16"
Length	2135	84
Orifice (Small)	14	9/16
Orifice (Large)	18	11/16
Extreme (45°)	75	3

## GALVANIZED STEEL SHEET STRAP

### Description:

Sheet strips are used in the construction of support structures for electrical power distribution lines and some equipment installation structures, for the reinforcement and stability of the spreaders. Hot galvanized steel with a thickness of 100 u, according to the ASTM 153 standard. NEMA dimensions.

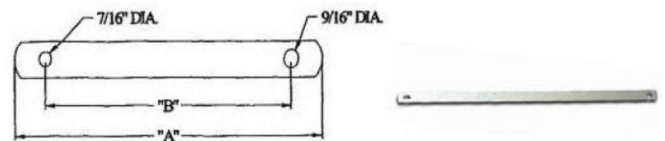


Dimensions	Approx. Weight Kg. (lb.)
De 32" (81 cm)	0.96 (2.10)
De 36" (91 cm)	1.23 (2.89)
De 28" (71 cm)	0.53 (1.17)

## GALVANIZED STEEL VERTICAL STRAP

### Description:

The vertical strips are used to support the transverse arms that carry tangent loads. They have round corners at the ends to prevent damage and reduce the possibility of injury. Hot-dip galvanized steel according to ASTM 153.



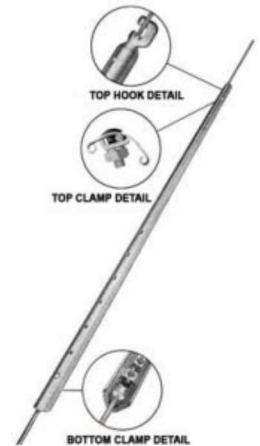
Size (Pulg.)	Length A (Pulg.)	Length B (Pulg.)	Weight Kg./Pcs
1 1/4 x 1/4	24	22	0.96
1 1/4 x 1/4	26	24	1.05
1 1/4 x 1/4	28	26	1.14
1 1/4 x 1/4	30	28	1.23
1 1/4 x 1/4	32	30	1.28

## GUY GUARDS

### Description:

Guy Guards slide over the metal rods or cables which are used to support and stabilize poles and antennas. These brightly coloured Guy Guards clearly indicate the presence of hard-to-see guy wires, reducing the risk of injury. They also act as impact buffers.

Description	Color	Length		Interior Diameter		Flap		Wall thickness (average)		Std. Pkg.	Qty Box	Approx. Weight	
		Foot	m	In.	mm	In.	mm	In.	mm			lbs/ft	kg/m
Large	Yellow	7.0	2.13	2.24	57.00	2.48	63	0.098	2.5	10	150	0.58	0.86
Small	Yellow	6.5	2.00	1.75	44.45	2.36	60	0.083	2.1	10	140	0.43	0.64
Small	Green	7.0	2.13	1.75	44.45	2.36	60	0.083	2.1	10	140	0.43	0.64

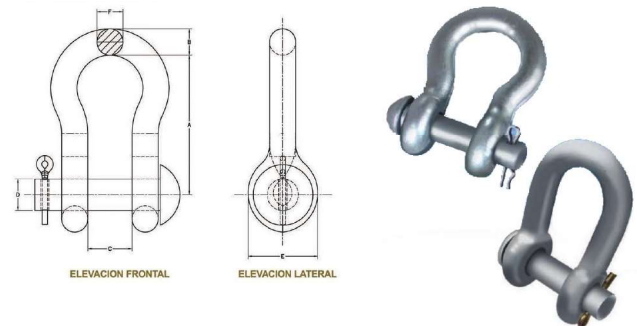


## NORMAL FETTERS 5/8"

### Description:

The fetters of galvanized steel are used to attach the cadenzas of insulators to the crosspieces in distribution lines and sub-transmission of electricity and the transmission line towers.

