



# CATÁLOGO GENERAL

## TERMINALES Y CONECTORES



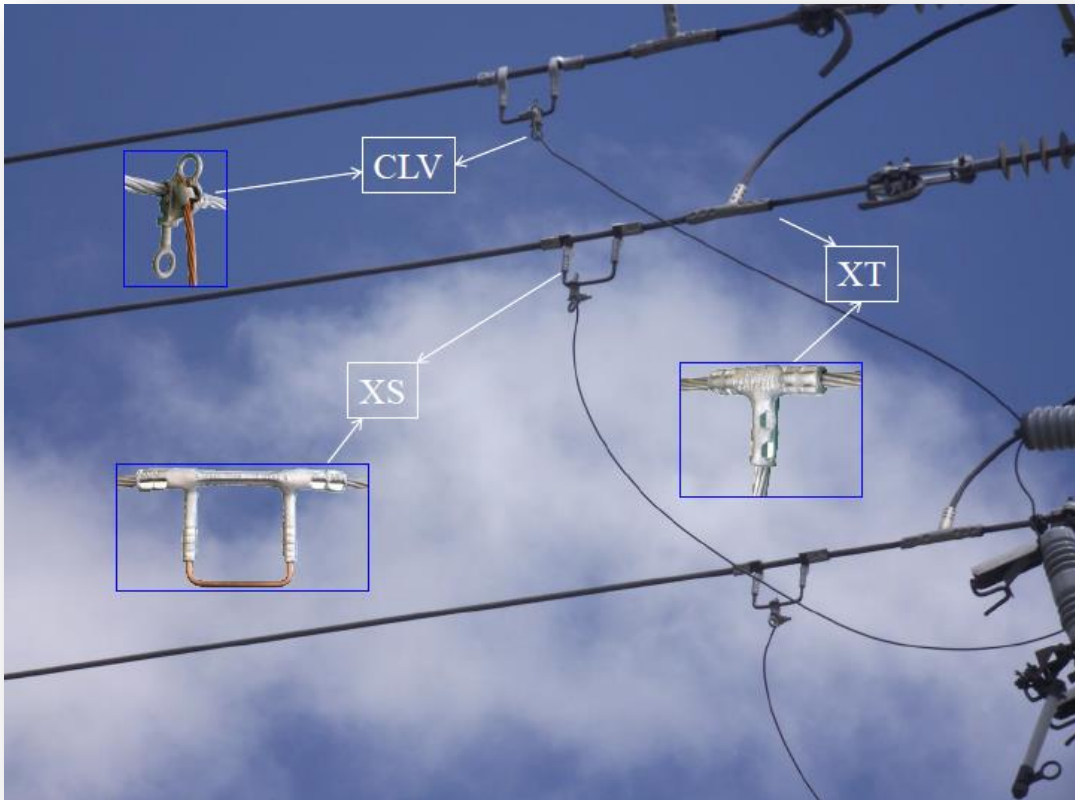
Cumplimiento normativo



Metales genuinos



El mejor tiempo de fabricación



# CONNECTORS CATALOG

## TERMINALS AND CONNECTORS



Delta Conectores es una Empresa dedicada a la fabricación y comercialización de terminales y conectores eléctricos para satisfacer las necesidades del mercado. Nuestra empresa fue fundada en la Cd. de Aguascalientes en el año de 1979 bajo el régimen fiscal de persona física. Para 1982 se consolida como sociedad anónima con la razón social de DELTA CONECTORES, SA DE CV. Actualmente la fábrica y Oficinas Generales continúan ubicadas en Aguascalientes; contamos con oficinas de ventas en la Ciudad De México, así como representantes en Monterrey y Guadalajara, nuestra amplia red de Distribuidores nos permite cubrir el territorio nacional. En Agosto de 1999 nos certificamos en la norma de calidad ISO9002 con el propósito de asegurar la calidad de nuestros procesos y dar certidumbre a nuestros clientes respecto a la calidad de nuestros productos. En el año 2002 nos certificamos en la versión ISO 9001:2000 (Actualmente 2015) la cual mantenemos a la fecha gracias al compromiso y convencimiento de todos y cada uno de los que trabajamos en Delta Conectores.

Contamos también con la Constancia de Calificación de Proveedor por parte de CFE-LAPEM, esta nos avala como PROVEEDOR CONFIABLE para Comisión Federal de Electricidad.

Hemos obtenido otras certificaciones igualmente importantes. El de Empresa Libre de Rezago Educativo ante el CONEVyT, el cual demuestra nuestro compromiso con nuestros trabajadores en apoyo a su desarrollo personal y laboral. Damos alta importancia al cuidado del medio ambiente por lo que aplicamos un Sistema de Gestión Ambiental teniendo como base los requerimientos de la PROFEPA.

Mantenemos el sistema de seguridad e higiene, para la protección de trabajadores e instalaciones que nos permiten proporcionar condiciones seguras de trabajo. Con estas acciones garantizamos ser una empresa sustentable, que da confianza a nuestros Clientes, Trabajadores, Proveedores y a la Sociedad en general.

DELTA CONECTORES, is a Mexican company dedicated to manufacture and trade Electrical Terminals and Connectors to satisfy the markets needs.

Our company was founded in Aguascalientes City in 1979 according to a fiscal status of physical person.

In 1982 Delta changed its status as a corporation under the name of DELTA CONECTORES, SA DE CV. At present both manufacturing and management continue in Aguascalientes, counting with a sales office in Mexico City and commercial representatives in Monterrey and Guadalajara as well as a Distributors network in most important cities of Mexico.

In August 1999 we were certified under ISO9002, certification that continue effective with the purpose to assure the quality of our manufacturing process and products. In 2002 we were certified in ISO9001-2000 (Presently 2015) certification that we are keeping as a commitment of each and every one who works in Delta. CFE-LAPEM Certification as RELIABLE SUPPLIER make it possible to sell our products to COMISION FEDERAL DE ELECTRICIDAD and its contractors.

Delta Conectores has also been certified as a company with laborers and personnel who has finished their elementary studies as well as professional degrees. This certification has been granted by CONEVyT. We comply with all the PROFEPA requirements (government institution) to avoid pollution.

Delta Conectores is conscious that we must provide secure conditions of labor to our personnel through commissions that observe that our facility is clean and secure to work. With actions like these we guarantee that our company is a reliable for our employees, customers, suppliers and society in general.

Our philosophy is to render to our customers good quality products with competitive prices and short delivery time by applying the Continue Improvement System.



Proveedor Calificado No. 251/21

La empresa mantiene la filosofía de dar a nuestros clientes productos de calidad al mejor precio y con un servicio oportuno aplicando la mejora continua, esto nos ha permitido mantenernos en constante crecimiento, aumentando nuestra capacidad de producción sustancialmente con lo cual seguimos avanzando para consolidarnos como líderes en el mercado.

Los productos Delta cumplen con las normas nacionales NMX y con las normas Internacionales NEMA.

Se emplean materiales de calidad, principalmente aleaciones de bronce y aluminio acordes con las normas ASTM y CDA. Para la fabricación se aplica alta tecnología y un sistema que propicia la mejora continua.

En la actualidad contamos con más de 100 líneas de productos de donde se desprenden más de 2000 productos diferentes; comprendiendo terminales, empalmes, derivadores, conectores para perno, salidas para transformador, soportes, conectores para sistemas de tierra y conectores especiales, los cuales tienen aplicación en subestaciones eléctricas, líneas de transmisión y distribución, de uso industrial, sistemas de tierra y en general para los fabricantes de equipo eléctrico.

En este catálogo se muestran solo algunos de los productos más comunes, tenemos la capacidad para satisfacer las necesidades específicas que tenga de este tipo de productos, ya sea modificando algún producto existente o desarrollando un producto en particular.

Las dimensiones especificadas en este catálogo están sujetas a modificaciones, contáctenos si estas son limitativas para su aplicación, ya sea directamente o a través del distribuidor autorizado, Usted recibirá un buen servicio.

#### **Oficinas Generales y Planta**

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##### **Mexico City Staff**

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[www.deltaconectores.com](http://www.deltaconectores.com)

Our product is manufactured under national standards (NMX) and Internationals (NEMA) casting bronze and aluminum alloys according to ASTM and CDA standards. Actually we have more than 100 product lines manufactured under casting system over 2000 different connectors and terminals such as mechanical connectors, grounding connectors, substations and distribution connectors as well as special connectors for industrial equipments and manufacturers.

In this catalog we are showing the products most in demand in Mexico but we have the capacity to produce specific connectors, modifying an existing product or making the design and development of new connectors. The dimensions specified in this catalog are subject to modifications, if your requirements are different in dimensions please contact us directly or through our distributor in order to receive a good service.

#### **Gerencia de Ventas**

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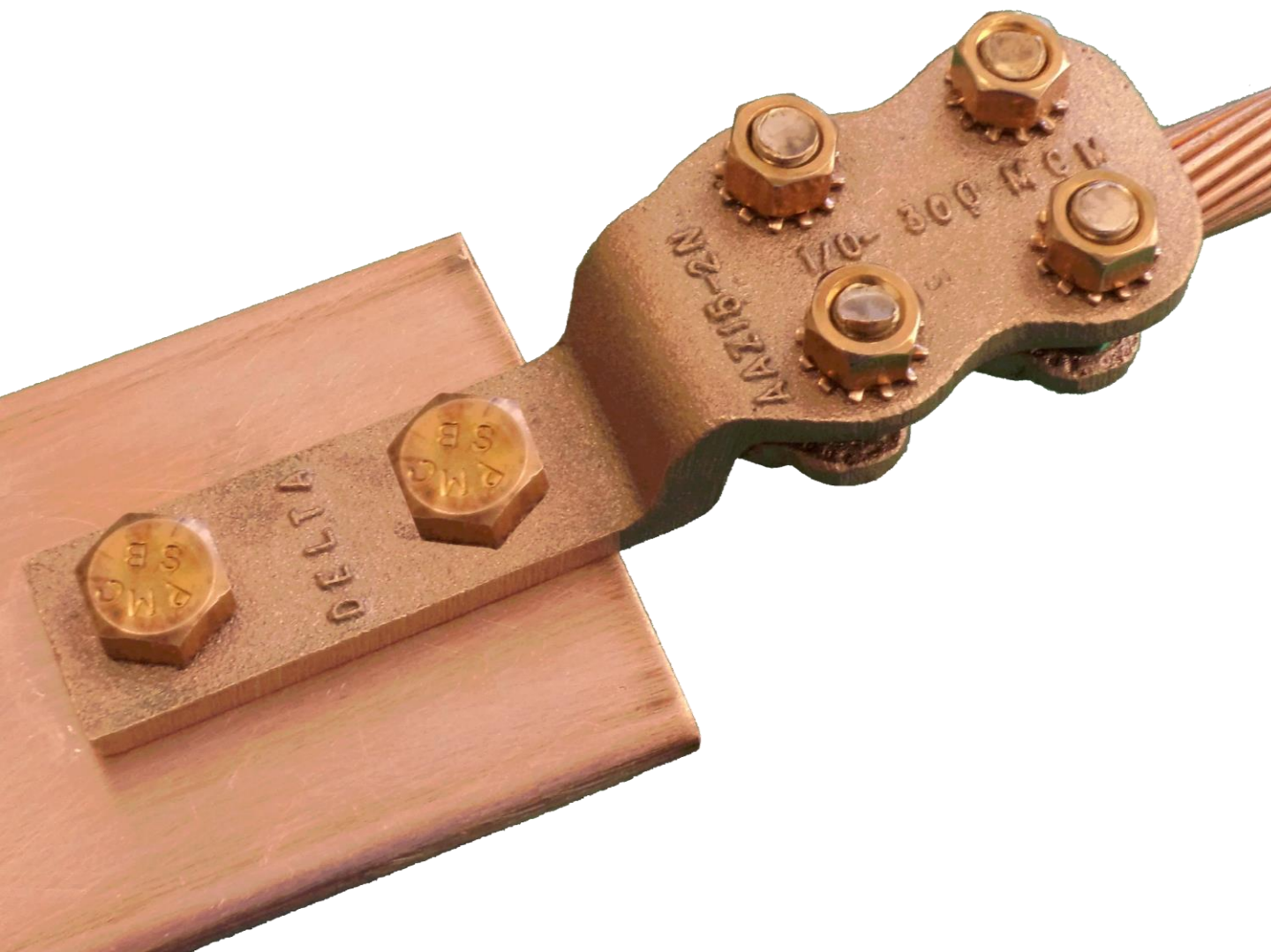
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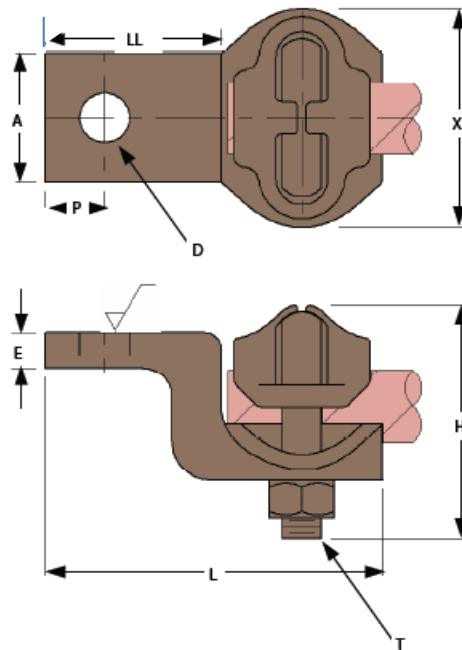




# Terminales Terminals

Terminal para conectar un cable de cobre a superficie plana, salidas de equipo o barra. Se recomienda para conexiones de cable extraflexible. El elemento tipo grapa acepta un amplio rango del conductor. Es fabricado con aleación de cobre.

Copper alloy terminal for connecting copper cable to flat or bus. Recommended for flexible and extra-flexible cable. The clamp element accepts a wide range of conductors.



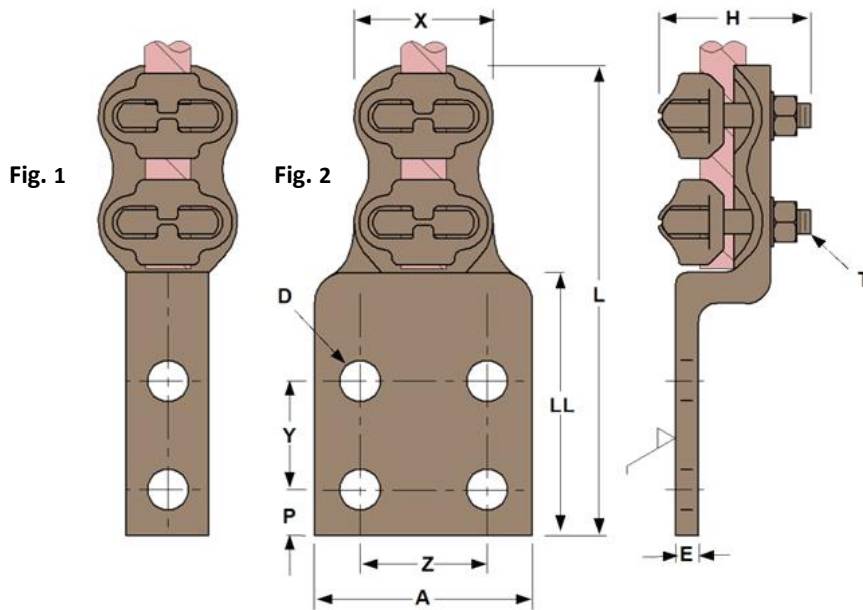
Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor AWG/MCM |                   | Dimensiones en mm / Dimensions in mm |    |    |    |     |    |    |    |    |
|---------------------|-------------------|-------------------|--------------------------------------|----|----|----|-----|----|----|----|----|
|                     | Mínimo<br>Minimum | Máximo<br>Maximum | A                                    | D  | E  | H  | L   | LL | P  | T  | X  |
| AZ10                | 6S (*)            | 1/0T (*)          | 23                                   | 11 | 6  | 40 | 71  | 35 | 11 | 10 | 39 |
| AZ13                | 1/0T (*)          | 4/0T (*)          | 29                                   | 11 | 10 | 47 | 74  | 39 | 13 | 10 | 46 |
| AZ15                | 1/0T (*)          | 300               | 29                                   | 11 | 10 | 49 | 82  | 44 | 16 | 10 | 51 |
| AZ19                | 300               | 500               | 35                                   | 14 | 10 | 55 | 100 | 54 | 21 | 10 | 59 |



Terminal con doble elemento para conectar cable de cobre a superficie plana, salidas de equipo o barra. Recomendado para conexión de cable extraflexible. Con doble elemento tipo grapa para resistir vibraciones y flexiones. Es fabricado de aleación de cobre.

Copper alloy terminal with double clamping elements for connecting copper cable to flat bar or bus. Recommended for connecting flexible and extra flexible cable. The double clamp element is effective against vibration and flexing.



Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Conductor AWG/MCM |                   | Dimensiones en mm / Dimensions in mm |    |    |    |    |     |    |    |    |    |     |
|---------------------|-------------------|-------------------|--------------------------------------|----|----|----|----|-----|----|----|----|----|-----|
|                     | Mínimo<br>Minimum | Máximo<br>Maximum | Fig.                                 | A  | D  | E  | H  | L   | LL | P  | T  | X  | X-Z |
| AAZ13-2N            | 1/0 T (*)         | 4/0 T (*)         | 1                                    | 29 | 14 | 8  | 47 | 156 | 88 | 16 | 10 | 43 | 45  |
| AAZ15-2N            | 1/0 T (*)         | 300               | 1                                    | 29 | 14 | 8  | 53 | 164 | 93 | 16 | 10 | 49 | 45  |
| AAZ15-4N            | 1/0 T (*)         | 300               | 2                                    | 76 | 14 | 8  | 53 | 164 | 93 | 16 | 10 | 49 | 45  |
| AAZ19-2N            | 300               | 500               | 1                                    | 35 | 14 | 10 | 56 | 172 | 94 | 16 | 10 | 57 | 45  |
| AAZ19-4N            | 300               | 500               | 2                                    | 76 | 14 | 10 | 56 | 172 | 94 | 16 | 10 | 57 | 45  |
| AAZ25-2N            | 500               | 800               | 1                                    | 41 | 14 | 10 | 67 | 192 | 94 | 16 | 13 | 69 | 45  |
| AAZ25-4N            | 500               | 800               | 2                                    | 76 | 14 | 10 | 67 | 192 | 94 | 16 | 13 | 69 | 45  |
| AAZ28-2N            | 750               | 1000              | 1                                    | 52 | 14 | 15 | 76 | 198 | 94 | 16 | 13 | 73 | 45  |
| AAZ28-4N            | 750               | 1000              | 2                                    | 76 | 14 | 13 | 76 | 198 | 94 | 16 | 13 | 73 | 45  |

Terminal de aleación de cobre para la conexión de un conductor de cobre a superficie plana o tablero. El elemento de apriete acepta un amplio rango de conductores.

Copper alloy terminal to connect conductors to flat surface or panel. The clamping element accepts a wide range of conductors.