A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	E mm (in.)	F mm (in.)	Weight (kg)	Maximum tension (lb)
82.55 (3 1/4")	15.88 (5/8")	25.4 (1")	19.05 (3/4")	44.45 (1 3/4")	15.88 (5/8")	1.66	40,000



## STRAPPING BUCKLES

### Description:

Stainless steel buckles to fasten the straps.

Part No.	Strapping		Buckles Thickness	Box 100 Box	Reference x cardboard	
	In.	mm			Kgs	Cubic feet
BK-33	3/8"	9.5	0.7	25	11	1.2
BK-34	1/2"	12.7	0.7	25	12	1.2
BK-35	5/8"	16	0.7	25	15	1.2
BK-36	3/4"	19	1.0	25	21	1.2
BK-53	3/8"	9.5	1.0	50	15	1.3
BK-54	1/2"	12.7	1.3	25	23	1.2
BK-55	5/8"	16	1.3	25	22	1.4
BK-56	3/4"	19	1.7	10	15	0.55
BK-58	1"	25.4	2.5	10	13	0.55



BK-5



BK-3

## MOULDINGS

### Description:

They are made of galvanized steel sheet hot and use to cover power cables and mechanical protection.

Description	Weight lb. (kg.)
Large	15 (6.82)
Small	7.94 (3.61)

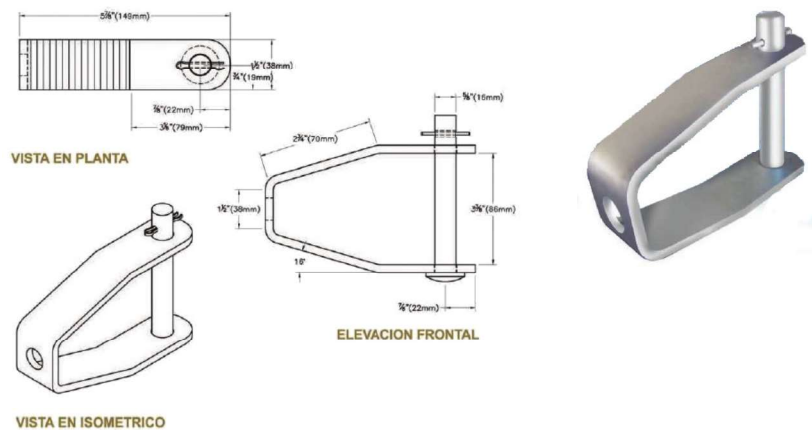


## ISOLATOR HOLDER

### Description:

They are made of hot galvanized steel under ASTM A153 and used in the construction of power airlines low voltage, to support the type insulator structures reel auction, tangents and structures that support lines with deflection angle.

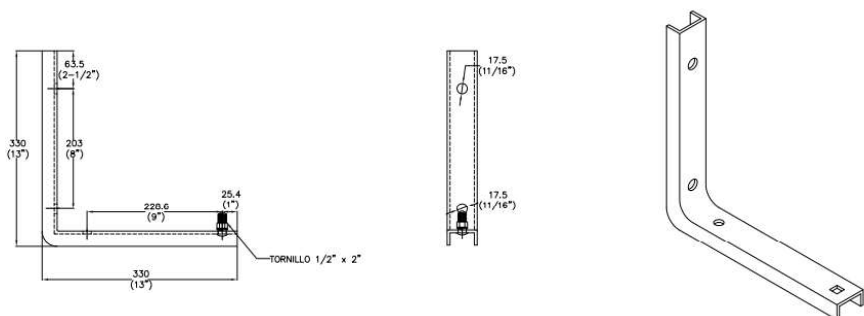
Description	Thickness	Mechanical resistance approx. KN (lb.)	Weight Kg. (lb.)
For Isolator 1/4"	1/4"	8.8 (2,000)	0.84 (1.84)



## POLE SUPPORT SINGLE UNIT

### Description:

Galvanized steel according to ASTM 153-78 standard. Approximate thickness 4.8 mm (3 / 16"). Includes 1 / 2" x 2" car bolt with nut and washer.