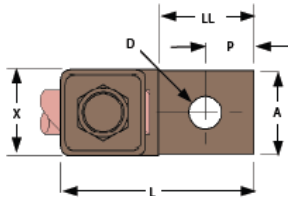


Fig. 1

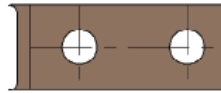


Fig. 2

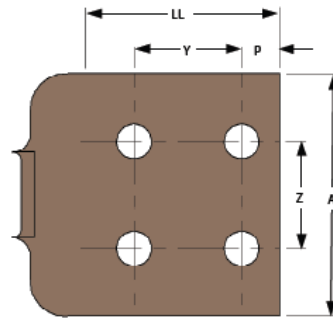
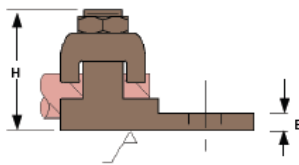


Fig. 3

Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Fig. | Dimensiones en mm/ Dimensions in mm |    |    |    |     |    |    |    |     |
|---------------------|----------------------|------|-------------------------------------|----|----|----|-----|----|----|----|-----|
|                     |                      |      | A                                   | D  | E  | H  | L   | LL | P  | X  | Y-Z |
| CZ8T                | 14S-8T(*)            | 1    | 17                                  | 6  | 4  | 20 | 37  | 15 | 7  | 19 | --- |
| CZ4T                | 6S-4T(*)             | 1    | 17                                  | 7  | 4  | 20 | 37  | 15 | 8  | 19 | --- |
| CZ4T-2              | 6S-4T(*)             | 2    | 17                                  | 7  | 4  | 20 | 54  | 31 | 8  | 19 | 15  |
| CZ1T                | 4T-1T(*)             | 1    | 17                                  | 7  | 6  | 26 | 45  | 18 | 8  | 19 | --- |
| CZ1T-2              | 4T-1T(*)             | 2    | 17                                  | 9  | 6  | 26 | 65  | 38 | 8  | 19 | 21  |
| CZ20                | 1/0T-2/0T(*)         | 1    | 21                                  | 10 | 6  | 30 | 52  | 23 | 11 | 23 | --- |
| CZ20-2              | 1/0T-2/0T(*)         | 2    | 21                                  | 10 | 6  | 30 | 72  | 47 | 11 | 23 | 25  |
| CZ20-2N             | 1/0T-2/0T(*)         | 2    | 25                                  | 14 | 6  | 30 | 107 | 76 | 16 | 23 | 45  |
| CZ20-4N             | 1/0T-2/0T(*)         | 3    | 76                                  | 14 | 6  | 30 | 107 | 76 | 16 | 23 | 45  |
| CZ40                | 3/0T-4/0T(*)         | 1    | 26                                  | 10 | 6  | 37 | 59  | 27 | 11 | 27 | --- |
| CZ40-2              | 3/0T-4/0T(*)         | 2    | 26                                  | 10 | 6  | 37 | 81  | 51 | 11 | 27 | 25  |
| CZ40-2N             | 3/0T-4/0T(*)         | 2    | 26                                  | 14 | 6  | 37 | 110 | 76 | 16 | 27 | 45  |
| CZ40-4N             | 3/0T-4/0T(*)         | 3    | 76                                  | 14 | 6  | 37 | 110 | 76 | 16 | 27 | 45  |
| CZ350               | 250-350              | 1    | 31                                  | 13 | 8  | 42 | 70  | 35 | 17 | 30 | --- |
| CZ350-2             | 250-350              | 2    | 31                                  | 10 | 8  | 42 | 84  | 51 | 11 | 30 | 25  |
| CZ350-2N            | 250-350              | 2    | 31                                  | 14 | 8  | 42 | 114 | 76 | 16 | 30 | 45  |
| CZ350-4N            | 250-350              | 3    | 76                                  | 14 | 8  | 42 | 114 | 76 | 16 | 30 | 45  |
| CZ500               | 400-500              | 1    | 35                                  | 13 | 6  | 49 | 80  | 41 | 21 | 36 | --- |
| CZ500-2             | 400-500              | 2    | 35                                  | 10 | 8  | 49 | 92  | 51 | 11 | 36 | 25  |
| CZ500-2N            | 400-500              | 2    | 35                                  | 14 | 6  | 49 | 121 | 76 | 16 | 36 | 45  |
| CZ500-4             | 400-500              | 3    | 48                                  | 11 | 8  | 49 | 92  | 56 | 13 | 36 | 25  |
| CZ500-4N            | 400-500              | 3    | 76                                  | 14 | 8  | 49 | 121 | 76 | 16 | 36 | 45  |
| CZ800               | 600-800              | 1    | 41                                  | 17 | 9  | 58 | 95  | 47 | 24 | 45 | --- |
| CZ800-2             | 600-800              | 2    | 41                                  | 11 | 9  | 58 | 102 | 54 | 13 | 45 | 29  |
| CZ800-2N            | 600-800              | 2    | 41                                  | 14 | 9  | 58 | 125 | 76 | 16 | 45 | 45  |
| CZ800-4N            | 600-800              | 3    | 76                                  | 14 | 9  | 58 | 125 | 76 | 16 | 45 | 45  |
| CZ1000              | 850-1000             | 1    | 48                                  | 17 | 13 | 63 | 102 | 51 | 25 | 47 | --- |
| CZ1000-4            | 850-1000             | 3    | 54                                  | 11 | 13 | 63 | 108 | 56 | 13 | 47 | 29  |
| CZ1000-4N           | 850-1000             | 3    | 76                                  | 14 | 13 | 63 | 128 | 76 | 16 | 47 | 45  |

Terminal de aleación de cobre para la conexión de uno a dos cables de cobre a superficie plana, salidas de equipo o barras. Los elementos de apriete son independientes y aceptan un amplio rango para cada cable.

Copper alloy terminal to connect one or two conductors to flat surface or flat bar. The two clamping elements are independent from each other and accept a wide range of conductors.

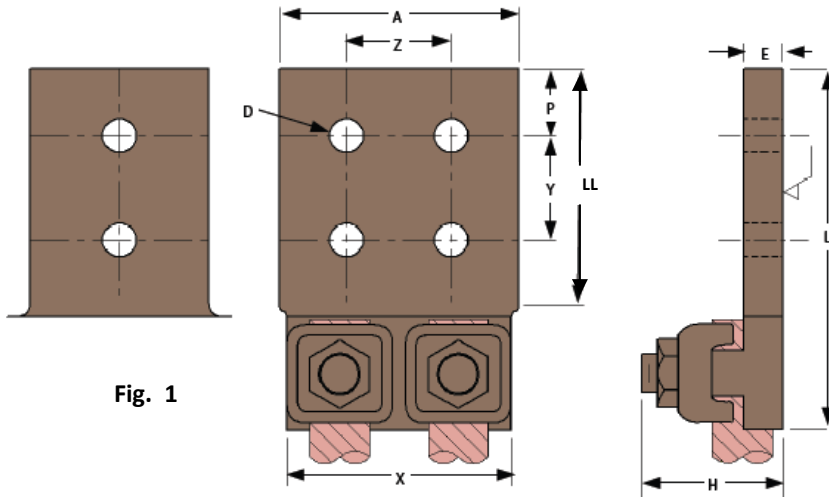


Fig. 1

Fig. 2

Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |    |     |    |    |     |     |
|---------------------|----------------------|------------------|--------------------------------------|----|----|----|-----|----|----|-----|-----|
|                     |                      |                  | A                                    | D  | E  | H  | L   | LL | P  | X   | Y-Z |
| C2Z1T-2             | 4T-1T (*)            | 1                | 39                                   | 11 | 5  | 25 | 76  | 47 | 11 | 40  | 25  |
| C2Z20-2             | 1/0T-2/0T(*)         | 1                | 42                                   | 11 | 5  | 30 | 79  | 51 | 11 | 49  | 25  |
| C2Z20-2N            | 1/0T-2/0T(*)         | 1                | 42                                   | 14 | 6  | 30 | 108 | 79 | 16 | 49  | 45  |
| C2Z20-4N            | 1/0T-2/0T(*)         | 2                | 76                                   | 14 | 6  | 30 | 108 | 79 | 16 | 49  | 45  |
| C2Z40-2N            | 3/0T-4/0T(*)         | 1                | 48                                   | 14 | 6  | 37 | 110 | 79 | 16 | 56  | 45  |
| C2Z40-4N            | 3/0T-4/0T(*)         | 2                | 76                                   | 14 | 6  | 37 | 115 | 79 | 16 | 56  | 45  |
| C2Z350-2N           | 250-350              | 1                | 61                                   | 14 | 8  | 42 | 113 | 79 | 16 | 68  | 45  |
| C2Z350-4            | 250-350              | 2                | 61                                   | 11 | 8  | 42 | 98  | 64 | 13 | 68  | 35  |
| C2Z350-4N           | 250-350              | 2                | 76                                   | 14 | 8  | 42 | 115 | 79 | 16 | 68  | 45  |
| C2Z500-2N           | 400-500              | 1                | 65                                   | 14 | 10 | 49 | 121 | 79 | 16 | 77  | 45  |
| C2Z500-4            | 400-500              | 2                | 65                                   | 14 | 10 | 49 | 106 | 67 | 14 | 77  | 35  |
| C2Z500-4N           | 400-500              | 2                | 76                                   | 14 | 10 | 49 | 121 | 79 | 16 | 77  | 45  |
| C2Z800-2N           | 600-800              | 1                | 76                                   | 14 | 11 | 60 | 127 | 79 | 16 | 98  | 45  |
| C2Z800-4            | 600-800              | 2                | 76                                   | 14 | 11 | 60 | 127 | 79 | 17 | 98  | 41  |
| C2Z800-4N           | 600-800              | 2                | 76                                   | 14 | 12 | 60 | 130 | 79 | 16 | 98  | 45  |
| C2Z1000-2N          | 850-1000             | 1                | 76                                   | 14 | 13 | 63 | 134 | 83 | 16 | 104 | 45  |
| C2Z1000-4N          | 850-1000             | 2                | 82                                   | 14 | 13 | 63 | 134 | 83 | 16 | 104 | 45  |
| C2Z1500-4N          | 1100-1500            | 2                | 90                                   | 14 | 17 | 76 | 147 | 83 | 16 | 120 | 45  |

Terminal de aleación de cobre para la conexión de uno a tres cables de cobre a superficie plana, salida de equipo o barras. Los elementos de apriete permiten un amplio rango del conductor para cada uno de ellos en forma independiente

Copper alloy terminal to connect from one to three conductors to flat surface or flat bar. The clamping element are independent and accept a wide range of conductors.

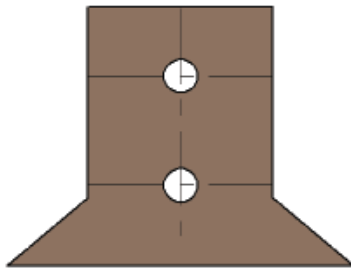


Fig. 1

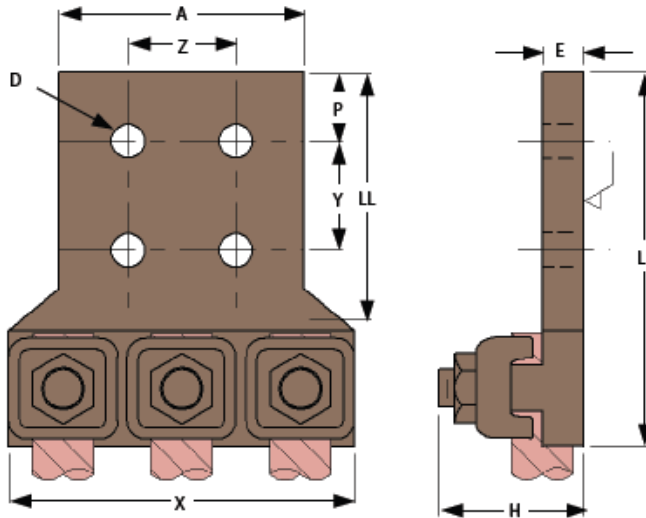


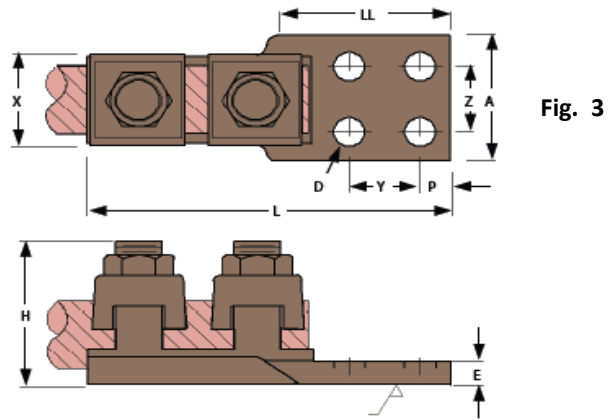
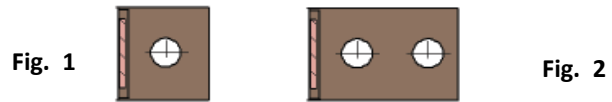
Fig. 2

Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |    |     |    |    |     |     |
|---------------------|----------------------|------------------|--------------------------------------|----|----|----|-----|----|----|-----|-----|
|                     |                      |                  | A                                    | D  | E  | H  | L   | LL | P  | X   | Y-Z |
| C3Z20-2N            | 1/0T-2/0T(*)         | 1                | 41                                   | 14 | 7  | 30 | 110 | 79 | 16 | 76  | 45  |
| C3Z20-4N            | 1/0T-2/0T(*)         | 2                | 76                                   | 14 | 7  | 30 | 106 | 79 | 16 | 76  | 45  |
| C3Z40-2N            | 3/0T-4/0T(*)         | 1                | 48                                   | 14 | 7  | 39 | 113 | 79 | 16 | 85  | 45  |
| C3Z40-4N            | 3/0T-4/0T(*)         | 2                | 76                                   | 14 | 7  | 39 | 113 | 79 | 16 | 85  | 45  |
| C3Z350-2N           | 250-350              | 1                | 54                                   | 14 | 9  | 43 | 113 | 79 | 16 | 105 | 45  |
| C3Z350-4N           | 250-350              | 2                | 76                                   | 14 | 9  | 43 | 113 | 79 | 16 | 105 | 45  |
| C3Z500-2N           | 400-500              | 1                | 65                                   | 14 | 9  | 49 | 121 | 79 | 16 | 118 | 45  |
| C3Z500-4            | 400-500              | 2                | 65                                   | 14 | 9  | 49 | 107 | 67 | 14 | 118 | 45  |
| C3Z500-4N           | 400-500              | 2                | 78                                   | 14 | 9  | 49 | 121 | 79 | 16 | 118 | 45  |
| C3Z800-2N           | 600-800              | 1                | 78                                   | 14 | 12 | 59 | 130 | 79 | 16 | 144 | 45  |
| C3Z800-4N           | 600-800              | 2                | 78                                   | 14 | 12 | 59 | 130 | 79 | 16 | 144 | 45  |
| C3Z1000-4N          | 850-1000             | 2                | 89                                   | 14 | 12 | 63 | 139 | 83 | 16 | 154 | 45  |
| C3Z1500-4N          | 1000-1500            | 2                | 89                                   | 14 | 19 | 76 | 150 | 83 | 16 | 182 | 45  |

Terminal de aleación de cobre para la conexión de un conductor de cobre a superficie plana o tablero. Cuenta con doble elemento de apriete para reforzar la conexión.

Copper alloy terminal to connect one copper conductor to flat surface or panel. It has two clamping elements for a heavy duty connection.



**Note (\*)**  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |    |     |    |    |    |     |
|---------------------|----------------------|------------------|--------------------------------------|----|----|----|-----|----|----|----|-----|
|                     |                      |                  | A                                    | D  | E  | H  | L   | LL | P  | X  | Y-Z |
| CCZ4T               | 6S-4T(*)             | 1                | 16                                   | 7  | 5  | 20 | 59  | 16 | 8  | 19 | --  |
| CCZ4T-2             | 6S-4T(*)             | 2                | 16                                   | 7  | 5  | 20 | 75  | 32 | 9  | 19 | 16  |
| CCZ4T-2N            | 6S-4T(*)             | 2                | 26                                   | 14 | 6  | 22 | 122 | 76 | 16 | 19 | 45  |
| CCZ1T               | 4T-1T(*)             | 1                | 16                                   | 7  | 6  | 25 | 70  | 19 | 9  | 19 | --  |
| CCZ1T-2             | 4T-1T(*)             | 2                | 16                                   | 9  | 6  | 25 | 90  | 38 | 9  | 19 | 21  |
| CCZ1T-2N            | 4T-1T(*)             | 2                | 26                                   | 14 | 7  | 25 | 128 | 76 | 16 | 19 | 45  |
| CCZ20               | 1/0T-2/0T(*)         | 1                | 21                                   | 10 | 6  | 30 | 79  | 22 | 11 | 22 | --  |
| CCZ20-2             | 1/0T-2/0T(*)         | 2                | 21                                   | 10 | 6  | 30 | 104 | 47 | 11 | 22 | 25  |
| CCZ20-2N            | 1/0T-2/0T(*)         | 2                | 28                                   | 14 | 6  | 30 | 133 | 76 | 15 | 22 | 45  |
| CCZ40               | 3/0T-4/0T(*)         | 1                | 25                                   | 10 | 6  | 40 | 90  | 25 | 13 | 28 | --  |
| CCZ40-2             | 3/0T-4/0T(*)         | 2                | 25                                   | 10 | 6  | 40 | 118 | 51 | 11 | 28 | 25  |
| CCZ40-2N            | 3/0T-4/0T(*)         | 2                | 26                                   | 14 | 6  | 40 | 139 | 80 | 16 | 28 | 45  |
| CCZ350              | 250-350              | 1                | 30                                   | 13 | 7  | 43 | 108 | 35 | 17 | 30 | --  |
| CCZ350-2            | 250-350              | 2                | 30                                   | 10 | 7  | 43 | 121 | 51 | 11 | 30 | 25  |
| CCZ350-2N           | 250-350              | 2                | 30                                   | 14 | 7  | 43 | 152 | 80 | 16 | 30 | 45  |
| CCZ350-4N           | 250-350              | 3                | 30                                   | 14 | 8  | 43 | 152 | 80 | 16 | 30 | 45  |
| CCZ500              | 400-500              | 1                | 76                                   | 13 | 7  | 50 | 125 | 41 | 21 | 35 | --  |
| CCZ500-2            | 400-500              | 2                | 35                                   | 14 | 7  | 50 | 133 | 51 | 11 | 35 | 25  |
| CCZ500-2N           | 400-500              | 2                | 35                                   | 14 | 7  | 50 | 164 | 80 | 16 | 35 | 45  |
| CCZ500-4            | 400-500              | 3                | 48                                   | 11 | 7  | 50 | 131 | 56 | 11 | 35 | 25  |
| CCZ500-4N           | 400-500              | 3                | 76                                   | 14 | 7  | 50 | 165 | 79 | 16 | 35 | 45  |
| CCZ800              | 600-800              | 1                | 42                                   | 17 | 9  | 58 | 176 | 47 | 25 | 45 | --  |
| CCZ800-2N           | 600-800              | 2                | 42                                   | 14 | 9  | 58 | 176 | 78 | 16 | 45 | 45  |
| CCZ800-4N           | 600-800              | 3                | 76                                   | 14 | 10 | 58 | 176 | 78 | 16 | 45 | 45  |
| CCZ1000-4N          | 850-1000             | 3                | 76                                   | 14 | 13 | 63 | 180 | 78 | 16 | 47 | 45  |

Terminal tipo bandera de aleación de cobre para la conexión de un conductor de cobre a superficie plana o tablero. El elemento de apriete acepta un amplio rango de conductores.

Copper alloy side entrance terminal to connect one copper conductor to flat surface or panel. The clamping element accepts a wide range of conductors.

Fig. 1

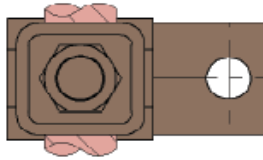
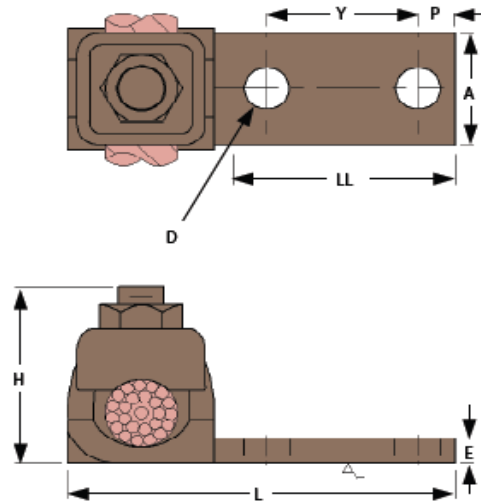


Fig. 2



Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |    |     |    |    |    |
|---------------------|----------------------|------------------|--------------------------------------|----|----|----|-----|----|----|----|
|                     |                      |                  | A                                    | D  | E  | H  | L   | LL | P  | Y  |
| CB8T                | 14S-8T (*)           | 1                | 16                                   | 6  | 4  | 24 | 33  | 18 | 8  | -- |
| CB4T                | 6S-4T(*)             | 1                | 16                                   | 7  | 4  | 24 | 33  | 18 | 8  | -- |
| CB1T                | 4T-1T(*)             | 1                | 16                                   | 7  | 7  | 27 | 40  | 25 | 9  | -- |
| CB20                | 1/0T-2/0T(*)         | 1                | 20                                   | 10 | 6  | 31 | 46  | 25 | 11 | -- |
| CB20-2              | 1/0T-2/0T(*)         | 2                | 20                                   | 10 | 7  | 31 | 72  | 51 | 11 | 25 |
| CB40                | 3/0T-4/0T(*)         | 1                | 26                                   | 14 | 6  | 37 | 55  | 27 | 13 | -- |
| CB40-2              | 3/0T-4/0T(*)         | 2                | 26                                   | 10 | 8  | 37 | 81  | 53 | 11 | 25 |
| CB40-2N             | 3/0T-4/0T(*)         | 2                | 26                                   | 14 | 8  | 37 | 107 | 76 | 16 | 45 |
| CB350               | 250-350              | 1                | 33                                   | 14 | 10 | 43 | 71  | 41 | 17 | -- |
| CB350-2             | 250-350              | 2                | 33                                   | 10 | 8  | 43 | 85  | 53 | 11 | 25 |
| CB350-2N            | 250-350              | 2                | 33                                   | 14 | 8  | 43 | 116 | 76 | 16 | 45 |
| CB500               | 400-500              | 1                | 36                                   | 14 | 8  | 48 | 82  | 46 | 21 | -- |
| CB800               | 600-800              | 1                | 42                                   | 17 | 10 | 58 | 95  | 53 | 24 | -- |
| CB800-2N            | 600-800              | 2                | 42                                   | 14 | 10 | 58 | 118 | 76 | 16 | 45 |



Terminal económica de aleación de cobre para conectar un amplio rango de cable de cobre a superficie plana, salidas de equipo o bloques de terminales. El elemento de apriete es un opresor allen o ranurado de acero zincado, puede surtirse con otro tipo de opresor de acuerdo al requerimiento del cliente.

Cost effective terminal of cooper alloy to connect a wide range of cable or wire to flat surface or terminal blocks. The standard grip element consist of a galvanized steel allen screw socket. Different material and or plated finishing can be supplied on special requirements.

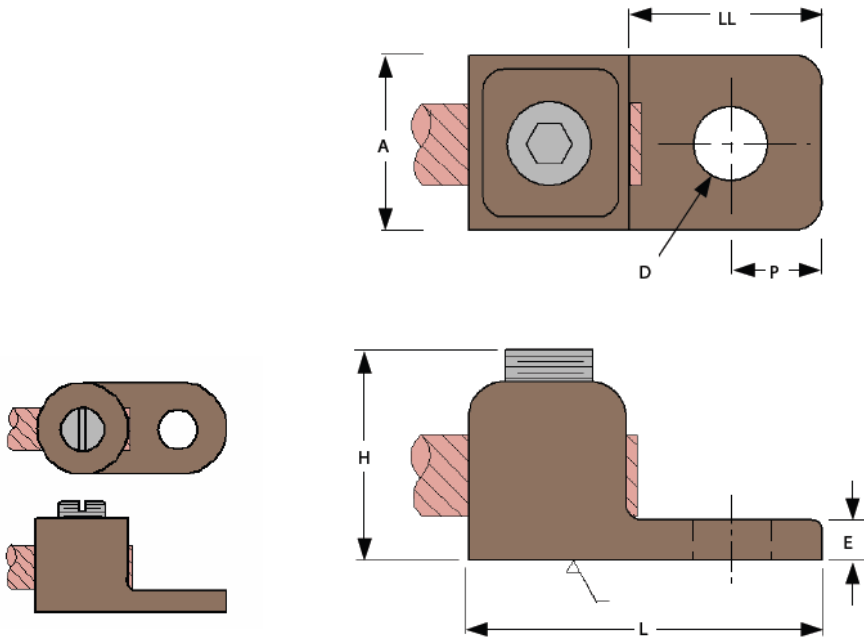


Fig. 1

Fig. 2

Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |   |    |    |    |    |
|---------------------|----------------------|------------------|--------------------------------------|----|---|----|----|----|----|
|                     |                      |                  | A                                    | D  | E | H  | L  | LL | P  |
| LZ4T                | 14S-4T(*)            | 1                | 14                                   | 7  | 4 | 19 | 29 | 14 | 7  |
| LZ10                | 4T-1/0T(*)           | 2                | 19                                   | 11 | 5 | 22 | 40 | 22 | 10 |
| LZ250               | 4T-250(*)            | 2                | 24                                   | 11 | 5 | 32 | 48 | 24 | 11 |
| LZ500               | 4/0T-500(*)          | 2                | 36                                   | 14 | 8 | 45 | 64 | 29 | 14 |
| LZ800               | 250-800              | 2                | 41                                   | 14 | 9 | 57 | 84 | 44 | 19 |

Terminal tipo subestación para unir tubo de cobre a superficie plana, es fabricado con aleación de cobre y lleva tornillería de bronce que garantiza una unión confiable. Bajo requerimiento puede ser surtido con recubrimiento de estaño, para indicar esto, en el final del catálogo se le agrega "- E "

Copper alloy substation terminal to connect copper tube to flat surface. Silicon bronze hardware assures a reliable and dependability connection of the tube. For tin plated add "- E " suffix to the catalog number.

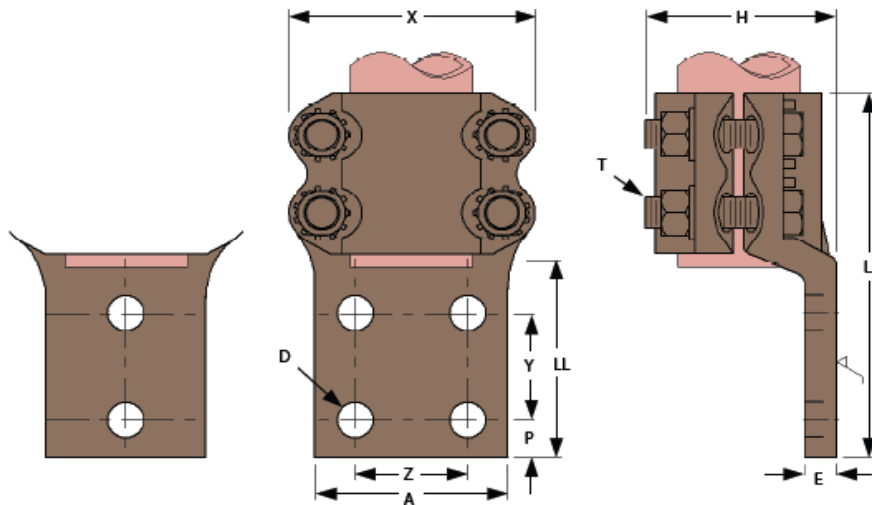


Fig. 1

Fig. 2

| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |     |     |    |    |    |     |     |
|---------------------|---------------------|------------------|--------------------------------------|----|----|-----|-----|----|----|----|-----|-----|
|                     |                     |                  | A                                    | D  | E  | H   | L   | LL | P  | T  | X   | Y-Z |
| HZ37-2N             | 19(3/4")            | 1                | 42                                   | 14 | 10 | 46  | 133 | 76 | 16 | 10 | 63  | 44  |
| HZ37-4N             | 19(3/4")            | 2                | 76                                   | 14 | 10 | 46  | 133 | 76 | 16 | 10 | 63  | 44  |
| HZ38-2N             | 25(1")              | 1                | 48                                   | 14 | 10 | 48  | 139 | 76 | 16 | 10 | 73  | 44  |
| HZ38-4N             | 25(1")              | 2                | 76                                   | 14 | 10 | 48  | 139 | 76 | 16 | 10 | 73  | 44  |
| HZ39-2N             | 32(1 1/4")          | 1                | 56                                   | 14 | 13 | 62  | 156 | 76 | 16 | 13 | 92  | 44  |
| HZ39-4N             | 32(1 1/4")          | 2                | 76                                   | 14 | 13 | 62  | 156 | 76 | 16 | 13 | 92  | 44  |
| HZ40-2N             | 38(1 1/2")          | 1                | 63                                   | 14 | 13 | 69  | 151 | 76 | 16 | 13 | 96  | 44  |
| HZ40-4N             | 38(1 1/2")          | 2                | 76                                   | 14 | 13 | 69  | 151 | 76 | 16 | 13 | 96  | 44  |
| HZ41-2N             | 51(2")              | 1                | 78                                   | 14 | 13 | 69  | 152 | 76 | 16 | 13 | 119 | 44  |
| HZ41-4N             | 51(2")              | 2                | 78                                   | 14 | 13 | 69  | 152 | 76 | 16 | 13 | 119 | 44  |
| HZ42-2N             | 64(2 1/2")          | 1                | 78                                   | 14 | 16 | 93  | 152 | 76 | 16 | 13 | 137 | 44  |
| HZ42-4N             | 64(2 1/2")          | 2                | 97                                   | 14 | 16 | 93  | 152 | 76 | 16 | 13 | 137 | 44  |
| HZ43-4N             | 76(3")              | 2                | 114                                  | 14 | 18 | 110 | 167 | 76 | 16 | 16 | 158 | 44  |
| HZ44-4N             | 89(3 1/2")          | 2                | 114                                  | 14 | 22 | 130 | 165 | 76 | 16 | 16 | 175 | 44  |
| HZ45-4N             | 102(4")             | 2                | 127                                  | 14 | 22 | 143 | 184 | 76 | 16 | 16 | 188 | 44  |

Terminal tipo subestación de aleación de aluminio para conectar tubo a una superficie plana, puede utilizarse para conexión aluminio aluminio o aluminio cobre. Es surtida con tornillería de acero galvanizado (zincada). Al hacer la instalación se recomienda aplicar la pasta antioxidante "Deltatron" para obtener una buena conexión.

Aluminum alloy substation connector to connect aluminum tube to a flat surface. This connector can be used as bimetallic for the joint of aluminum tube and termination to copper by applying an oxid inhibitor paste "Deltatron" as anti-oxidation to prevent galvanic corrosion. This terminal is assembled with galvanized steel bolts.

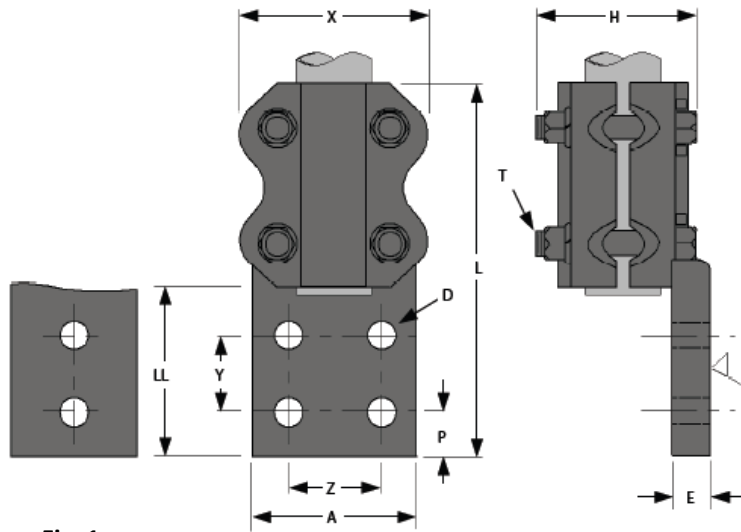


Fig. 1

Fig. 2

| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |     |     |    |    |    |     |     |
|---------------------|---------------------|------------------|--------------------------------------|----|----|-----|-----|----|----|----|-----|-----|
|                     |                     |                  | A                                    | D  | E  | H   | L   | LL | P  | T  | X   | Y-Z |
| HZ37A-2N            | 19(3/4")            | 1                | 41                                   | 14 | 10 | 79  | 165 | 76 | 16 | 13 | 71  | 44  |
| HZ37A-4N            | 19(3/4")            | 2                | 76                                   | 14 | 10 | 79  | 165 | 76 | 16 | 13 | 71  | 44  |
| HZ38A-2N            | 25(1")              | 1                | 48                                   | 14 | 13 | 87  | 173 | 76 | 16 | 13 | 78  | 44  |
| HZ38A-4N            | 25(1")              | 2                | 76                                   | 14 | 13 | 87  | 173 | 76 | 16 | 13 | 78  | 44  |
| HZ39A-2N            | 32(1 1/4")          | 1                | 57                                   | 14 | 13 | 73  | 178 | 76 | 16 | 13 | 85  | 44  |
| HZ39A-4N            | 32(1 1/4")          | 2                | 76                                   | 14 | 13 | 73  | 178 | 76 | 16 | 13 | 85  | 44  |
| HZ40A-2N            | 38(1 1/2")          | 1                | 64                                   | 14 | 13 | 99  | 191 | 76 | 16 | 13 | 97  | 44  |
| HZ40A-4N            | 38(1 1/2")          | 2                | 76                                   | 14 | 13 | 99  | 191 | 76 | 16 | 13 | 97  | 44  |
| HZ41A-2N            | 51(2")              | 1                | 70                                   | 14 | 13 | 113 | 197 | 76 | 16 | 16 | 117 | 44  |
| HZ41A-4N            | 51(2")              | 2                | 79                                   | 14 | 18 | 113 | 197 | 76 | 16 | 16 | 117 | 44  |
| HZ42A-4N            | 64(2 1/2")          | 2                | 95                                   | 14 | 18 | 126 | 197 | 76 | 16 | 16 | 125 | 44  |
| HZ43A-4N            | 76(3")              | 2                | 95                                   | 14 | 18 | 138 | 206 | 76 | 16 | 16 | 140 | 44  |
| HZ44A-4N            | 89(3 1/2")          | 2                | 95                                   | 14 | 18 | 138 | 222 | 76 | 16 | 16 | 156 | 44  |
| HZ45A-4N            | 102(4")             | 2                | 95                                   | 14 | 19 | 151 | 243 | 76 | 16 | 16 | 168 | 44  |

Terminal tipo subestación de aleación de cobre que puede conectar cable de cobre a superficie plana, salida de equipo o barra. El elemento del cable ofrece una conexión muy firme y tiene capacidad para un amplio rango del calibre. Para otras dimensiones o posición de lengüeta consúltenos.

Copper alloy substation terminal to connect copper cable to flat surface or flat bar. According to its structure, this terminal accommodates a large range of conductors. It is assembled with silicon bronze bolts to assure reliable contact pressure. It can be supplied with different tongue angles and different holes upon request.

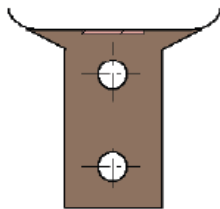


Fig. 1

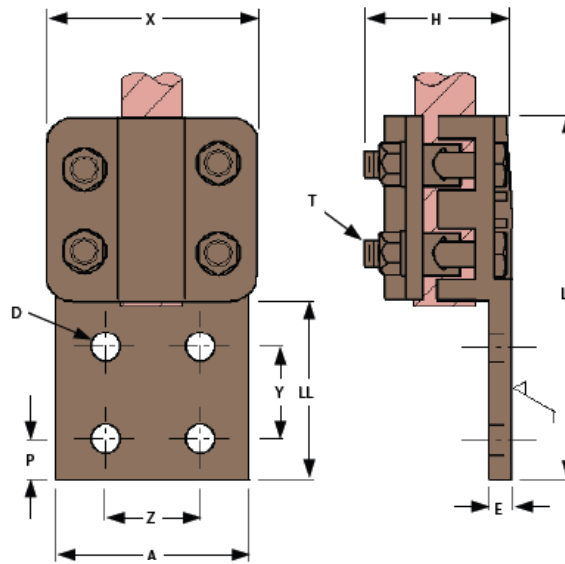


Fig. 2

Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Figura<br>Figure | Dimensiones en mm / Dimensions in mm |    |    |    |     |    |    |    |    |     |
|---------------------|----------------------|------------------|--------------------------------------|----|----|----|-----|----|----|----|----|-----|
|                     |                      |                  | A                                    | D  | E  | H  | L   | LL | P  | T  | X  | Y-Z |
| HZR10-2N            | 4S-1/OT (*)          | 1                | 32                                   | 14 | 8  | 40 | 142 | 76 | 16 | 10 | 45 | 44  |
| HZR10-4N            | 4S-1/OT(*)           | 2                | 76                                   | 14 | 8  | 40 | 142 | 76 | 16 | 10 | 45 | 44  |
| HZR13-2N            | 2/OS-4/OT(*)         | 1                | 32                                   | 14 | 8  | 44 | 148 | 76 | 16 | 10 | 49 | 44  |
| HZR13-4N            | 2/OS-4/OT(*)         | 2                | 76                                   | 14 | 8  | 44 | 148 | 76 | 16 | 10 | 49 | 44  |
| HZR19-2N            | 250-500              | 1                | 43                                   | 14 | 10 | 58 | 150 | 76 | 16 | 10 | 58 | 44  |
| HZR19-4N            | 250-500              | 2                | 76                                   | 14 | 10 | 58 | 150 | 76 | 16 | 10 | 58 | 44  |
| HZR25-2N            | 500-800              | 1                | 43                                   | 14 | 13 | 61 | 149 | 76 | 16 | 10 | 63 | 44  |
| HZR25-4N            | 500-800              | 2                | 76                                   | 14 | 13 | 61 | 155 | 76 | 16 | 10 | 63 | 44  |
| HZR28-2N            | 750-1000             | 1                | 51                                   | 14 | 13 | 62 | 159 | 76 | 16 | 13 | 78 | 44  |
| HZR28-4N            | 750-1000             | 2                | 76                                   | 14 | 13 | 62 | 159 | 76 | 16 | 13 | 78 | 44  |
| HZR30-2N            | 1000-1500            | 1                | 70                                   | 14 | 13 | 72 | 165 | 76 | 16 | 13 | 84 | 44  |
| HZR30-4N            | 1000-1500            | 2                | 76                                   | 14 | 13 | 72 | 165 | 76 | 16 | 13 | 84 | 44  |

Terminal tipo subestación de aleación de aluminio que conecta cable a una superficie plana, salida de equipo o barra. Puede utilizarse para conexiones de aluminio aluminio o aluminio cobre. El diseño del elemento del cable permite obtener un buen contacto de superficie con el cable, evita el degollamiento del cable en la embocadura y ofrece un amplio rango del calibre. Al hacer la instalación es recomendable la aplicación de la pasta antioxidante "Deltatron" para una mejor conexión.

Aluminum alloy substation terminal to connect cable to flat surface or flat bar. It can be used as bimetallic for the joint of aluminum cable and termination to copper by applying an oxid inhibitor "Deltatron" to prevent galvanic corrosion. This terminal is assembled with galvanized steel bolts. This terminal accommodates a large range of conductors sizes.

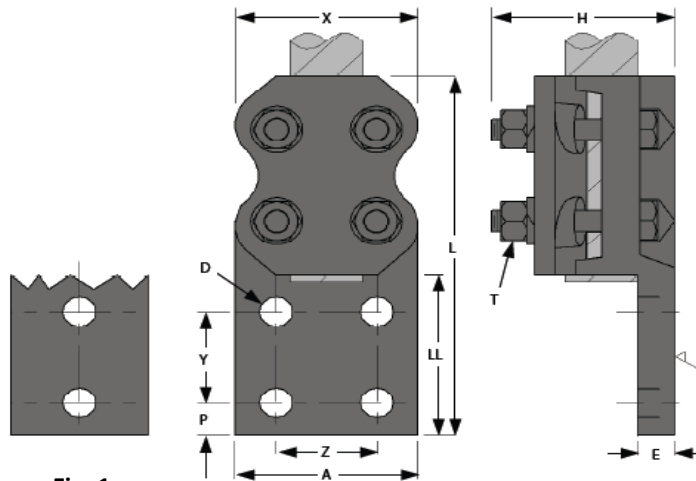
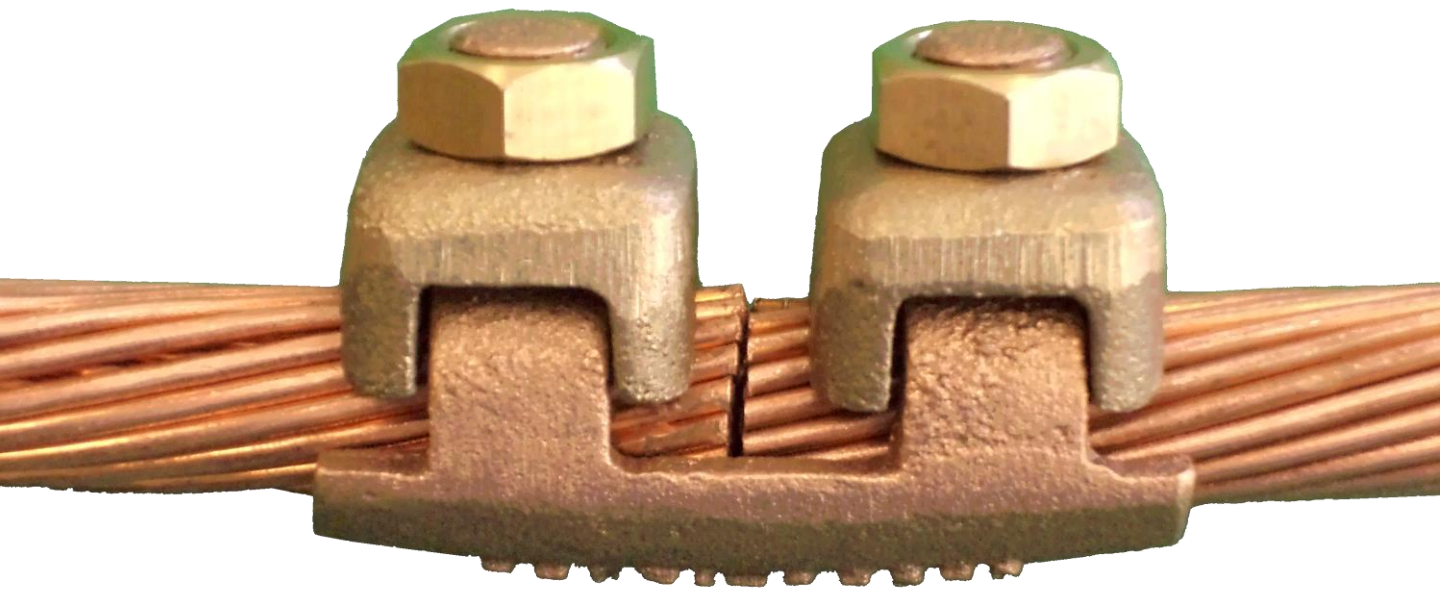


Fig. 1

Fig. 2

Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Conductor AWG/MCM    |                         | Dimensiones en mm / Dimensions in mm |    |    |    |    |     |    |    |    |    |     |
|---------------------|----------------------|-------------------------|--------------------------------------|----|----|----|----|-----|----|----|----|----|-----|
|                     | Aluminio<br>Aluminum | ACSR                    | Fig.                                 | A  | D  | E  | H  | L   | LL | P  | T  | X  | Y-Z |
| HZR14A-2N           | 1/0T-250 (*)         | 1/0(6/1)-4/0(6/1)       | 1                                    | 42 | 14 | 9  | 58 | 150 | 76 | 16 | 13 | 63 | 44  |
| HZR14A-4N           | 1/0T-250(*)          | 1/0(6/1)-4/0(6/1)       | 2                                    | 76 | 14 | 9  | 58 | 150 | 76 | 16 | 13 | 63 | 44  |
| HZR17A-2N           | 250-400              | 4/0(6/1)-397(18/1)      | 1                                    | 45 | 14 | 11 | 71 | 160 | 76 | 16 | 13 | 67 | 44  |
| HZR17A-4N           | 250-400              | 4/0(6/1)-397(18/1)      | 2                                    | 76 | 14 | 11 | 71 | 160 | 76 | 16 | 13 | 67 | 44  |
| HZR21A-2N           | 350-600              | 336(18/1)-477(30/7)     | 1                                    | 45 | 14 | 11 | 71 | 163 | 76 | 16 | 13 | 70 | 44  |
| HZR21A-4N           | 350-600              | 336(18/1)-477(30/7)     | 2                                    | 76 | 14 | 11 | 71 | 163 | 76 | 16 | 13 | 70 | 44  |
| HZR27A-2N           | 600-900              | 477(30/7)-795(54/7)     | 1                                    | 51 | 14 | 13 | 80 | 171 | 76 | 16 | 13 | 76 | 44  |
| HZR27A-4N           | 600-900              | 477(30/7)-795(54/7)     | 2                                    | 76 | 14 | 13 | 80 | 171 | 76 | 16 | 13 | 76 | 44  |
| HZR29A-2N           | 900-1250             | 715(30/19)-1113(54/19)  | 1                                    | 67 | 14 | 13 | 92 | 175 | 76 | 16 | 13 | 81 | 44  |
| HZR29A-4N           | 900-1250             | 715(30/19)-1113(54/19)  | 2                                    | 78 | 14 | 13 | 92 | 175 | 76 | 16 | 13 | 81 | 44  |
| HZR30A-2N           | 1250-1600            | 1113(54/19)-1431(54/7)  | 1                                    | 78 | 14 | 16 | 93 | 203 | 76 | 16 | 16 | 94 | 44  |
| HZR30A-4N           | 1250-1600            | 1113(54/19)-1431(54/7)  | 2                                    | 78 | 14 | 16 | 93 | 203 | 76 | 16 | 16 | 94 | 44  |
| HZR32A-2N           | 1500-2000            | 1272(54/19)-1780(84/19) | 1                                    | 78 | 14 | 18 | 99 | 209 | 76 | 16 | 16 | 97 | 44  |
| HZR32A-4N           | 1500-2000            | 1272(54/19)-1780(84/19) | 2                                    | 78 | 14 | 18 | 99 | 209 | 76 | 16 | 16 | 97 | 44  |

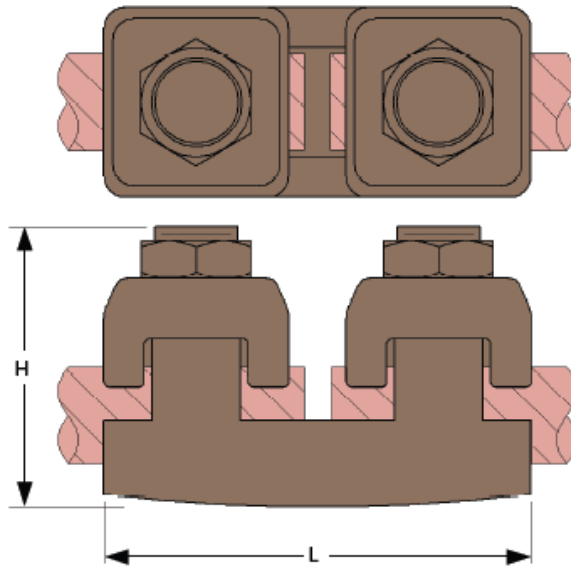


# Empalmes Couplers



Conector de aleación de cobre para conectar en empalme dos conductores de cobre. El elemento de apriete acepta un amplio rango de conductores.