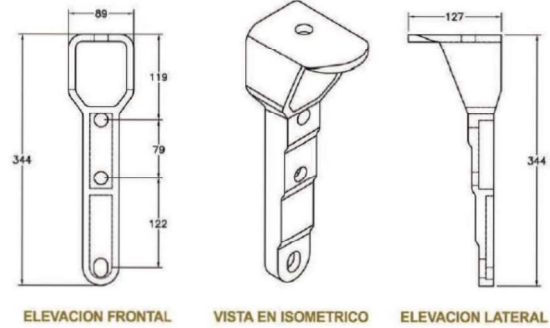


## VERTICAL TYPE POST SUPPORT FOR INSULATOR

### Description:

Post Type Insulator Post Brackets are used in the construction of overhead power distribution lines to support the Post Type Insulator at the top of the post.

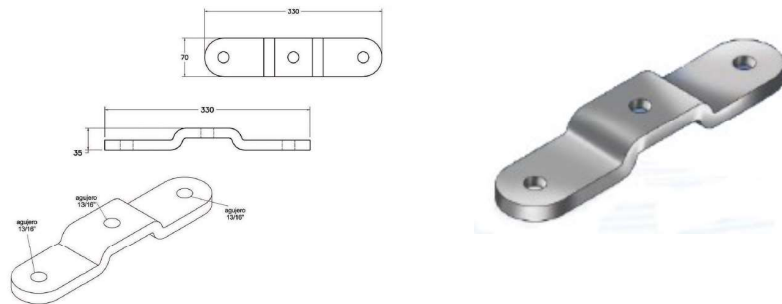
Product Description	Weight lbs. Kg.
Pole Tip Bracket (Bracket)	6.34 2.88



## DOUBLE UNIT INSULATOR POST SUPPORT

### Description:

The double unit insulator post supports are made of hot-dip galvanized structural steel and are used for the assembly of the spigot which in turn holds the Type insulator spigot.



## ANCHOR PIPE BRACKET

For anchor tube (for 2" pipes)

The post plates and clamping fixture are attached to the pipe with set screws. The tubing is not included. Assembled with 1/2" fixing bolts (not included)

Cat. No.	Std. Pkg.	Weight lbs.
540SGF	10	700
541SGF	10	500





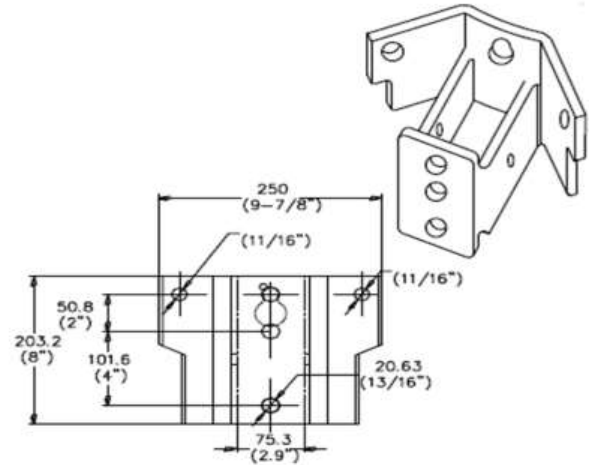
## SINGLE PHASE TRANSFORMER BRACKET

### Description:

The supports for single-phase Type pole transformer are manufactured in galvanized steel under the ASTM A123 standard, which are used in the assembly of 1 transformer of 5 - 100 KVA, the transformer is adjusted by bolts and square nuts.