Copper alloy coupler connector for connecting two copper cables sizes. Sizes using one size wrench.

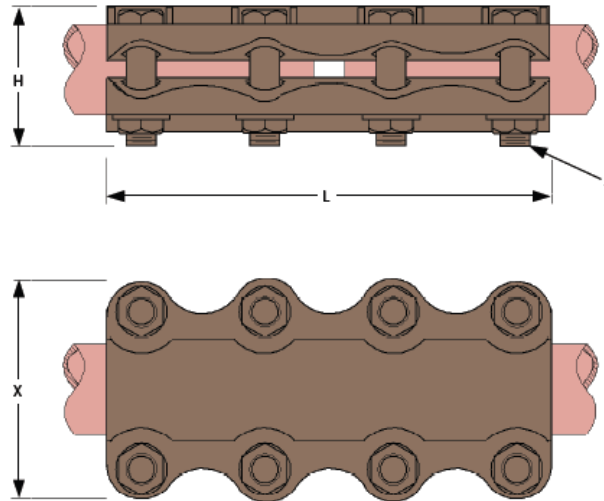


**Note (\*)**  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG/MCM | Dimensiones en mm<br>Dimensions in mm |    |
|---------------------|----------------------|---------------------------------------|----|
|                     |                      | H                                     | L  |
| CE8T                | 14S-8T (*)           | 21                                    | 44 |
| CE4T                | 6S-4T(*)             | 21                                    | 44 |
| CE1T                | 4T-1T(*)             | 27                                    | 49 |
| CE20                | 1/0T-2/0T(*)         | 32                                    | 54 |
| CE40                | 3/0T-4/0T(*)         | 40                                    | 62 |
| CE350               | 250-350              | 45                                    | 69 |
| CE500               | 400-500              | 55                                    | 79 |
| CE800               | 600-800              | 65                                    | 89 |
| CE1000              | 850-1000             | 68                                    | 99 |

Conector tipo subestación de aleación de cobre para unir dos tubos de cobre del mismo diámetro. El diseño ofrece una conexión firme y confiable de muy baja resistencia eléctrica.

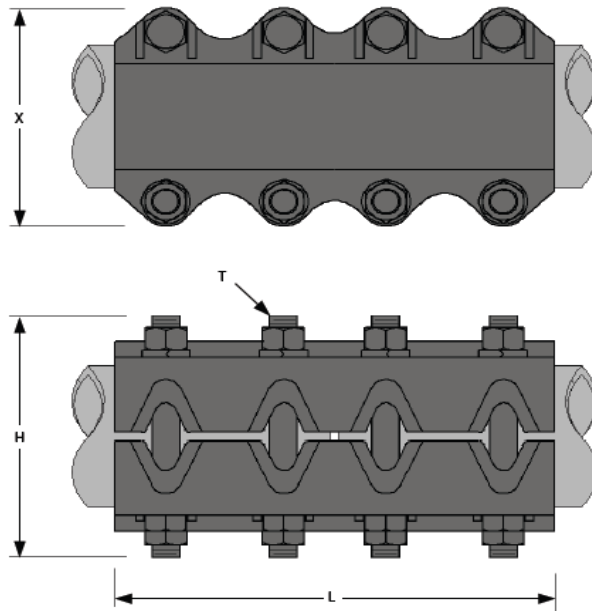
Copper alloy substation connector used to join two copper tubular buses of the same diameter . Assembled with silicone bronze bolts to assure a reliable connection with low electrical resistance.



| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Dimensiones en mm<br>Dimensions in mm |     |    |     |
|---------------------|---------------------|---------------------------------------|-----|----|-----|
|                     |                     | H                                     | L   | T  | X   |
| HE3434              | 6.4(1/4'')          | 39                                    | 77  | 10 | 54  |
| HE3636              | 13(1/2'')           | 43                                    | 102 | 10 | 60  |
| HE3737              | 19(3/4'')           | 45                                    | 108 | 10 | 63  |
| HE3838              | 25(1'')             | 48                                    | 108 | 10 | 73  |
| HE3939              | 32(1 1/4'')         | 66                                    | 149 | 13 | 91  |
| HE4040              | 38(1 1/2'')         | 67                                    | 145 | 13 | 99  |
| HE4141              | 51(2'')             | 77                                    | 145 | 13 | 119 |
| HE4242              | 54(2 1/2'')         | 94                                    | 145 | 13 | 134 |
| HE4343              | 76(3'')             | 110                                   | 183 | 16 | 156 |
| HE4444              | 89(3 1/2'')         | 126                                   | 183 | 16 | 175 |
| HE4545              | 102(4'')            | 143                                   | 216 | 16 | 188 |
| HE4646              | 114(4 1/2'')        | 152                                   | 223 | 16 | 203 |

Conector tipo subestación de aleación de aluminio para conectar dos tubos iguales. Su construcción especial permite el uso de combinaciones de aluminio aluminio o aluminio cobre. Es recomendable utilizar pasta antioxidante "Deltatron" en las uniones.

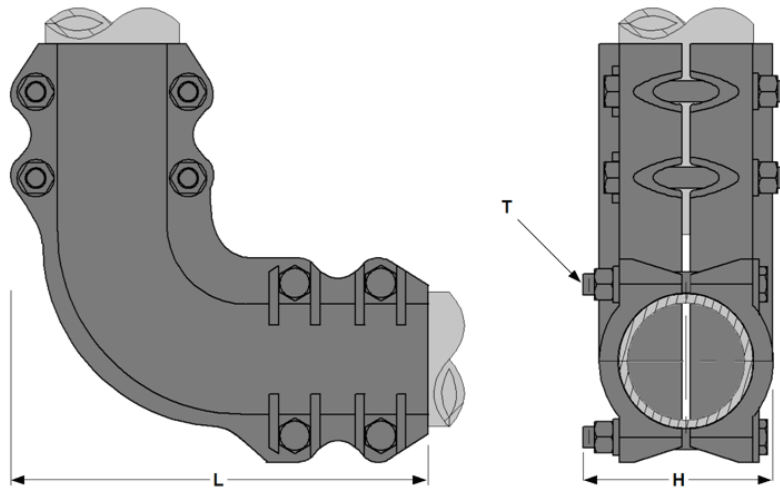
Aluminum alloy substation connector to join two tubular buses of the same diameter. This connector may be used to couple copper and aluminum tubes by using an inhibitor paste "Deltatron" as anti-oxidation to prevent galvanic corrosion. It is assembled with galvanized steel bolts.



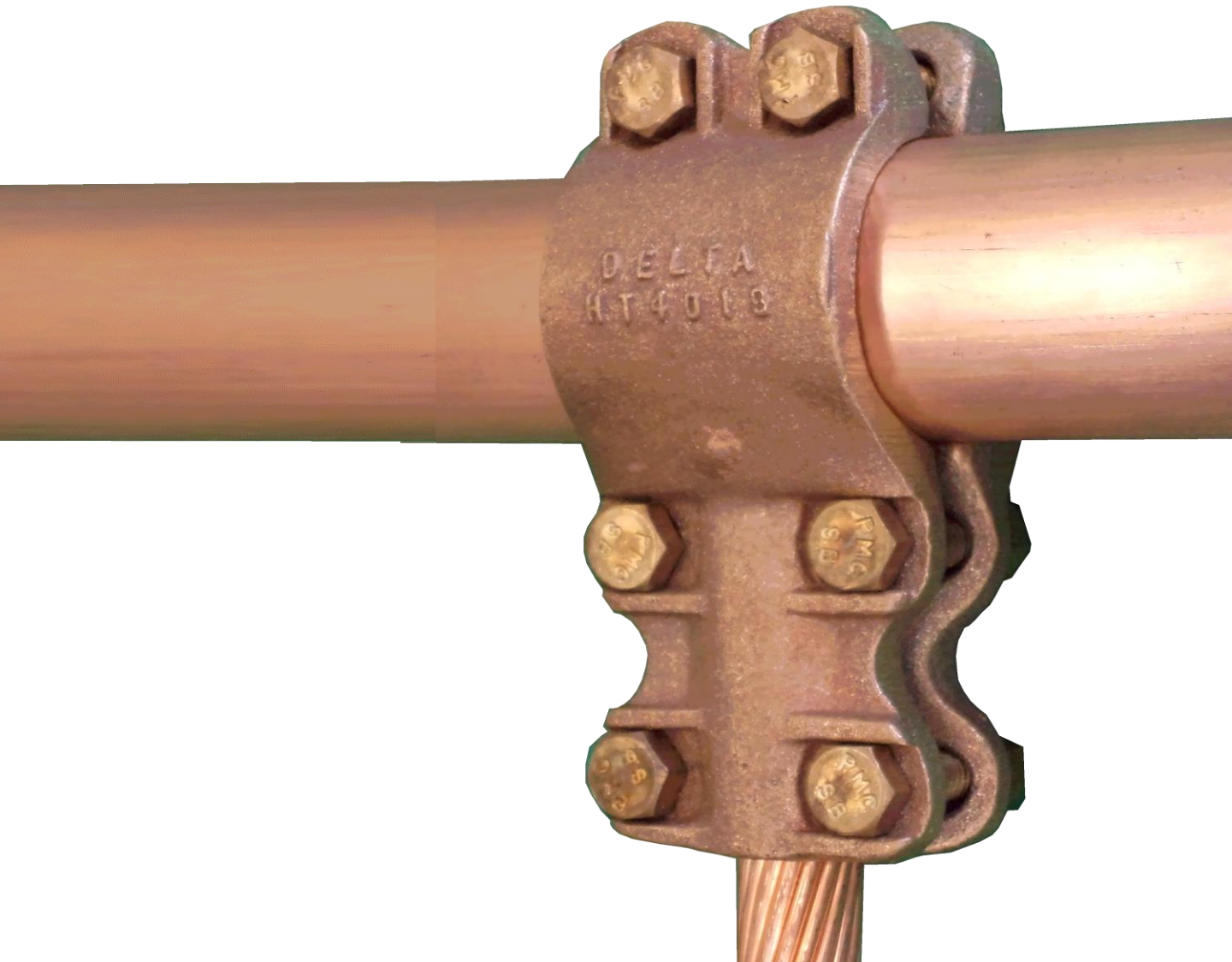
| Catálogo<br>Catalog | Tubo<br>Tube | Dimensiones en mm<br>Dimensions in mm |     |    |     |
|---------------------|--------------|---------------------------------------|-----|----|-----|
|                     |              | H                                     | L   | T  | X   |
| HE36A36A            | 13(1/2'')    | 78                                    | 159 | 13 | 66  |
| HE37A37A            | 19(3/4'')    | 97                                    | 174 | 13 | 71  |
| HE38A38A            | 25(1'')      | 97                                    | 184 | 13 | 78  |
| HE39A39A            | 32(1 1/4'')  | 82                                    | 197 | 13 | 87  |
| HE40A40A            | 38(1 1/2'')  | 105                                   | 215 | 13 | 96  |
| HE41A41A            | 51(2'')      | 127                                   | 228 | 16 | 115 |
| HE42A42A            | 64(2 1/2'')  | 148                                   | 239 | 16 | 127 |
| HE43A43A            | 76(3'')      | 160                                   | 253 | 16 | 138 |
| HE44A44A            | 89(3 1/2'')  | 150                                   | 287 | 16 | 156 |
| HE45A45A            | 102(4'')     | 165                                   | 311 | 16 | 170 |

Conector tipo subestación de aleación de aluminio en forma de "L" para cambiar la dirección de un bus tubular en 90°. Puede utilizarse en conexiones de aluminio-aluminio o aluminio-cobre. La presión ejercida sobre los buses ofrece una conexión muy confiable y de muy baja resistencia eléctrica. Consúltenos para otros ángulos.

Aluminum alloy elbow substation connector for changing the direction of the tubular bus by 90°. It may be applied in connections of aluminum to aluminum buses or aluminum to copper buses. The pressure areas on the buses insure reliable and low electrical resistance. It may be supplied by different angles upon request.



| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Dimensiones en mm<br>Dimensions in mm |     |    |
|---------------------|---------------------|---------------------------------------|-----|----|
|                     |                     | H                                     | L   | T  |
| HL37A37A            | 19(3/4")            | 84                                    | 150 | 13 |
| HL38A38A            | 25(1")              | 84                                    | 167 | 13 |
| HL39A39A            | 32(1 1/4")          | 75                                    | 180 | 13 |
| HL40A40A            | 38(1 1/2")          | 96                                    | 195 | 13 |
| HL41A41A            | 51(2")              | 112                                   | 230 | 16 |
| HL42A42A            | 64(2 1/2")          | 122                                   | 247 | 16 |
| HL43A43A            | 76(3")              | 138                                   | 264 | 16 |
| HL44A44A            | 89(3 1/2")          | 142                                   | 296 | 16 |
| HL45A45A            | 102(4")             | 157                                   | 324 | 16 |

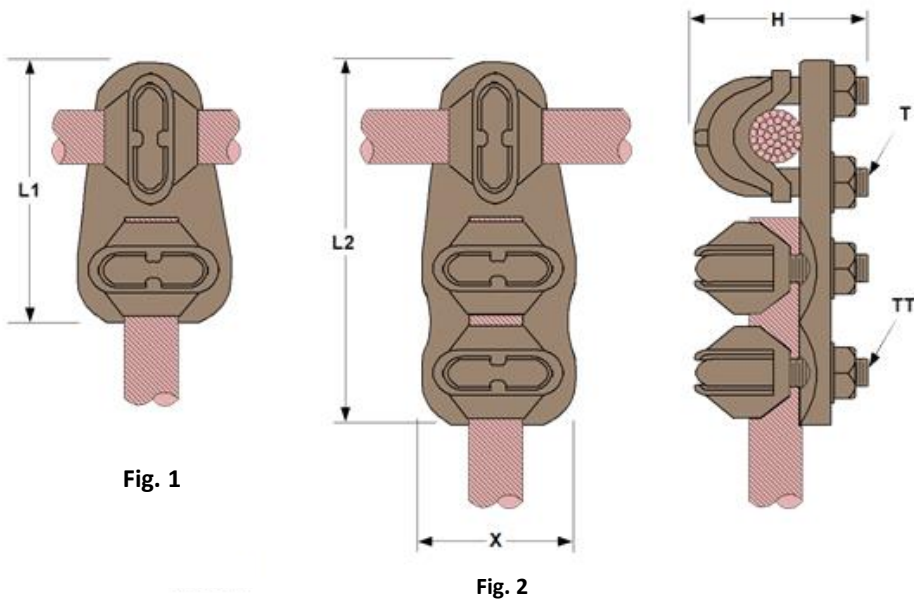


# Derivadores en T

## T Connectors

Conector de aleación de cobre en " T " para unir un cable de cobre en el principal y en la derivación. Se usan elementos tipo grapa que aceptan un amplio rango de cables. Se recomienda donde la conexión esta sujeta a vibración. El tipo ATT utiliza doble elemento de apriete en la derivación para reforzar la conexión.

" T " Copper alloy connector to join copper cable in the run and the tap. It accommodates a wide range of conductor sizes by means of its clamp caps that do not damage the cable strands. Recommended for use on flexible cables subjected to strain or vibration. The AAT connector uses double clamping element to grip the tap and reinforce the connection.



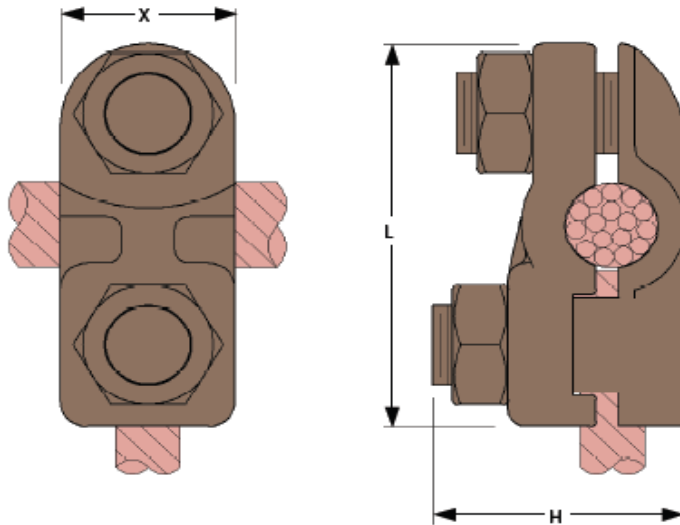
**Note (\*)**  
S - Solid  
T - Stranded

| Catálogo<br>Catalog  |                      | Conductor AWG/MCM |                   | Dimensiones en mm<br>Dimensions in mm |     |     |    |    |    |
|----------------------|----------------------|-------------------|-------------------|---------------------------------------|-----|-----|----|----|----|
| Figura 1<br>Figure 1 | Figura 2<br>Figure 2 | Principal<br>Run  | Derivación<br>Tap | H                                     | L1  | L2  | T  | TT | X  |
| AT1010               | ATT1010              | 6S-1/0T(*)        | 6S-1/0T(*)        | 40                                    | 70  | 100 | 10 | 10 | 39 |
| AT1313               | ATT1313              | 1/0T-4/0T (*)     | 1/0T-4/0T(*)      | 47                                    | 80  | 112 | 10 | 10 | 45 |
| AT1513               | ATT1513              | 1/0T-300(*)       | 1/0-4/0T(*)       | 51                                    | 85  | 115 | 10 | 10 | 45 |
| AT1515               | ATT1515              | 1/0T-300(*)       | 1/0T-300(*)       | 51                                    | 85  | 118 | 10 | 10 | 50 |
| AT1913               | ATT1913              | 300-500           | 1/0 T-4/0T(*)     | 56                                    | 90  | 124 | 10 | 10 | 45 |
| AT1915               | ATT1915              | 300-500           | 1/0T-300(*)       | 56                                    | 91  | 126 | 10 | 10 | 50 |
| AT1919               | ATT1919              | 300-500           | 300-500           | 56                                    | 97  | 135 | 10 | 10 | 58 |
| AT2515               | ATT2515              | 500-800           | 1/0T-300(*)       | 67                                    | 103 | 140 | 13 | 10 | 50 |
| AT2519               | ATT2519              | 500-800           | 300-500           | 67                                    | 110 | 153 | 13 | 10 | 58 |
| AT2525               | ATT2525              | 500-800           | 500-800           | 67                                    | 119 | 167 | 13 | 13 | 69 |
| AT2815               | ATT2815              | 750-1000          | 1/0T-300(*)       | 81                                    | 109 | 144 | 13 | 10 | 50 |
| AT2819               | ATT2819              | 750-1000          | 300-500           | 81                                    | 119 | 154 | 13 | 10 | 58 |
| AT2828               | ATT2828              | 750-1000          | 750-1000          | 81                                    | 133 | 178 | 13 | 13 | 74 |



Conector de aleación de cobre para derivar en " T " con cables de cobre. Es un conector compacto de rápida instalación, ya que solo se emplean dos tuercas para el apriete completo. No acepta rango de cables ya que se fabrica para calibre específico.

Compact " T " Copper alloy connector for copper cables. Easy and quick installation by simple gripping the conductor by means of two nuts.

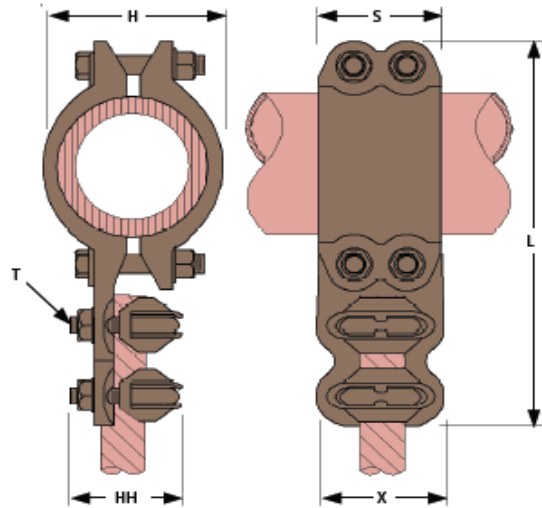


Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Conductor AWG/MCM |                   | Dimensiones en mm<br>Dimensions in mm |     |    |
|---------------------|-------------------|-------------------|---------------------------------------|-----|----|
|                     | Principal<br>Run  | Derivación<br>Tap | H                                     | L   | X  |
| CT2T8T              | 2T (*)            | 8T(*)             | 33                                    | 50  | 19 |
| CT1T1T              | 1T(*)             | 1T(*)             | 28                                    | 56  | 21 |
| CT101T              | 1/0T(*)           | 1T(*)             | 33                                    | 53  | 26 |
| CT1010              | 1/0T(*)           | 1/0T(*)           | 33                                    | 58  | 26 |
| CT111T              | 2/0T(*)           | 1T(*)             | 33                                    | 53  | 21 |
| CT1111              | 2/0T(*)           | 2/0T(*)           | 37                                    | 58  | 26 |
| CT1310              | 4/0T(*)           | 1/0T(*)           | 37                                    | 62  | 25 |
| CT1313              | 4/0T(*)           | 4/0T(*)           | 37                                    | 64  | 29 |
| CT1414              | 250               | 250               | 40                                    | 73  | 35 |
| CT1616              | 350               | 350               | 41                                    | 73  | 35 |
| CT1919              | 500               | 500               | 52                                    | 84  | 40 |
| CT2525              | 800               | 800               | 62                                    | 100 | 47 |
| CT2819              | 1000              | 500               | 59                                    | 94  | 40 |

Conector de aleación de cobre en " T " para unir un tubo de cobre en el principal a un cable de cobre en la derivación. Tiene dos elementos tipo grapa que aceptan un amplio rango de cables. Se recomienda cuando la conexión esta sujeta a vibración.

" T " copper alloy connector to join copper tube in the tap and copper cable in the run. Two silicon bronze clamp type on the tap for different cable ranges and silicon bronze bolts on the run for good rigidly and contact. It is recommended for use on cable subjected to vibration.

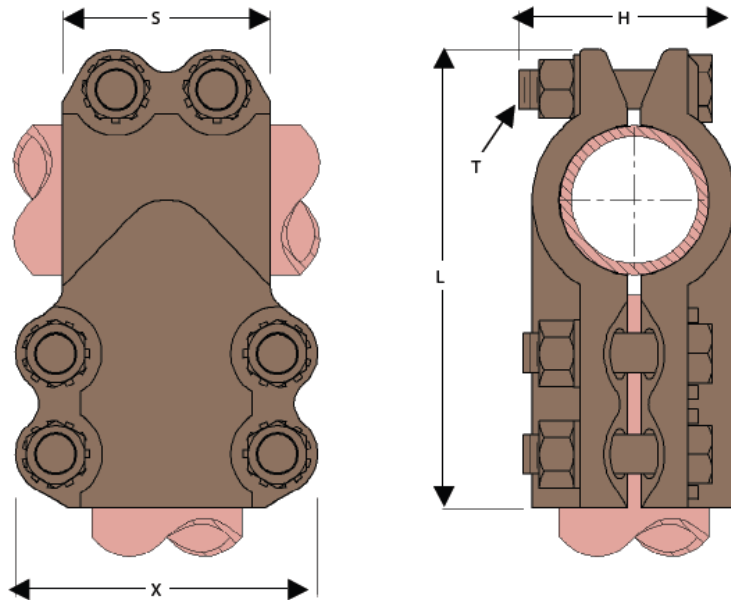


Note (\*)  
T - Stranded

| Catálogo<br>Catalogo | Principal / Run<br>Tubo / Tube<br>IPS | Derivación / Tap<br>Cable<br>AWG/MCM | Dimensiones en mm<br>Dimensions in mm |    |     |    |    |    |
|----------------------|---------------------------------------|--------------------------------------|---------------------------------------|----|-----|----|----|----|
|                      |                                       |                                      | H                                     | HH | L   | S  | T  | X  |
| HATT3713             | 19(3/4'')                             | 1/OT-4/OT (*)                        | 39                                    | 48 | 127 | 52 | 10 | 43 |
| HATT3715             | 19(3/4'')                             | 1/OT-300(*)                          | 39                                    | 51 | 135 | 52 | 10 | 50 |
| HATT3813             | 25(1'')                               | 1/OT-4/OT(*)                         | 45                                    | 48 | 144 | 52 | 10 | 43 |
| HATT3815             | 25(1'')                               | 1/OT-300(*)                          | 45                                    | 51 | 146 | 52 | 10 | 50 |
| HATT3819             | 25(1'')                               | 300-500                              | 45                                    | 57 | 154 | 52 | 10 | 58 |
| HATT3915             | 32(1 1/4'')                           | 1/OT-300(*)                          | 58                                    | 51 | 151 | 52 | 10 | 50 |
| HATT3919             | 32(1 1/4'')                           | 300-500                              | 58                                    | 57 | 160 | 52 | 10 | 58 |
| HATT3925             | 32(1 1/4'')                           | 500-800                              | 58                                    | 68 | 191 | 71 | 13 | 69 |
| HATT3928             | 32(1 1/4'')                           | 750-1000                             | 58                                    | 76 | 198 | 71 | 13 | 73 |
| HATT4015             | 38(1 1/2'')                           | 1/OT-300(*)                          | 65                                    | 51 | 160 | 53 | 10 | 50 |
| HATT4019             | 38(1 1/2'')                           | 300-500                              | 65                                    | 57 | 170 | 53 | 10 | 58 |
| HATT4025             | 38(1 1/2'')                           | 500-800                              | 65                                    | 68 | 200 | 69 | 13 | 69 |
| HATT4028             | 38(1 1/2'')                           | 750-1000                             | 65                                    | 76 | 207 | 69 | 13 | 73 |
| HATT4115             | 51(2'')                               | 1/OT-300(*)                          | 75                                    | 51 | 175 | 52 | 10 | 50 |
| HATT4119             | 51(2'')                               | 300-500                              | 75                                    | 57 | 182 | 52 | 10 | 58 |
| HATT4125             | 51(2'')                               | 500-800                              | 78                                    | 68 | 221 | 69 | 13 | 69 |
| HATT4128             | 51(2'')                               | 750-1000                             | 78                                    | 76 | 244 | 69 | 13 | 73 |
| HATT4215             | 64(2 1/2'')                           | 1/OT-300(*)                          | 93                                    | 51 | 194 | 52 | 10 | 50 |
| HATT4219             | 64(2 1/2'')                           | 300-500                              | 93                                    | 57 | 203 | 52 | 10 | 58 |
| HATT4225             | 64(2 1/2'')                           | 500-800                              | 97                                    | 68 | 219 | 70 | 13 | 69 |
| HATT4228             | 64(2 1/2'')                           | 750-1000                             | 97                                    | 76 | 245 | 70 | 13 | 73 |
| HATT4315             | 76(3'')                               | 1/OT-300(*)                          | 106                                   | 51 | 218 | 52 | 10 | 50 |
| HATT4319             | 76(3'')                               | 300-500                              | 106                                   | 57 | 227 | 52 | 10 | 58 |
| HATT4325             | 76(3'')                               | 500-800                              | 111                                   | 68 | 245 | 84 | 13 | 69 |
| HATT4328             | 76(3'')                               | 750-1000                             | 111                                   | 76 | 254 | 84 | 13 | 73 |

Conector tipo subestación en " T ", conecta tubo de cobre en el principal y en la derivación, fabricado en aleación de cobre que garantiza una unión firme y segura. Bajo requerimiento se puede surtir con acabado estañado, agregando "- E " al catálogo.

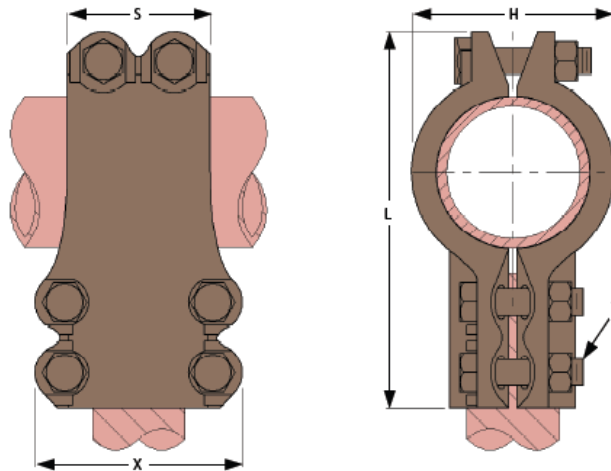
T copper substation connector for connections of copper tube in the run and the tap, manufactured in copper alloy that assure an stable installation. It can be supplied tin plated upon request by adding "- E " suffix to the catalog number.



| Catálogo<br>Catalog | Tubo IPS / Tube IPS |                  | Dimensiones en mm / Dimensions in mm |     |     |    |     |
|---------------------|---------------------|------------------|--------------------------------------|-----|-----|----|-----|
|                     | Principal / Run     | Derivación / Tap | H                                    | L   | S   | T  | X   |
| HT3535              | 10(3/8")            | 10(3/8")         | 31                                   | 99  | 51  | 10 | 54  |
| HT3636              | 13(1/2")            | 13(1/2")         | 31                                   | 99  | 51  | 10 | 60  |
| HT3736              | 19(3/4")            | 13(1/2")         | 38                                   | 106 | 52  | 10 | 60  |
| HT3737              | 19(3/4")            | 19(3/4")         | 38                                   | 106 | 52  | 10 | 63  |
| HT3837              | 25(1")              | 19(3/4")         | 48                                   | 111 | 52  | 10 | 63  |
| HT3838              | 25(1")              | 25(1")           | 48                                   | 111 | 52  | 10 | 73  |
| HT3937              | 32(1 1/4")          | 19(3/4")         | 62                                   | 116 | 52  | 10 | 63  |
| HT3938              | 32(1 1/4")          | 25(1")           | 62                                   | 116 | 52  | 10 | 73  |
| HT3939              | 32(1 1/4")          | 32(1 1/4")       | 62                                   | 141 | 70  | 13 | 92  |
| HT4038              | 38(1 1/2")          | 25(1")           | 62                                   | 126 | 51  | 10 | 73  |
| HT4039              | 38(1 1/2")          | 32(1 1/4")       | 62                                   | 148 | 69  | 13 | 92  |
| HT4040              | 38(1 1/2")          | 38(1 1/2")       | 66                                   | 148 | 69  | 13 | 99  |
| HT4139              | 51(2")              | 32(1 1/4")       | 80                                   | 166 | 69  | 13 | 92  |
| HT4140              | 51(2")              | 38(1 1/2")       | 80                                   | 169 | 69  | 13 | 99  |
| HT4141              | 51(2")              | 51(2")           | 80                                   | 169 | 69  | 13 | 118 |
| HT4242              | 64(2 1/2")          | 64(2 1/2")       | 99                                   | 182 | 78  | 13 | 133 |
| HT4343              | 76(3")              | 76(3")           | 110                                  | 217 | 108 | 13 | 158 |
| HT4444              | 89(3 1/2")          | 89(3 1/2")       | 127                                  | 226 | 119 | 16 | 175 |
| HT4545              | 102(4")             | 102(4")          | 138                                  | 269 | 124 | 16 | 188 |

Conector tipo subestación en " T " de aleación de cobre para derivar de tubo de cobre a cables de cobre. Es fabricado para el tamaño específico del cable. Si en la tabla siguiente no encuentra el rango que necesita consúltenos, con gusto le atenderemos.

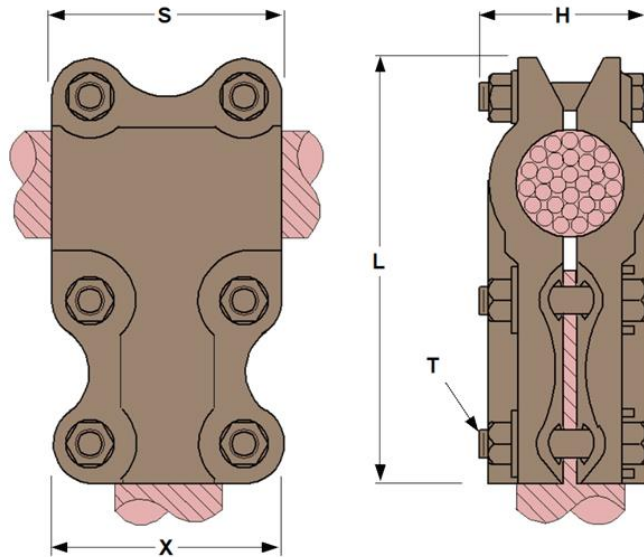
" T " copper alloy substation connector for connections of copper tube in the run and copper cable at the tap. Manufactured for specific cable ranges. Please contact us in case the table below does not show the range that you require.



| Catálogo<br>Catalog | Principal / Run<br>Tubo IPS<br>IPS Tube | Derivación / Tap<br>Cable MCM | Dimensiones en mm<br>Dimensions in mm |     |    |    |    |
|---------------------|---|-------------------------------|---------------------------------------|-----|----|----|----|
|                     |   |                               | H                                     | L   | S  | T  | X  |
| HT3815              | 25(1'')                                 | 300                           | 48                                    | 109 | 52 | 10 | 54 |
| HT3819              | 25(1'')                                 | 500                           | 48                                    | 121 | 52 | 10 | 62 |
| HT3824              | 25(1'')                                 | 750                           | 48                                    | 123 | 52 | 10 | 62 |
| HT3915              | 32(1 1/4'')                             | 300                           | 59                                    | 116 | 52 | 10 | 54 |
| HT3919              | 32(1 1/4'')                             | 500                           | 59                                    | 126 | 52 | 10 | 62 |
| HT3924              | 32(1 1/4'')                             | 750                           | 59                                    | 130 | 52 | 10 | 62 |
| HT4015              | 38(1 1/2'')                             | 300                           | 63                                    | 125 | 52 | 10 | 54 |
| HT4019              | 38(1 1/2'')                             | 500                           | 63                                    | 137 | 52 | 10 | 62 |
| HT4024              | 38(1 1/2'')                             | 750                           | 63                                    | 132 | 52 | 10 | 62 |
| HT4028              | 38(1 1/2'')                             | 1000                          | 66                                    | 155 | 68 | 13 | 80 |
| HT4115              | 51(2'')                                 | 300                           | 77                                    | 141 | 52 | 10 | 54 |
| HT4119              | 51(2'')                                 | 500                           | 77                                    | 151 | 52 | 10 | 62 |
| HT4128              | 51(2'')                                 | 500                           | 77                                    | 170 | 68 | 13 | 80 |
| HT4215              | 64(2 1/2'')                             | 300                           | 93                                    | 152 | 52 | 10 | 54 |
| HT4219              | 64(2 1/2'')                             | 500                           | 93                                    | 157 | 52 | 10 | 62 |
| HT4228              | 64(2 1/2'')                             | 1000                          | 97                                    | 179 | 68 | 13 | 80 |
| HT4319              | 76(3'')                                 | 500                           | 106                                   | 192 | 52 | 10 | 62 |
| HT4324              | 76(3'')                                 | 750                           | 106                                   | 188 | 52 | 10 | 62 |
| HT4328              | 76(3'')                                 | 1000                          | 110                                   | 197 | 82 | 13 | 80 |

Conector tipo subestación, conecta cable de cobre en el principal y en la derivación, fabricado en aleación de cobre que garantiza una unión firme y segura. Bajo requerimiento se puede surtir con acabado estañado agregando "- E" al catálogo.

T copper alloy substation connector for connection of copper cable at the run and the tap. Silicon bronze bolts assure good rigidly and contact . It can be supplied tin plated upon request by adding "- E" to the catalog number

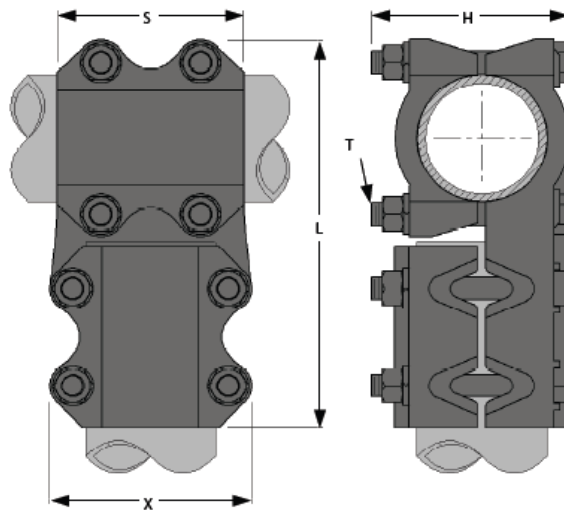


Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Cable AWG/MCM   |                  | Dimensiones en mm / Dimensions in mm |     |    |    |    |
|---------------------|-----------------|------------------|--------------------------------------|-----|----|----|----|
|                     | Principal / Run | Derivación / Tap | H                                    | L   | S  | T  | X  |
| HT1111              | 2/OT (*)        | 2/OT(*)          | 37                                   | 78  | 35 | 10 | 51 |
| HT1212              | 3/OT(*)         | 3/OT(*)          | 37                                   | 78  | 35 | 10 | 51 |
| HT1313              | 4/OT(*)         | 4/OT(*)          | 37                                   | 86  | 51 | 10 | 51 |
| HT1414              | 250             | 250              | 37                                   | 95  | 52 | 10 | 54 |
| HT1515              | 300             | 300              | 37                                   | 95  | 52 | 10 | 54 |
| HT1717              | 400             | 400              | 45                                   | 99  | 52 | 10 | 54 |
| HT1915              | 500             | 300              | 45                                   | 99  | 52 | 10 | 54 |
| HT1919              | 500             | 500              | 45                                   | 99  | 52 | 10 | 58 |
| HT2119              | 600             | 500              | 45                                   | 106 | 52 | 10 | 62 |
| HT2121              | 600             | 600              | 45                                   | 106 | 52 | 10 | 62 |
| HT2415              | 750             | 300              | 58                                   | 99  | 51 | 10 | 54 |
| HT2419              | 750             | 500              | 58                                   | 110 | 51 | 10 | 62 |
| HT2424              | 750             | 750              | 58                                   | 104 | 51 | 10 | 62 |
| HT2828              | 1000            | 1000             | 58                                   | 132 | 74 | 13 | 80 |

Conector tipo subestación en " T " de aleación de aluminio para conectar tubo en el principal y en la derivación. El diseño permite la conexión aluminio aluminio y aluminio cobre. Se recomienda el uso de la pasta antioxidante " Deltactron " en las conexiones.

" T " aluminum alloy substation connector for connection of tube in the run and the tap. Its design allows the connection of aluminum aluminum and aluminum copper. Its recommended the application of an inhibitor paste " Deltactron " as anti-oxidation to prevent galvanic corrosion. Assembled with galvanized steel bolts.