### Specifications:

Distance between holes to the transformer (mm):	152.4mm (6")
Thickness (mm):	6.35mm (1/4")
Diameter of hole to post (mm):	17.5mm (11/16")
Drill diameter higher than the transformer (mm):	20.6mm (13/16")
Drill diameter lower than the transformer (mm):	17.5mm (11/16")
Zinc Layer Thickness (μ):	100



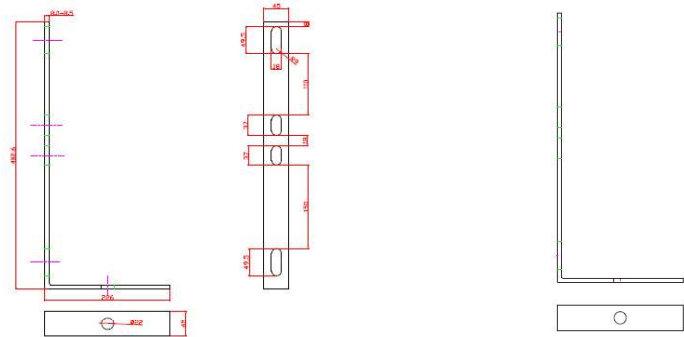
## L BRACKET

### Description:

Used for strength and mounting a variety of electrical equipment including arresters, cutouts, combination units and terminations. All components are Hot dip galvanized to meet ASTM A153 specification.

size	Orifice size
100mm x 8.0mm	40mm
450mm x 8.0mm	22mm

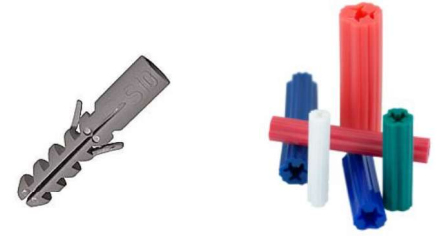
Other sizes available upon request.



## DOWEL

### Description:

It refers to the element that allows to provide greater security to a screw in a wall or in another structure. Plastic dowel in sizes 3/16, 7/32, 1/4, 5/16 and 3/8.



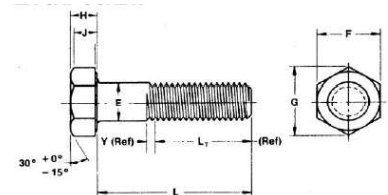
## MACHINE SCREWS

### Description:

Square head machine screws and hex are used for fixing the crosspieces, poles and other structures. The screws are supplied with square or hex nuts at the customer. Hot dip galvanized according to ASTM A153.

### Square head

Diameter in	Size	Long. screw in. (mm)	Long. thread in. (mm)	Weight Kg / Pcs
1/2	1/2"x1 1/2"	1 1/2 (38)	1 1/4 (32)	0.084
1/2	1/2"x2"	2 (50)	1 3/4 (44)	0.093
1/2	1/2"x2 1/2"	2 1/2 (63)	2 1/4 (58)	0.105
1/2	1/2"x3"	3 (75)	2 3/4 (69)	0.114
1/2	1/2"x4"	4 (100)	3 (75)	0.140
5/8	5/8"x5"	5 (125)	3 (75)	0.259
5/8	5/8"x6"	6 (150)	3 (75)	0.282
5/8	5/8"x8"	8 (200)	4 (100)	0.373
5/8	5/8"x10"	10 (250)	6 (150)	0.410
5/8	5/8"x12"	12 (300)	6 (150)	0.491
3/4	3/4"x8"	8 (200)	4 (100)	0.536
3/4	3/4"x10"	10 (250)	4 (100)	0.645
3/4	3/4"x12"	12 (300)	6 (150)	0.736
3/4	3/4"x14"	14 (350)	6 (150)	0.855
3/4	3/4"x16"	16 (400)	6 (150)	0.964