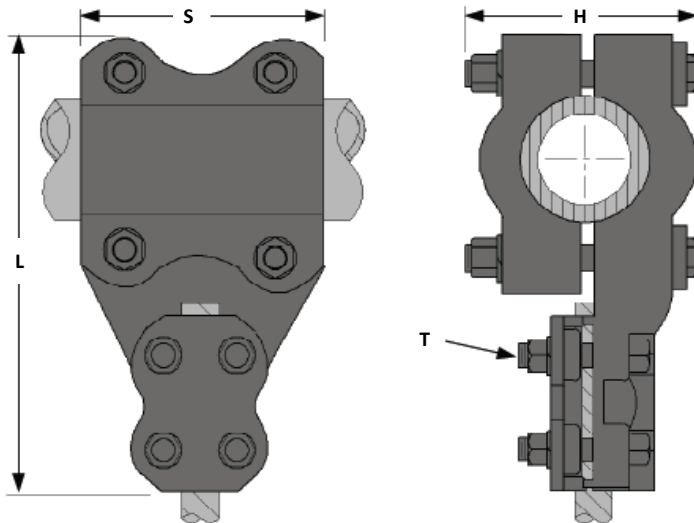


| Catálogo<br>Catalog | Tubo IPS / IPS Tube |                  | Dimensiones en mm / Dimensions in mm |     |     |    |     |
|---------------------|---------------------|------------------|--------------------------------------|-----|-----|----|-----|
|                     | Principal / Run     | Derivación / Tap | H                                    | L   | S   | T  | X   |
| HHT37A37A           | 19(3/4")            | 19(3/4")         | 84                                   | 169 | 84  | 13 | 71  |
| HHT38A38A           | 25(1")              | 25(1")           | 84                                   | 173 | 89  | 13 | 78  |
| HHT39A39A           | 32(1 1/4")          | 32(1 1/4")       | 76                                   | 185 | 95  | 13 | 83  |
| HHT40A40A           | 38(1 1/2")          | 38(1 1/2")       | 97                                   | 206 | 105 | 13 | 96  |
| HHT41A39A           | 51(2")              | 32(1 1/4")       | 97                                   | 203 | 102 | 13 | 83  |
| HHT41A40A           | 51(2")              | 38(1 1/2")       | 97                                   | 211 | 102 | 13 | 96  |
| HHT41A41A           | 51(2")              | 51(2")           | 112                                  | 239 | 109 | 16 | 114 |
| HHT42A40A           | 64(2 1/2")          | 38(1 1/2")       | 110                                  | 228 | 102 | 13 | 96  |
| HHT42A41A           | 64(2 1/2")          | 51(2")           | 125                                  | 251 | 114 | 16 | 114 |
| HHT42A42A           | 64(2 1/2")          | 64(2 1/2")       | 125                                  | 251 | 114 | 16 | 127 |
| HHT43A41A           | 76(3")              | 51(2")           | 138                                  | 257 | 126 | 16 | 114 |
| HHT43A42A           | 76(3")              | 64(2 1/2")       | 138                                  | 257 | 126 | 16 | 127 |
| HHT43A43A           | 76(3")              | 76(3")           | 138                                  | 271 | 126 | 16 | 141 |
| HHT44A42A           | 89(3 1/2")          | 64(2 1/2")       | 142                                  | 278 | 140 | 16 | 127 |
| HHT44A43A           | 89(3 1/2")          | 76(3")           | 142                                  | 295 | 140 | 16 | 141 |
| HHT44A44A           | 89(3 1/2")          | 89(3 1/2")       | 142                                  | 309 | 140 | 16 | 157 |
| HHT45A42A           | 102(4")             | 64(2 1/2")       | 157                                  | 293 | 152 | 16 | 127 |
| HHT45A43A           | 102(4")             | 76(3")           | 157                                  | 305 | 152 | 16 | 140 |
| HHT45A45A           | 102(4")             | 102(4")          | 157                                  | 327 | 152 | 16 | 168 |



Conector en " T " de aleación de aluminio para conectar tubo en el principal y cable en la derivación. Esta diseñado para la conexión aluminio aluminio y aluminio cobre . Se recomienda el uso de la pasta antioxidante "Deltatron" en las conexiones. El elemento del cable acepta cierto rango.

" T " aluminum alloy connector for connection of tube at the run and cable in the tap. Designed for installation of aluminum aluminum and aluminum copper. Its recommended the application of an inhibitor paste "Deltatron" as anti-oxidation to prevent galvanic corrosion. Assembled with galvanized steel bolts.



Note (\*)  
T - Stranded

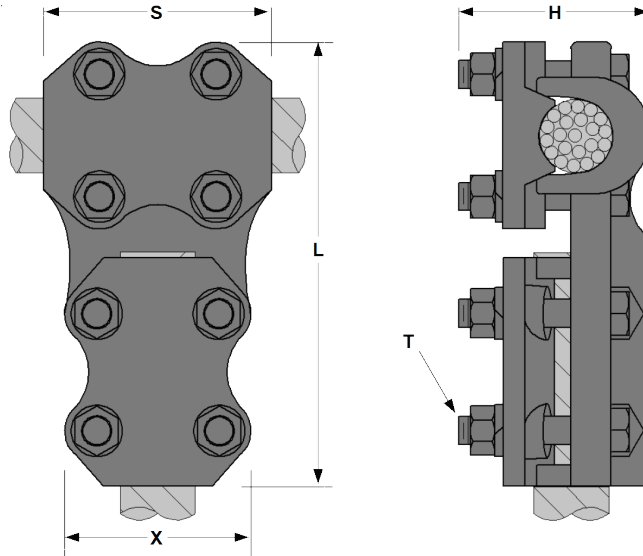
| Catálogo<br>Catalog | Principal / Run<br>Tubo IPS<br>IPS Tube | Derivación / Tap<br>Cable AWG/MCM |                        | Dimensiones en mm<br>Dimensions in mm |     |    |    |
|---------------------|---|-----------------------------------|------------------------|---------------------------------------|-----|----|----|
|                     |   | Aluminio<br>Aluminum              | ACSR                   | H                                     | L   | S  | T  |
| HHTR37A14A          | 19(3/4'')                               | 1/0T-250 (*)                      | 1/0(6/1)-4/0(6/1)      | 84                                    | 151 | 84 | 13 |
| HHTR37A17A          | 19(3/4'')                               | 250-400                           | 4/0(6/1)-397(18/1)     | 84                                    | 157 | 84 | 13 |
| HHTR37A21A          | 19(3/4'')                               | 350-600                           | 336(18/1)-477(30/7)    | 84                                    | 163 | 84 | 13 |
| HHTR38A14A          | 25(1'')                                 | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 84                                    | 152 | 89 | 13 |
| HHTR38A17A          | 25(1'')                                 | 250-400                           | 4/0(6/1)-397(18/1)     | 84                                    | 164 | 89 | 13 |
| HHTR38A21A          | 25(1'')                                 | 350-600                           | 336(18/1)-477(30/7)    | 84                                    | 172 | 89 | 13 |
| HHTR38A27A          | 25(1'')                                 | 600-900                           | 477(30/7)-795(54/7)    | 84                                    | 179 | 89 | 13 |
| HHTR39A14A          | 32(1 1/4'')                             | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 76                                    | 166 | 95 | 13 |
| HHTR39A17A          | 32(1 1/4'')                             | 250-400                           | 4/0(6/1)-397(18/1)     | 76                                    | 172 | 95 | 13 |
| HHTR39A21A          | 32(1 1/4'')                             | 350-600                           | 336(18/1)-477(30/7)    | 76                                    | 179 | 95 | 13 |
| HHTR39A27A          | 32(1 1/4'')                             | 600-900                           | 477(30/7)-795(54/7)    | 76                                    | 191 | 95 | 13 |
| HHTR39A29A          | 32(1 1/4'')                             | 900-1250                          | 715(30/19)-1113(54/19) | 76                                    | 191 | 95 | 13 |

Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Principal / Run<br>Tubo IPS<br>IPS Tube | Derivación / Tap<br>Cable AWG/MCM |                        | Dimensiones en mm<br>Dimensions in mm |     |     |    |
|---------------------|---|-----------------------------------|------------------------|---------------------------------------|-----|-----|----|
|                     |   | Aluminio<br>Aluminum              | ACSR                   | H                                     | L   | S   | T  |
| HHTR40A14A          | 38(1 1/2'')                             | 1/0T-250 (*)                      | 1/0(6/1)-4/0(6/1)      | 97                                    | 172 | 102 | 13 |
| HHTR40A17A          | 38(1 1/2'')                             | 250-400                           | 4/0(6/1)-397(18/1)     | 97                                    | 178 | 102 | 13 |
| HHTR40A21A          | 38(1 1/2'')                             | 350-600                           | 336(18/1)-477(30/7)    | 97                                    | 185 | 102 | 13 |
| HHTR40A27A          | 38(1 1/2'')                             | 600-900                           | 477(30/7)-795(54/7)    | 97                                    | 191 | 102 | 13 |
| HHTR40A29A          | 38(1 1/2'')                             | 900-1250                          | 715(30/19)-1113(54/19) | 97                                    | 197 | 102 | 13 |
| HHTR41A14A          | 51(2'')                                 | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 110                                   | 184 | 102 | 13 |
| HHTR41A17A          | 51(2'')                                 | 250-400                           | 4/0(6/1)-397(18/1)     | 110                                   | 190 | 102 | 13 |
| HHTR41A21A          | 51(2'')                                 | 350-600                           | 336(18/1)-477(30/7)    | 110                                   | 197 | 102 | 13 |
| HHTR41A27A          | 51(2'')                                 | 600-900                           | 477(30/7)-795(54/7)    | 110                                   | 206 | 102 | 13 |
| HHTR41A29A          | 51(2'')                                 | 900-1250                          | 715(30/19)-1113(54/19) | 110                                   | 210 | 102 | 13 |
| HHTR42A14A          | 64(2 1/2'')                             | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 110                                   | 197 | 102 | 13 |
| HHTR42A17A          | 64(2 1/2'')                             | 250-400                           | 4/0(6/1)-397(18/1)     | 110                                   | 203 | 102 | 13 |
| HHTR42A21A          | 64(2 1/2'')                             | 350-600                           | 336(18/1)-477(30/7)    | 110                                   | 210 | 102 | 13 |
| HHTR42A27A          | 64(2 1/2'')                             | 600-900                           | 477(30/7)-795(54/7)    | 110                                   | 216 | 102 | 13 |
| HHTR42A29A          | 64(2 1/2'')                             | 900-1250                          | 715(30/19)-1113(54/19) | 110                                   | 225 | 102 | 13 |
| HHTR43A14A          | 76(3'')                                 | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 127                                   | 214 | 102 | 13 |
| HHTR43A17A          | 76(3'')                                 | 250-400                           | 4/0(6/1)-397(18/1)     | 127                                   | 219 | 102 | 13 |
| HHTR43A21A          | 76(3'')                                 | 350-600                           | 336(18/1)-477(30/7)    | 127                                   | 225 | 102 | 13 |
| HHTR43A27A          | 76(3'')                                 | 600-900                           | 477(30/7)-795(54/7)    | 127                                   | 232 | 102 | 13 |
| HHTR43A29A          | 76(3'')                                 | 900-1250                          | 715(30/19)-1113(54/19) | 127                                   | 232 | 102 | 13 |
| HHTR44A14A          | 89(3 1/2'')                             | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 132                                   | 225 | 102 | 13 |
| HHTR44A17A          | 89(3 1/2'')                             | 250-400                           | 4/0(6/1)-397(18/1)     | 132                                   | 234 | 102 | 13 |
| HHTR44A21A          | 89(3 1/2'')                             | 350-600                           | 336(18/1)-477(30/7)    | 132                                   | 238 | 102 | 13 |
| HHTR44A27A          | 89(3 1/2'')                             | 600-900                           | 477(30/7)-795(54/7)    | 132                                   | 244 | 102 | 13 |
| HHTR44A29A          | 89(3 1/2'')                             | 900-1250                          | 715(30/19)-1113(54/19) | 132                                   | 251 | 102 | 13 |
| HHTR45A14A          | 102(4'')                                | 1/0T-250(*)                       | 1/0(6/1)-4/0(6/1)      | 149                                   | 238 | 102 | 13 |
| HHTR45A17A          | 102(4'')                                | 250-400                           | 4/0(6/1)-397(18/1)     | 149                                   | 244 | 102 | 13 |
| HHTR45A21A          | 102(4'')                                | 350-600                           | 336(18/1)-477(30/7)    | 149                                   | 251 | 102 | 13 |
| HHTR45A27A          | 102(4'')                                | 600-900                           | 477(30/7)-795(54/7)    | 149                                   | 257 | 102 | 13 |
| HHTR45A29A          | 102(4'')                                | 900-1250                          | 715(30/19)-1113(54/19) | 149                                   | 263 | 102 | 13 |

Conector tipo subestación en " T " de aleación de aluminio para conectar cable en el principal y en la derivación. Esta diseñado para la conexión aluminio aluminio y aluminio cobre. Se recomienda emplear la pasta antioxidante "Deltatron" en las conexiones. Acepta rango para los cables que conecta

" T " aluminum alloy substation connector for connection of cable in the run and the tap. Designed for connection aluminum aluminum and aluminum copper. Its recommended the application of an inhibitor paste "Deltatron" as anti-oxidation to prevent galvanic corrosion. Assembled with galvanized steel bolts.



Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Principal / Run<br>AWG/MCM |                         | Derivación / Tap<br>AWG/MCM |                         | Dimensiones en mm<br>Dimensions in mm |     |     |    |    |
|---------------------|----------------------------|-------------------------|-----------------------------|-------------------------|---------------------------------------|-----|-----|----|----|
|                     | Aluminio<br>Aluminum       | ACSR                    | Aluminio<br>Aluminum        | ACSR                    | H                                     | L   | S   | T  | X  |
| HHTR14A14A          | 1/0T-250(*)                | 1/0(6/1)-4/0(6/1)       | 1/0T-250(*)                 | 1/0(6/1)-4/0(6/1)       | 58                                    | 143 | 72  | 13 | 63 |
| HHTR17A14A          | 250-400                    | 4/0(6/1)-397(18/1)      | 1/0T-250(*)                 | 1/0(6/1)-4/0(6/1)       | 71                                    | 147 | 79  | 13 | 63 |
| HHTR17A17A          | 250-400                    | 4/0(6/1)-397(18/1)      | 250-400                     | 4/0(6/1)-397(18/1)      | 71                                    | 157 | 79  | 13 | 67 |
| HHTR21A14A          | 350-600                    | 336(18/1)-477(30/7)     | 1/0T-250(*)                 | 1/0(6/1)-4/0(6/1)       | 71                                    | 155 | 86  | 13 | 63 |
| HHTR21A17A          | 350-600                    | 336(18/1)-477(30/7)     | 250-400                     | 4/0(6/1)-397(18/1)      | 71                                    | 159 | 86  | 13 | 67 |
| HHTR21A21A          | 350-600                    | 336(18/1)-477(30/7)     | 350-600                     | 336(18/1)-477(30/7)     | 71                                    | 166 | 86  | 13 | 70 |
| HHTR27A14A          | 600-900                    | 477(30/7)-795(54/7)     | 1/0T-250(*)                 | 1/0(6/1)-4/0(6/1)       | 80                                    | 157 | 92  | 13 | 63 |
| HHTR27A17A          | 600-900                    | 477(30/7)-795(54/7)     | 250-400                     | 4/0(6/1)-397(18/1)      | 80                                    | 157 | 92  | 13 | 67 |
| HHTR27A21A          | 600-900                    | 477(30/7)-795(54/7)     | 350-600                     | 336(18/1)-477(30/7)     | 80                                    | 179 | 92  | 13 | 70 |
| HHTR27A27A          | 600-900                    | 477(30/7)-795(54/7)     | 600-900                     | 477(30/7)-795(54/7)     | 80                                    | 179 | 92  | 13 | 76 |
| HHTR29A14A          | 900-1250                   | 715(30/19)-1113(54/19)  | 1/0T-250(*)                 | 1/0(6/1)-4/0(6/1)       | 92                                    | 168 | 100 | 13 | 63 |
| HHTR29A17A          | 900-1250                   | 715(30/19)-1113(54/19)  | 250-400                     | 4/0(6/1)-397(18/1)      | 92                                    | 172 | 100 | 13 | 67 |
| HHTR29A21A          | 900-1250                   | 715(30/19)-1113(54/19)  | 350-600                     | 336(18/1)-477(30/7)     | 92                                    | 171 | 100 | 13 | 70 |
| HHTR29A27A          | 900-1250                   | 715(30/19)-1113(54/19)  | 600-900                     | 477(30/7)-795(54/7)     | 92                                    | 181 | 100 | 13 | 76 |
| HHTR29A29A          | 900-1250                   | 715(30/19)-1113(54/19)  | 900-1250                    | 715(30/19)-1113(54/19)  | 92                                    | 183 | 100 | 13 | 81 |
| HHTR30A30A          | 1250-1600                  | 1113(54/19)-1431(54/7)  | 1250-1600                   | 1113(54/19)-1431(54/7)  | 93                                    | 217 | 113 | 13 | 94 |
| HHTR32A32A          | 1500-2000                  | 1272(54/19)-1780(84/19) | 1500-2000                   | 1272(54/19)-1780(84/19) | 99                                    | 224 | 121 | 13 | 97 |



**Derivadores para línea viva**  
**Hot line clamps**

Conector de aleación de cobre con acabado estañado para usarse en línea viva con el auxilio de una pértiga. Por su diseño acepta un amplio rango de cables ya sea de cobre, aluminio o ACSR, para la conexión con estos dos últimos se recomienda utilizar pasta antioxidante "Deltatron". El tipo "CLW" es blindado, protege la rosca y lleva resorte para mantener una mayor presión de contacto, se recomienda para lugares con ambiente húmedo, contaminado o salino.

Copper alloy tin plated clamp to be installed on live line using a hot stick. It was designed to be used in different cable ranges, either copper, aluminum or ACSR. In connections with aluminum based conductors, it is recommended the use of an inhibitor paste "Deltatron" as anti-oxidation to prevent galvanic corrosion. The shielded type CLW protects the thread and uses a spring to hold a reliable pressure on the contact point of the conductor. It is recommended to be used on live-lines where moisture, pollution or salinity exists.

Fig. 1

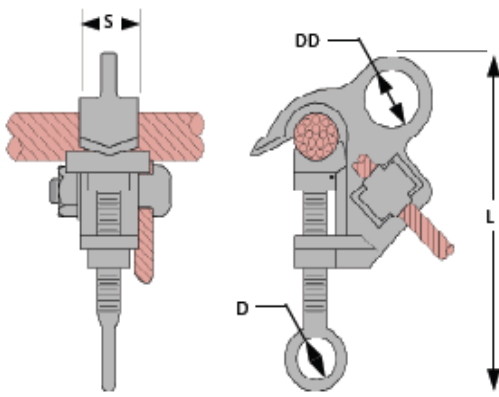
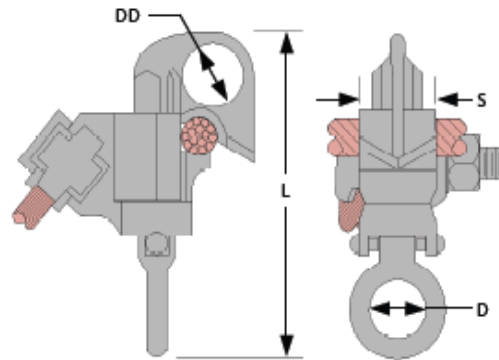


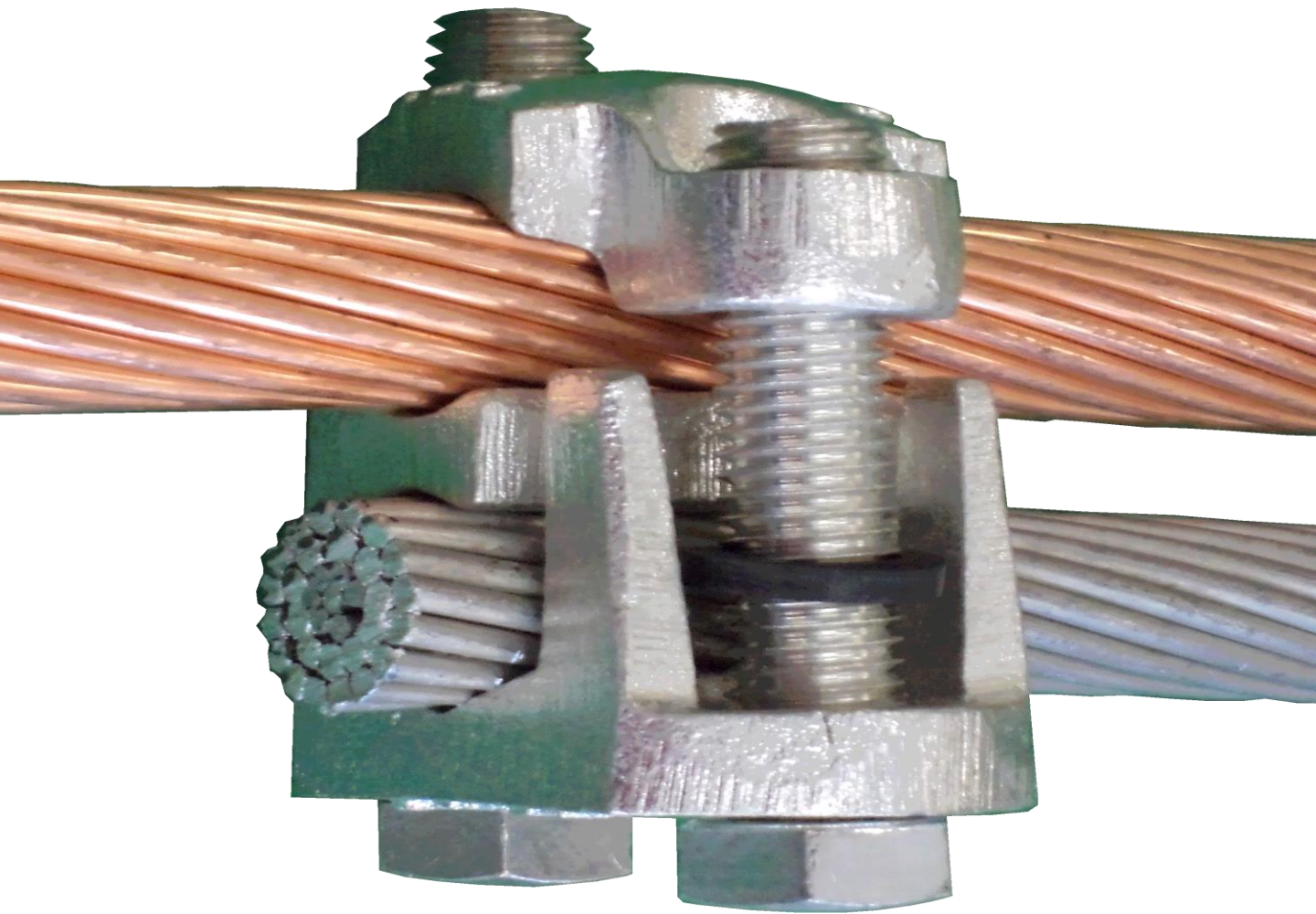
Fig. 2



|   |         |
|---|---------|
| Especificación CFE 2DI00-27<br>CFE specification CFE 2DI00-27 |         |
| LE 13   | CLW1311 |

Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Figura<br>Figure | Cable AWG/MCM   |                  | Dimensiones en mm<br>Dimensions in mm |    |     |    |
|---------------------|------------------|-----------------|------------------|---------------------------------------|----|-----|----|
|                     |                  | Principal / Run | Derivación / Tap | D                                     | DD | L   | S  |
| CLV1110             | 1                | 8S-2/OT(*)      | 6S-1/OT(*)       | 18                                    | 18 | 114 | 19 |
| CLV1611             | 1                | 2S-350(*)       | 6S-2/OT(*)       | 19                                    | 19 | 138 | 22 |
| CLW1110             | 2                | 8T-2/OT(*)      | 6T-1/OT(*)       | 19                                    | 19 | 94  | 25 |
| CLW1311             | 2                | 8T-4/OT(*)      | 8T-2/OT(*)       | 19                                    | 16 | 97  | 25 |
| CLW1713             | 2                | 6S-400(*)       | 6S-4/OT(*)       | 19                                    | 19 | 116 | 33 |

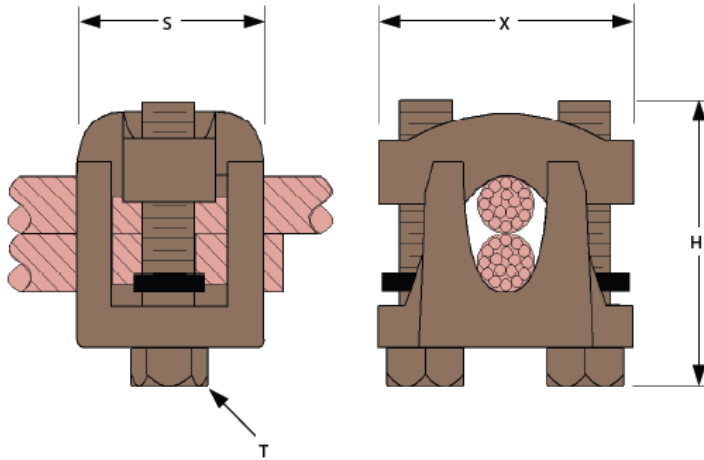


**Derivadores paralelos**  
**Parallel connectors**



Conector de aleación de cobre para efectuar empalmes o derivaciones con cable de cobre. Es un conector compacto y seguro, de fácil instalación.

Copper alloy connector for splices and tapping of copper cable. Compact and safety connector with easy installation.

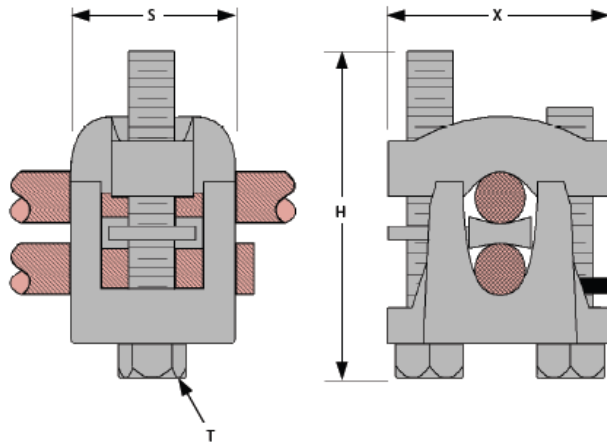


Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Cable AWG/MCM   |                  | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|-----------------|------------------|---------------------------------------|----|----|----|
|                     | Principal / Run | Derivación / Tap | H                                     | S  | T  | X  |
| PT20                | 2T-2/0T (*)     | 6T-2/0T(*)       | 37                                    | 27 | 10 | 41 |
| PT40                | 1/0T-4/0T(*)    | 1/0T-4/0T(*)     | 46                                    | 30 | 10 | 44 |
| PT500               | 250-500         | 10T-500(*)       | 60                                    | 39 | 13 | 59 |
| PT800               | 400-800         | 3/0T-800(*)      | 73                                    | 60 | 13 | 69 |
| PT1000              | 500-1000        | 3/0T-1000(*)     | 86                                    | 66 | 16 | 78 |

Conector de aleación de cobre con acabado estañado para efectuar empalmes o derivaciones con cables de aluminio o cobre. Lleva separador entre cables.

Tin plated copper alloy connector for splices or tapping with aluminum or copper cables. With spacer between cables.



Note (\*)  
T - Stranded

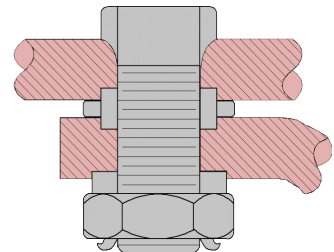
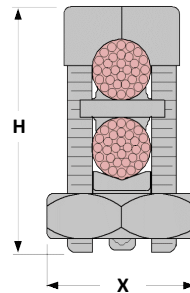
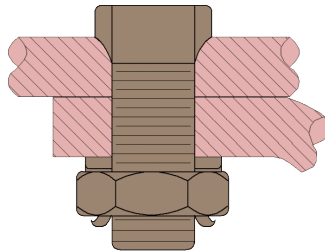
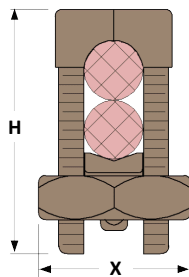
| Catálogo<br>Catalog | Principal – Run<br>AWG/MCM        |         | Derivación – Tap<br>AWG/MCM       |         | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|-----------------------------------|---------|-----------------------------------|---------|---------------------------------------|----|----|----|
|                     | Aluminio/Aluminum<br>Cobre/Copper | ACSR    | Aluminio/Aluminum<br>Cobre/Copper | ACSR    | H                                     | S  | T  | X  |
| PTH20               | 2T-2/0T (*)                       | 3-2/0   | 6T-2/0T (*)                       | 6-2/0   | 56                                    | 27 | 10 | 41 |
| PTH40               | 1/0T-4/0T(*)                      | 1/0-4/0 | 6T-4/0T(*)                        | 6-4/0   | 69                                    | 30 | 10 | 44 |
| PTH500              | 250-500                           | 4/0-397 | 4T-500(*)                         | 5-397   | 83                                    | 39 | 13 | 59 |
| PTH800              | 400-800                           | 336-715 | 4/0T-800(*)                       | 3/0-715 | 96                                    | 60 | 13 | 69 |
| PTH1000             | 500-1000                          | 397-900 | 4/0T-1000(*)                      | 4/0-900 | 98                                    | 66 | 16 | 78 |



Conector bipartido de aleación de cobre resistente a la corrosión, compacto, de fácil y rápida instalación, conecta dos cables de cobre, ya sea en empalme o derivación. También se recomienda para sistemas de tierra. El tipo "RH" tiene acabado estañado y cuenta con separador que permite conectar combinaciones de cobre, aluminio y ACSR.

Copper alloy split bolt connector type, highly resistant to corrosion, compact, for easy and quick installation of copper cables. Also recommended for grounding systems.

"RH" type is tin plated, with spacer that allows cable combinations of copper, aluminum and ACSR.



Note (\*)  
T - Stranded

| Tipo R / R type     |                         | Dimensiones en mm<br>Dimensions in mm |    |
|---------------------|-------------------------|---------------------------------------|----|
| Catálogo<br>Catalog | Cobre/Copper<br>AWG/MCM | H                                     | X  |
| R2T                 | 5T-2T (*)               | 35                                    | 25 |
| R10                 | 4T-1/0T (*)             | 43                                    | 29 |
| R20                 | 2T-2/0T (*)             | 49                                    | 33 |
| R250                | 1T-250 (*)              | 64                                    | 35 |

| Tipo RH / RH Type   |  |                 | Dimensiones en mm<br>Dimensions in mm |    |
|---------------------|--|-----------------|---------------------------------------|----|
| Catálogo<br>Catalog | Aluminio/Cobre<br>Aluminum/Copper<br>AWG/MCM | ACSR<br>AWG/MCM | H                                     | X  |
| RH2T                | 6T-2T (*)                                    | 6(6/1)-2(6/1)   | 35                                    | 25 |
| RH10                | 2T-1/0T (*)                                  | 6(6/1)-1(6/1)   | 47                                    | 29 |
| RH20                | 2T-2/0T (*)                                  | 6(6/1)-1/0(6/1) | 49                                    | 33 |
| RH250               | 1T-250 (*)                                   | 6(6/1)-4/0(6/1) | 64                                    | 35 |

Grapa paralela de aleación de aluminio, para conexión de aluminio aluminio o aluminio cobre para alimentación, subtransmisión, y distribución primaria. Su diseño robusto proporciona una máxima protección contra la corrosión galvánica y sobrecargas. Con el diseño de las embocaduras y la forma del receptáculo se evita el degollamiento del cable y proporciona el máximo contacto del conector con la superficie del cable. Utiliza tornillos de acero zincados por inmersión. Es recomendable el uso de la pasta antioxidante "Deltatron" en las uniones.

Aluminum alloy parallel clamp for aluminum to aluminum or aluminum to copper cables for use on primary transmission or distribution. Its compact design avoids galvanic corrosion, over load and damage to the strands and assure good contact pressure on the conductor surface. Hot dip zinc plated bolts assemble the two bodies of this parallel clamp. In the joints, its recommended the application of an inhibitor paste "Deltatron" as anti-oxidation to prevent galvanic corrosion.

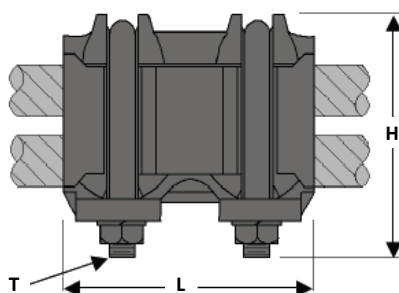
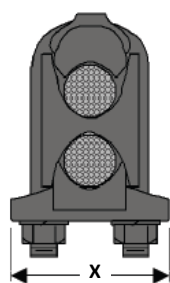
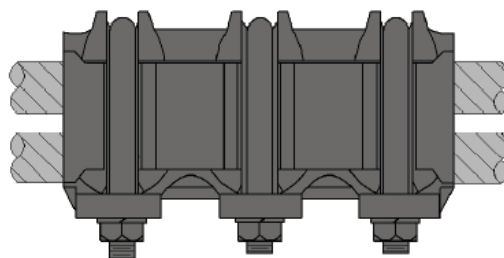


Fig. 1

Fig. 2



Note (\*)  
T - Stranded

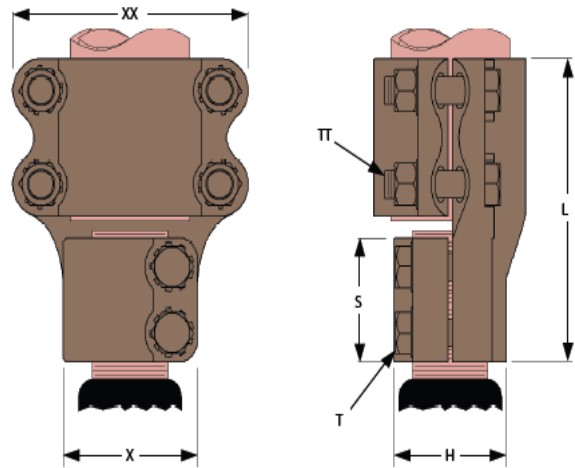
| Catálogo<br>Catalog | Fig. | Principal / Run<br>AWG/MCM |                      | Derivación / Tap<br>AWG/MCM |                      | Dimensiones en mm<br>Dimensions in mm |     |    |    |
|---------------------|------|----------------------------|----------------------|-----------------------------|----------------------|---------------------------------------|-----|----|----|
|                     |      | Aluminio<br>Aluminum       | ACSR                 | Aluminio<br>Aluminum        | ACSR                 | H                                     | L   | T  | X  |
| MP19R               | 1    | 3/0T-400(*)                | 2/0(6/1)-397(18/1)   | 3/0-400                     | 2/0(6/1)-397(18/1)   | 128                                   | 102 | 13 | 71 |
| MP30R21R            | 1    | 397-954                    | 336(30/7)-795(30/19) | 3/0-500                     | 110(12/7)-477(18/1)  | 144                                   | 102 | 13 | 73 |
| MP30R               | 1    | 397-954                    | 336(30/7)-795(30/19) | 397-954                     | 336(30/7)-795(30/19) | 166                                   | 113 | 16 | 83 |
| MP35R               | 2    | 1000-1351                  | 900(54/7)-1192(45/7) | 1000-1351                   | 900(54/7)-1192(45/7) | 172                                   | 182 | 16 | 94 |
| MP35R30R            | 2    | 1000-1351                  | 900(54/7)-1192(45/7) | 397-954                     | 336(30/7)-795(30/19) | 172                                   | 182 | 16 | 94 |



# Conectores para pernos Stud connectors

Conector de aleación de cobre para la conexión de birlo liso o roscado a tubo de cobre. La parte del catálogo "C12" indica que la cuerda es de doce hilos por pulgada, para birlo liso debe especificarse "CO ", consulte a la fábrica si su necesidad es para cuerda milimétrica, otras medidas o para conectar a 90°

Copper connector to be installed on smooth or threaded stud to join copper tube. Silicon bronze bolts assure pressure and low contact resistance. When ordering please specify whether stud is smooth or threaded adding number of threads per inch by means of two digits or adding CO is smooth. This type connector may be manufactured according to the Decimal or English System according to your needs.

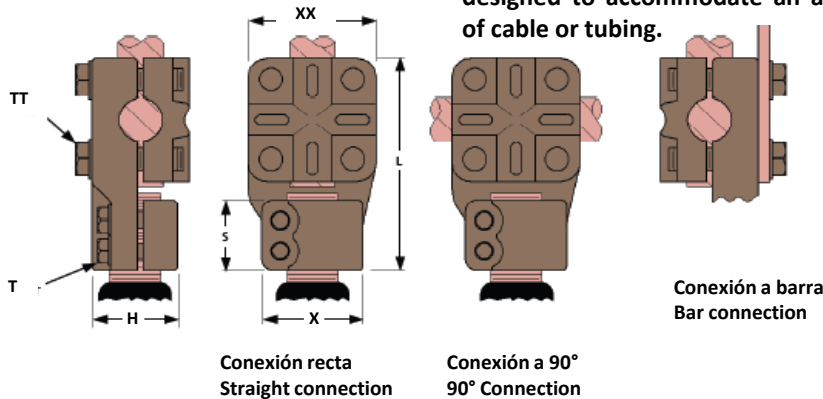


| Catálogo<br>Catalog | Perno<br>Stud        |              | Tubo<br>Tube<br>IPS | Dimensiones en mm<br>Dimensions in mm |     |    |    |    |    |     |
|---------------------|----------------------|--------------|---------------------|---------------------------------------|-----|----|----|----|----|-----|
|                     | Diámetro<br>Diameter | Hilos<br>TPI |                     | H                                     | L   | S  | T  | TT | X  | XX  |
| HP5738C12           | 25(1")               | 12           | 25(1")              | 48                                    | 104 | 41 | 10 | 10 | 57 | 73  |
| HP5740C12           | 25(1")               | 12           | 38(1 1/2")          | 48                                    | 132 | 52 | 13 | 13 | 61 | 98  |
| HP5741C12           | 25(1")               | 12           | 51(2")              | 48                                    | 135 | 52 | 13 | 13 | 61 | 120 |
| HP5742C12           | 25(1")               | 12           | 64(2 1/2")          | 48                                    | 146 | 52 | 13 | 13 | 61 | 136 |
| HP57538C12          | 29(1 1/8")           | 12           | 25(1")              | 48                                    | 104 | 41 | 10 | 10 | 57 | 73  |
| HP57540C12          | 29(1 1/8")           | 12           | 38(1 1/2")          | 48                                    | 132 | 52 | 13 | 13 | 61 | 98  |
| HP57541C12          | 29(1 1/8")           | 12           | 51(2")              | 48                                    | 135 | 52 | 13 | 13 | 61 | 120 |
| HP57542C12          | 29(1 1/8")           | 12           | 64(2 1/2")          | 48                                    | 146 | 52 | 13 | 13 | 61 | 136 |
| HP5838C12           | 32(1 1/4")           | 12           | 25(1")              | 48                                    | 104 | 41 | 10 | 10 | 57 | 73  |
| HP5840C12           | 32(1 1/4")           | 12           | 38(1 1/2")          | 48                                    | 132 | 52 | 13 | 13 | 61 | 98  |
| HP5841C12           | 32(1 1/4")           | 12           | 51(2")              | 48                                    | 135 | 52 | 13 | 13 | 61 | 120 |
| HP5842C12           | 32(1 1/4")           | 12           | 64(2 1/2")          | 48                                    | 146 | 52 | 13 | 13 | 61 | 136 |
| HP5938C12           | 38(1 1/2")           | 12           | 25(1")              | 56                                    | 117 | 52 | 13 | 10 | 68 | 73  |
| HP5939C12           | 38(1 1/2")           | 12           | 32(1 1/4")          | 56                                    | 128 | 52 | 13 | 13 | 68 | 92  |
| HP5940C12           | 38(1 1/2")           | 12           | 38(1 1/2")          | 56                                    | 128 | 52 | 13 | 13 | 68 | 98  |
| HP5941C12           | 38(1 1/2")           | 12           | 51(2")              | 56                                    | 130 | 52 | 13 | 13 | 68 | 120 |
| HP5942C12           | 38(1 1/2")           | 12           | 64(2 1/2")          | 56                                    | 130 | 52 | 13 | 13 | 68 | 136 |
| HP6041C12           | 51(2")               | 12           | 51(2")              | 73                                    | 133 | 52 | 13 | 13 | 86 | 120 |
| HP6042C12           | 51(2")               | 12           | 64(2 1/2")          | 73                                    | 134 | 52 | 13 | 13 | 86 | 136 |
| HP6043C12           | 51(2")               | 12           | 76(3")              | 73                                    | 158 | 52 | 13 | 13 | 86 | 156 |
| HP6044C12           | 51(2")               | 12           | 89(3 1/2")          | 73                                    | 172 | 52 | 13 | 13 | 86 | 175 |

Note: TPI – Threads Per Inch.

Conector de aleación de cobre para birlo liso o roscado que en la derivación puede conectarlo a cable, tubo o barra; con ejes paralelos o a 90°. Tiene un rango para cable o tubo muy amplio.

Copper connector to be installed on smooth or threaded stud to join copper tube, cable or bar. It may be connected straight or 90° angle degree. Silicon bronze bolts assure pressure contact and low resistance. It is designed to accommodate an ample range of cable or tubing.