### Hex Head

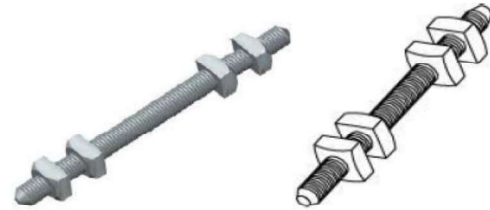
Basic Bolt Diameter in	E		F			G		H			J	L		Y	Decentration of the surface support layer
	Body diameter		Distance between tips			Angular dimension		Height			Grip height	Thread length for screw length		Transition thread length	
	Max.	Min.	Basic	Max.	Min.	Max.	Min.	Basic	Max.	Min.	Min.	< 6" Basic	> 6" Basic	Max.	
1/4	0.2500	0.2450	7/16	0.438	0.428	0.505	0.488	5/32	0.163	0.150	0.106	0.750	1.000	0.250	0.010
3/8	0.3750	0.3690	9/16	0.562	0.551	0.650	0.628	15/64	0.243	0.226	0.160	1.000	1.250	0.312	0.012
1/2	0.5000	0.4930	3/4	0.750	0.736	0.866	0.840	5/16	0.323	0.302	0.215	1.250	1.500	0.385	0.014
5/8	0.6250	0.6170	15/16	0.938	0.922	1.083	1.051	25/64	0.403	0.378	0.269	1.500	1.750	0.455	0.017
3/4	0.7500	0.7410	1 1/8	1.125	1.100	1.299	1.254	15/32	0.483	0.455	0.324	1.750	2.000	0.500	0.020
1	1.000	0.9900	1 1/2	1.500	1.469	1.732	1.675	39/64	0.627	0.591	0.416	2.250	2.500	0.625	0.026

## DOUBLE ARMING BOLT

### Description:

Used to secure two cable suspension clamps or other attachments on opposite sides of utility pole. Each Double Arming Bolt is supplied with four attached square nuts. Bolt provide with cone point at each end to ease starting. Hot Dip Galvanized meet ASTM A153 Class 3.

Part. No.	Size	Long. screw in (mm)	Weight Kg / Pcs
HE-16O	5/8"x10"	10 (250)	0.536
HE-16P	5/8"x12"	12 (300)	0.618
HE-16Q	5/8"x14"	14 (350)	0.645
HE-16R	5/8"x16"	16 (400)	0.718
HE-16S	5/8"x18"	18 (450)	0.850



## EXPANSION BOLT ANCHOR

### Description:

Expansion bolt fully threaded link wedge is designed for consistent performance in cracked and uncracked concrete. Suitable for normal weight concrete, lightweight concrete and concrete on steel deck.

**Material:** Carbon steel, stainless steel.

**Size:** 1/4"x1 3/4" to 3 3/4", 5/16"x2" to 4 1/4", 3/8"x2 1/4" to 5", 1/2"x3/4" to 7", 5/8"x3" to 7", 3/4"x3" to 10"

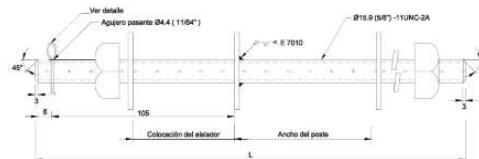


## SCREWS INSULATOR SPOOL TYPE

### Description:

Used with insulating spool as suspension point of the neutral line in single primary networks, secondary networks suspension in quadruplex and tees from them. Hot dip galvanized steel under ASTM-A153.

Length	Use of the screw according to its length
315 mm	Primary on 12 m poles Secondary on 9 m poles
540 mm	Secondary on 12 m poles

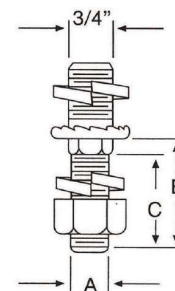


## SCREWS INSULATOR POLE TYPE

### Description:

It is used for fixing the insulator to the angular tip crosshead or support pole, subtransmission and distribution lines of electric energy. Hot dip galvanized steel.

Description	Dimensions mm (in.)			Weight approx. Per 100 pieces kg (lb)
	A	B	C	
Insulating Bolt Type Pole 5/8"x 1"	15.88 (5/8)	25.4 (1)	25.4 (1)	0.04 (0.09)
Insulating Bolt Type Pole 5/8"x 1 3/4"	15.88 (5/8)	44.45 (1 3/4)	26.99 (1 1/16)	0.07 (0.15)
Insulating Bolt Type Pole 3/8"x 1 3/4"	19.05 (3/4)	44.45 (1 3/4)	26.99 (1 1/16)	0.07 (0.15)



## TORNILLOS GUARDACABO RECTO

### Description:

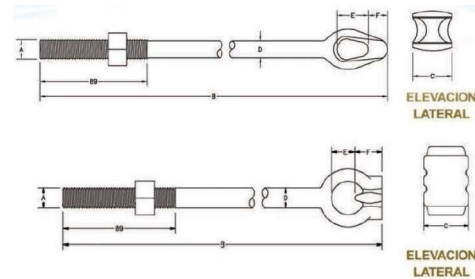
They are used in building structures for retention of lateral loads applied to the posts, together with the anchors and guy wire. Thunderstorms in the auction of lines, telephony and telecommunications change of direction thereof. The heads of the bars are of two types, single and double channel, with a wide radius which allows tensioning the pre-formed without damaging it. Hot galvanized steel under ASTM A153.

### Simple Anchor

A mm (in.)	B mm (foot)	C mm (in.)	D mm (in.)	E mm (in.)	F mm (in.)	Mechanical strength KN (lb)	Weight kg (lb)
16 (5/8")	1829 (6')	44 (1 3/4")	16 (5/8")	17 (11/16")	32 (1 1/4")	71 (16,000)	2.95 (6.50)
16 (5/8")	2134 (7')	44 (1 3/4")	16 (5/8")	17 (11/16")	32 (1 1/4")	71 (16,000)	3.45 (7.60)
16 (5/8")	2438 (8')	44 (1 3/4")	16 (5/8")	17 (11/16")	32 (1 1/4")	71 (16,000)	3.98 (8.76)

### Double Anchor

A mm (in.)	B mm (foot)	C mm (in.)	D mm (in.)	E mm (in.)	F mm (in.)	Mechanical strength KN (lb)	Weight kg (lb)
16 (5/8")	1829 (6')	30 (1 3/16")	16 (5/8")	19 (3/4")	21 (13/16")	71 (16,000)	2.97 (6.53)
16 (5/8")	2134 (7')	30 (1 3/16")	16 (5/8")	19 (3/4")	21 (13/16")	71 (16,000)	3.47 (7.63)
16 (5/8")	2438 (8')	30 (1 3/16")	16 (5/8")	19 (3/4")	21 (13/16")	71 (16,000)	4 (8.79)



## THREADED MAGNETIC SCREWS

### Description:

Aluminum alloy security screw that is actuated by a magnetic key.

### Size:

1/4" - 28, length: 30mm, 40mm, customized.



## LAG SCREW

### Description:

Lag screws used to attach pole line hardware to utility poles and other wood structures, available in several types either Fetter Drive or Gimlet Point Drive. All lag screw have rolled threads and square or hex head in accordance with ANSI/ASME B18.2.2.1. Hot Dip Galvanized meet ASTM A153 Class 3.

Dimensions	Std. Pkg..	Weight lbs. / C
1/4"x 2 1/2"	100	4
1/4"x3"	100	5
5/16"x3"	100	7
3/8"x2"	50	9
3/8"x3"	50	11
1/2"x2 1/2"	50	17
5/8"x4"	25	38
5/8"x5"	25	46

Other sizes available upon request.



## SELF-DRILLING SCREWS

### Description:

They are used for fixing high-resistance structures, metal constructions, electrical installations, assemblies in general.

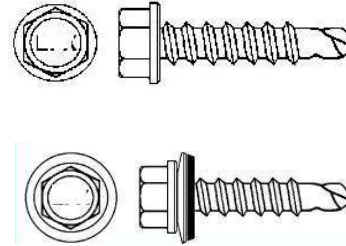
#### Hex Head Wick Point

Size		Qty x Box
# x inches	mm	
# 6 - 20 x 1/2	3.4 x 13	10,000
# 8 - 18 x 1/2	4.2 x 13	10,000
# 10 - 16 x 1/2	4.8 x 13	9,000
# 12 - 14 x 3/4	5.5 x 19	6,000
# 14 - 14 x 1	6.3 x 25	3,000
# 14 - 14 x 2	6.3 x 13	1,500
# 16 - 5/16 x 2	8.0 x 50	1,000

Other sizes available upon request.

#### Hex Head Wick Point with Washer

Size		Qty x Box
# x inches	mm	
# 12 - 14 x 3/4	5.5 x 19	6,000
# 12 - 14 x 1	5.5 x 25	4,000
# 12 - 14 x 1 1/2	5.5 x 38	3,000
# 14 - 14 x 3/4	6.3 x 19	3,800
# 14 - 14 x 1	6.3 x 25	3,000
# 14 - 14 x 2	6.3 x 50	1,500
# 14 - 14 x 3	6.3 x 75	1,000



## NUTS

### Description:

Hot dip galvanized.

Size	Std. Pkg.	Weight lbs / C
<b>Square</b>		
3/8"	100	3
1/2"	100	8
5/8"	100	13
3/4"	50	24

Size	Std. Pkg.	Weight lbs / C
<b>Hex</b>		
3/8"	100	3
1/2"	100	8
5/8"	100	13
3/4"	50	24

Other sizes available upon request.



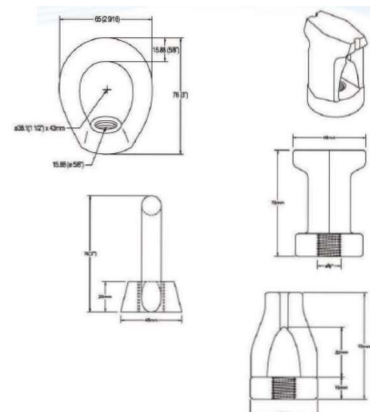
## EYE NUTS

### Description:

Eye Nuts of hot galvanized steel are used in the construction of overhead distribution lines power structures capping medium voltage to hold suspension insulators "nut eye without channel" and low voltage to finish the neutral conductor "eye nut channel."

Size	Std. Pkg.	Weight lbs / C
1/2"	50	70
5/8"	50	70
3/4"	50	70
<b>Simple Nut</b>		
5/8"	25	90
3/4"	24	90
<b>Double Nut</b>		
3/4"	25	100

Other sizes available upon request.

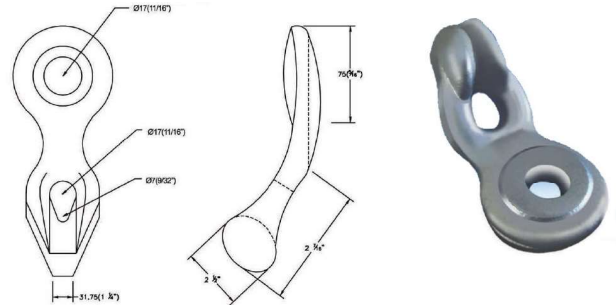


## NUT THIMBLE

### Description:

Nut thimble inclined to wind hot galvanized steel used in the construction of overhead distribution lines of electric energy to hold the cable retained the post.

Product Description	Approx. Weight kg. (lb.)	Minimum resistance KN (LB)
5/8"	0.70 (1.54)	60.27 (13.550)



## STRAIGHT NUTS

### Description:

Straight thimble nuts are used for thimble screw fixation versus thimble eyebolts for straight head cables. Hot galvanized steel.

Size	A (in.)	B (in.)	C (in.)	D (in.)	Weight kg / Pcs
5/8"	1 1/2	1 1/2	7/8	1 3/8	0.340
3/4"	1 1/2	1 1/2	7/8	1 3/8	0.327

Other sizes available upon request.