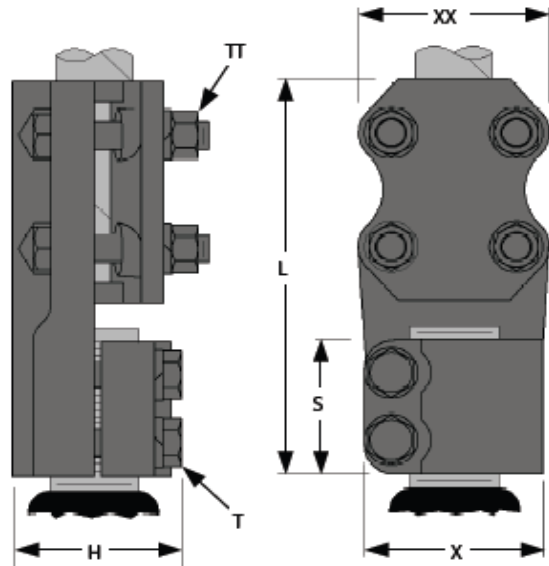
**Note (\*)**  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Perno<br>Stud        |              | Derivación<br>Tap |              | Dimensiones en mm<br>Dimensions in mm |     |    |    |    |     |    |
|---------------------|----------------------|--------------|-------------------|--------------|---------------------------------------|-----|----|----|----|-----|----|
|                     | Diámetro<br>Diameter | Hilos<br>TPI | Cable AWG/MCM     | Tubo<br>Tube | H                                     | L   | S  | T  | TT | X   | XX |
| HPR5513C13          | 13(1/2")             | 13           | 6S-4T (*)         | ---          | 30                                    | 97  | 39 | 10 | 10 | 41  | 48 |
| HPR5519C13          | 13(1/2")             | 13           | 6 S-500(*)        | 10-13        | 30                                    | 105 | 39 | 10 | 10 | 41  | 55 |
| HPR5619C16          | 19(3/4")             | 16           | 6S-500(*)         | 10-13        | 33                                    | 105 | 39 | 10 | 10 | 41  | 55 |
| HPR5628C16          | 19(3/4")             | 16           | 2S-1000(*)        | 10-19        | 48                                    | 122 | 41 | 10 | 13 | 41  | 72 |
| HPR5713C14          | 25(1")               | 14           | 6S-4T(*)          | ---          | 48                                    | 94  | 41 | 10 | 10 | 57  | 48 |
| HPR5719C14          | 25(1")               | 14           | 6S-500(*)         | 10-13        | 48                                    | 105 | 41 | 10 | 10 | 57  | 55 |
| HPR5728C14          | 25(1")               | 14           | 2S-1000(*)        | 10-19        | 48                                    | 122 | 41 | 10 | 13 | 57  | 72 |
| HPR5732C14          | 25(1")               | 14           | 4/OT-2000(*)      | 10-32        | 48                                    | 141 | 41 | 10 | 13 | 57  | 86 |
| HPR57513C12         | 29(1 1/8")           | 12           | 6S-4T(*)          | ---          | 48                                    | 94  | 41 | 10 | 10 | 57  | 48 |
| HPR57519C12         | 29(1 1/8")           | 12           | 6S-500(*)         | 10-13        | 48                                    | 105 | 41 | 10 | 10 | 57  | 55 |
| HPR57528C12         | 29(1 1/8")           | 12           | 2S-1000(*)        | 10-19        | 48                                    | 122 | 41 | 10 | 13 | 57  | 72 |
| HPR57532C12         | 29(1 1/8")           | 12           | 4/OT-2000(*)      | 10-32        | 48                                    | 141 | 41 | 10 | 13 | 57  | 86 |
| HPR5813C12          | 32(1 1/4")           | 12           | 6S-4T(*)          | ---          | 48                                    | 94  | 41 | 10 | 10 | 57  | 48 |
| HPR5819C12          | 32(1 1/4")           | 12           | 6S-500(*)         | 10-13        | 48                                    | 105 | 41 | 10 | 10 | 57  | 55 |
| HPR5828C12          | 32(1 1/4")           | 12           | 2S-1000(*)        | 10-19        | 48                                    | 122 | 41 | 10 | 13 | 57  | 72 |
| HPR5832C12          | 32(1 1/4")           | 12           | 4/O-2000          | 10-32        | 48                                    | 141 | 41 | 10 | 13 | 57  | 86 |
| HPR5913C12          | 38(1 1/2")           | 12           | 6S-4T(*)          | ---          | 56                                    | 112 | 54 | 13 | 10 | 70  | 48 |
| HPR5919C12          | 38(1 1/2")           | 12           | 6S-500(*)         | 10-12        | 56                                    | 122 | 54 | 13 | 10 | 70  | 55 |
| HPR5928C12          | 38(1 1/2")           | 12           | 2S-1000(*)        | 10-19        | 56                                    | 139 | 54 | 13 | 13 | 70  | 72 |
| HPR5932C12          | 38(1 1/2")           | 12           | 4/OT-2000(*)      | 10-32        | 56                                    | 148 | 54 | 13 | 13 | 70  | 86 |
| HPR6013C12          | 51(2")               | 12           | 6S-4T(*)          | ---          | 73                                    | 127 | 54 | 13 | 10 | 86  | 48 |
| HPR6019C12          | 51(2")               | 12           | 6S-500(*)         | 10-13        | 73                                    | 131 | 54 | 13 | 10 | 86  | 55 |
| HPR6028C12          | 51(2")               | 12           | 2S-1000(*)        | 10-19        | 73                                    | 140 | 54 | 13 | 13 | 86  | 72 |
| HPR6032C12          | 51(2")               | 12           | 4/OT-2000(*)      | 10-32        | 73                                    | 157 | 54 | 13 | 13 | 86  | 86 |
| HPR6119C12          | 64(2 1/2")           | 12           | 6S-500(*)         | 10-13        | 90                                    | 137 | 64 | 13 | 10 | 98  | 55 |
| HPR6128C12          | 64(2 1/2")           | 12           | 2S-1000(*)        | 10-19        | 90                                    | 148 | 64 | 13 | 13 | 98  | 72 |
| HPR6132C12          | 64(2 1/2")           | 12           | 4/OT-2000(*)      | 10-32        | 90                                    | 163 | 64 | 13 | 13 | 98  | 86 |
| HPR6219C12          | 76(3")               | 12           | 6S-500(*)         | 10-13        | 102                                   | 142 | 75 | 16 | 10 | 122 | 55 |
| HPR6228C12          | 76(3")               | 12           | 2S-1000(*)        | 10-19        | 102                                   | 165 | 75 | 16 | 13 | 122 | 72 |

Note: TPI – Threads Per Inch.

Conector de aleación de aluminio para birlo liso o roscado que conecta a cable, aceptando un amplio rango. Puede realizarse conexión aluminio aluminio o aluminio cobre. El elemento del cable esta diseñado para obtener el máximo contacto de superficie con el cable además de tener la embocadura de forma que evita el degollamiento del cable. En la instalación se recomienda el uso de la pasta antioxidante "Deltatron" en las uniones.

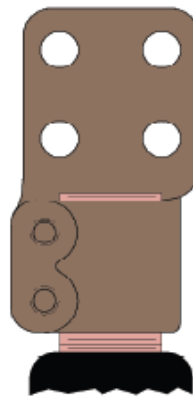
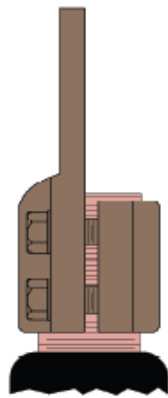
Aluminum alloy connector to be installed on smooth or threaded stud to accommodate and ample range of aluminum or copper cable. Aluminum to copper joint needs and inhibitor paste "Deltatron" to prevent galvanic corrosion. Its design avoids damaging the cable strand as well as assuring maximum contact on the cable and low resistance.



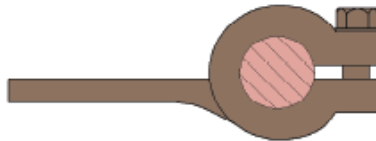
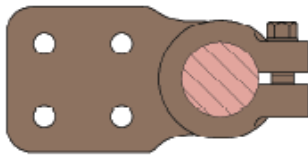
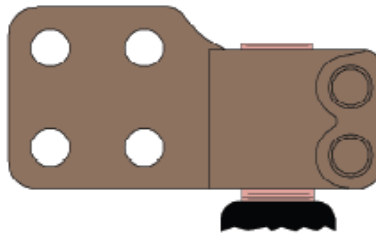
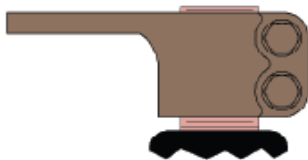
| Catálogo<br>Catalog | Perno<br>Stud | Cable AWG/MCM        |                        | Dimensiones en mm<br>Dimensions in mm |     |    |    |    |    |    |
|---------------------|---------------|----------------------|------------------------|---------------------------------------|-----|----|----|----|----|----|
|                     |               | Aluminio<br>Aluminum | ACSR                   | H                                     | L   | S  | T  | TT | X  | XX |
| HPR5717AC14         | 25(1")        | 250-400              | 4/0(6/1)-397(18/1)     | 64                                    | 152 | 59 | 13 | 13 | 65 | 67 |
| HPR5721AC14         | 25(1")        | 350-600              | 336(18/1)-477(30/7)    | 64                                    | 152 | 59 | 13 | 13 | 68 | 70 |
| HPR5727AC14         | 25(1")        | 600-900              | 477(30/7)-795(54/7)    | 64                                    | 167 | 59 | 13 | 13 | 68 | 76 |
| HPR5729AC14         | 25(1")        | 900-1250             | 715(30/19)-1113(54/19) | 64                                    | 173 | 59 | 13 | 13 | 68 | 81 |
| HPR57517AC12        | 29(1 1/8")    | 250-400              | 4/0(6/1)-397(18/1)     | 64                                    | 152 | 59 | 13 | 13 | 65 | 67 |
| HPR57521AC12        | 29(1 1/8")    | 350-600              | 336(18/1)-477(30/7)    | 64                                    | 152 | 59 | 13 | 13 | 68 | 70 |
| HPR57527AC12        | 29(1 1/8")    | 600-900              | 477(30/7)-795(54/7)    | 64                                    | 167 | 59 | 13 | 13 | 68 | 76 |
| HPR57529AC12        | 29(1 1/8")    | 900-1250             | 715(30/19)-1113(54/19) | 64                                    | 173 | 59 | 13 | 13 | 68 | 81 |
| HPR5817AC12         | 32(1 1/4")    | 250-400              | 4/0(6/1)-397(18/1)     | 64                                    | 152 | 59 | 13 | 13 | 65 | 67 |
| HPR5821AC12         | 32(1 1/4")    | 350-600              | 336(18/1)-477(30/7)    | 64                                    | 152 | 59 | 13 | 13 | 68 | 70 |
| HPR5827AC12         | 32(1 1/4")    | 600-900              | 477(30/7)-795(54/7)    | 64                                    | 167 | 59 | 13 | 13 | 68 | 76 |
| HPR5829AC12         | 32(1 1/4")    | 900-1250             | 715(30/19)-1113(54/19) | 64                                    | 173 | 59 | 13 | 13 | 68 | 81 |
| HPR5830AC12         | 32(1 1/4")    | 1250-1600            | 1113(54/19)-1413(54/7) | 64                                    | 188 | 59 | 13 | 16 | 68 | 95 |
| HPR5917AC12         | 38(1 1/4")    | 250-400              | 4/0(6/1)-397(18/1)     | 69                                    | 155 | 59 | 13 | 13 | 75 | 67 |
| HPR5921AC12         | 38(1 1/2")    | 350-600              | 336(18/1)-477(30/7)    | 69                                    | 162 | 59 | 13 | 13 | 75 | 70 |
| HPR5927AC12         | 38(1 1/2")    | 600-900              | 477(30/7)-795(54/7)    | 69                                    | 169 | 59 | 13 | 13 | 75 | 76 |
| HPR5929AC12         | 38(1 1/2")    | 900-1250             | 715(30/19)-1113(54/19) | 69                                    | 173 | 59 | 13 | 13 | 75 | 81 |
| HPR5930AC12         | 38(1 1/2")    | 1250-1600            | 1113(54/19)-1431(54/7) | 69                                    | 188 | 59 | 13 | 16 | 75 | 95 |
| HPR6017AC12         | 51(2")        | 250-400              | 4/0(6/1)-397(18/1)     | 81                                    | 160 | 64 | 13 | 13 | 86 | 67 |
| HPR6021AC12         | 51(2")        | 350-600              | 336(18/1)-477(30/7)    | 81                                    | 162 | 64 | 13 | 13 | 86 | 70 |
| HPR6027AC12         | 51(2")        | 600-900              | 477(30/7)-795(54/7)    | 81                                    | 180 | 64 | 13 | 13 | 86 | 76 |
| HPR6029AC12         | 51(2")        | 900-1250             | 715(30/19)-1113(54/19) | 81                                    | 193 | 64 | 13 | 13 | 86 | 81 |
| HPR6030AC12         | 51(2")        | 1250-1600            | 1113(54/19)-1431(54/7) | 81                                    | 193 | 64 | 13 | 16 | 86 | 95 |

Conector de aleación de cobre para birlo liso o roscado que conecta a superficie plana, la que usualmente es una o varias barras colectoras. Dependiendo de la posición de las barras se optara por el tipo de conector "PM", "PMA" o "PMR". Consúltenos para su necesidad específica.

Copper alloy connector for smooth or threaded stud to one or more different position flat copper bars. This type connector is suitable to be manufactured according to your needs in different angle or tongue position for example type "PM" shows vertical position with relation to the stud . "PMA" shows a flat position of 90 ° in relation to the stud, "PMR" shows a vertical position of 90 ° in relation to the stud.



Tipo PM  
PM Type



Tipo PMA  
PMA Type

Tipo PMR  
PMR Type



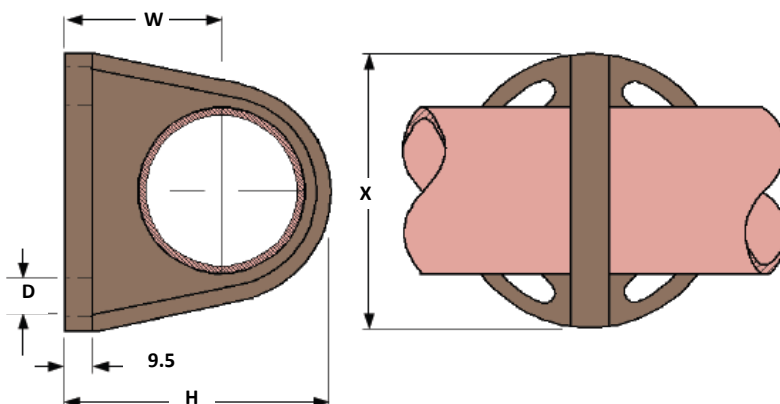


**Soportes y tapones para buses**  
**Bus supports and corona bells**



Soporte deslizable de aleación de cobre para tubo de cobre. Cuenta con ranuras en la base que permiten su alineamiento con el aislador.

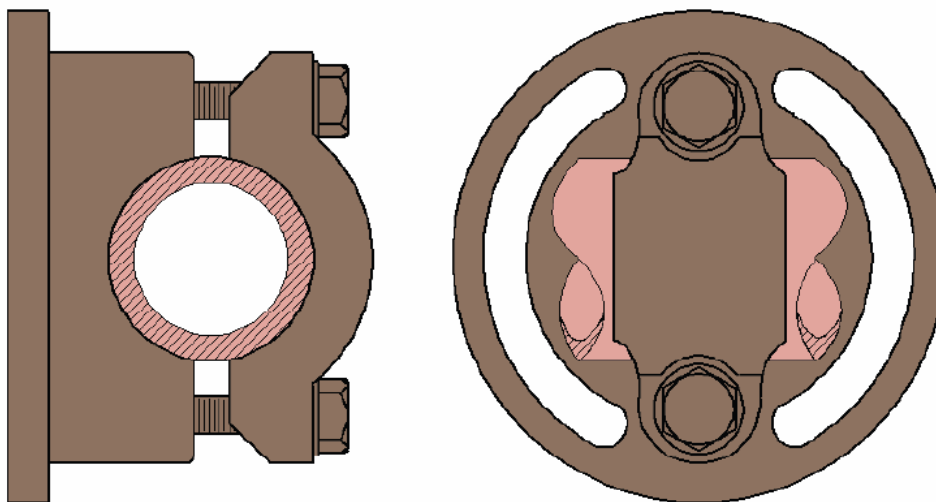
Copper alloy slide bus support for copper tube. It is slotted bolt mounting circle let the clamp position to match the necessary bus angle with the insulator.



| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Círculo para<br>Tornillos<br><br>Bolts Circle | Dimensiones en mm<br>Dimensions in mm |     |    |     |
|---------------------|---------------------|---|---------------------------------------|-----|----|-----|
|                     |                     |   | D                                     | H   | W  | X   |
| SD37-3              | 19(3/4")            | 76(3")  | 14                                    | 81  | 51 | 108 |
| SD37-5              | 19(3/4")            | 127(5")                                       | 17                                    | 100 | 70 | 159 |
| SD38-3              | 25(1")              | 76(3")  | 14                                    | 86  | 52 | 108 |
| SD38-5              | 25(1")              | 127(5")                                       | 17                                    | 105 | 70 | 159 |
| SD39-3              | 32(1 1/4")          | 76(3")  | 14                                    | 96  | 57 | 108 |
| SD39-5              | 32(1 1/4")          | 127(5")                                       | 17                                    | 111 | 76 | 159 |
| SD40-3              | 38(1 1/2")          | 76(3")  | 14                                    | 106 | 64 | 108 |
| SD40-5              | 38(1 1/2")          | 127(5")                                       | 17                                    | 122 | 83 | 159 |
| SD41-3              | 51(2")              | 76(3")  | 14                                    | 111 | 63 | 108 |
| SD41-5              | 51(2")              | 127(5")                                       | 17                                    | 130 | 83 | 159 |
| SD42-3              | 64(2 1/2")          | 76(3")  | 14                                    | 133 | 76 | 108 |
| SD42-5              | 64(2 1/2")          | 127(5")                                       | 17                                    | 152 | 95 | 159 |
| SD43-3              | 76(3")              | 76(3")  | 14                                    | 144 | 76 | 108 |
| SD43-5              | 76(3")              | 127(5")                                       | 17                                    | 163 | 95 | 159 |

Soporte fijo de aleación de cobre para tubo de cobre. Su base cuenta con ranuras en que permiten su alineamiento con el aislador.

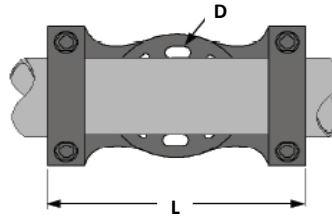
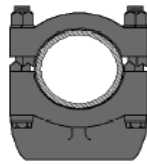
Fixed Copper alloy support for copper tube. The slotted circle mounting matches the insulator base to the necessary position.



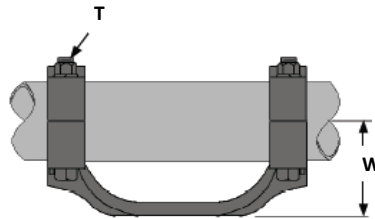
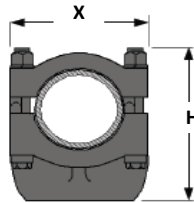
Soporte doble de aleación de aluminio para un bus tubular de cobre o aluminio que ha de montarse sobre un aislador tipo poste o pedestal. La separación entre los sujetadores ofrece soporte en una amplia longitud del bus. El diseño cuenta con elementos independientes que al girarlos 180° pueden ofrecer posición fija o deslizante para el bus.

Aluminum alloy double support for bus of aluminum or copper tube to be mounted on a post or pedestal insulator. The distance between the clamps brings support in the tube a long distance of the bus. Its design has two independent caps with rotation of 180°, it may be positioned to different angles either fixable or sliding for the bus.

**Posición fija**  
**Fixed position**



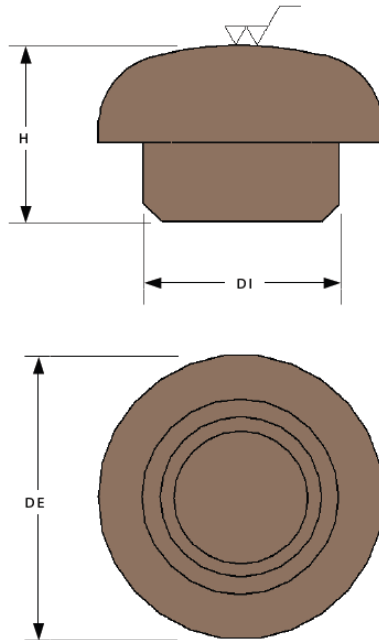
**Posición deslizante**  
**Sliding position**



| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Círculo para<br>Tornillos<br>Bolts Circle | Dimensiones en mm<br>Dimensions in mm |     |     |    |     |     |
|---------------------|---------------------|---|---------------------------------------|-----|-----|----|-----|-----|
|                     |                     |   | D                                     | H   | L   | T  | X   | W   |
| FSD38A-3            | 25(1")              | 76(3")                                    | 14                                    | 104 | 211 | 12 | 78  | 55  |
| FSD38A-5            | 25(1")              | 127(5")                                   | 17                                    | 98  | 267 | 12 | 78  | 55  |
| FSD39A-3            | 32(1 1/4")          | 76(3")                                    | 14                                    | 98  | 211 | 12 | 84  | 56  |
| FSD39A-5            | 32(1 1/4")          | 127(5")                                   | 17                                    | 98  | 267 | 12 | 84  | 56  |
| FSD40A-3            | 38(1 1/2")          | 76(3")                                    | 14                                    | 117 | 211 | 12 | 95  | 65  |
| FSD40A-5            | 38(1 1/2")          | 127(5")                                   | 17                                    | 117 | 267 | 12 | 95  | 65  |
| FSD41A-3            | 51(2")              | 76(3")                                    | 14                                    | 143 | 215 | 16 | 116 | 70  |
| FSD41A-5            | 51(2")              | 127(5")                                   | 17                                    | 143 | 267 | 16 | 116 | 70  |
| FSD42A-3            | 64(2 1/2")          | 76(3")                                    | 14                                    | 143 | 215 | 16 | 129 | 84  |
| FSD42A-5            | 64(2 1/2")          | 127(3")                                   | 17                                    | 143 | 267 | 16 | 136 | 73  |
| FSD43A-3            | 76(3")              | 76(3")                                    | 14                                    | 168 | 211 | 16 | 145 | 89  |
| FSD43A-5            | 76(3")              | 127(5")                                   | 17                                    | 168 | 267 | 16 | 145 | 89  |
| FSD44A-3            | 89(3 1/2")          | 76(3")                                    | 14                                    | 176 | 215 | 16 | 156 | 102 |
| FSD44A-5            | 89(3 1/2")          | 127(5")                                   | 17                                    | 176 | 267 | 16 | 156 | 102 |
| FSD45A-3            | 102(4")             | 76(3")                                    | 14                                    | 190 | 215 | 16 | 178 | 116 |
| FSD45A-5            | 102(4")             | 127(5")                                   | 17                                    | 196 | 267 | 16 | 178 | 116 |

Tapón interno de aleación de cobre que se usa para reducir pérdidas por descargas electrostáticas en tubos de cobre y le ofrece protección contra el deterioro excesivo de la superficie interior. Para su instalación debe entrar forzado en el extremo del tubo

Internal type copper alloy corona bell installed with the purpose to reduce losses of electric discharges in copper tubes and its protection against the damage of their internal surface. For its installation must be fit the exact dimension of the tube.

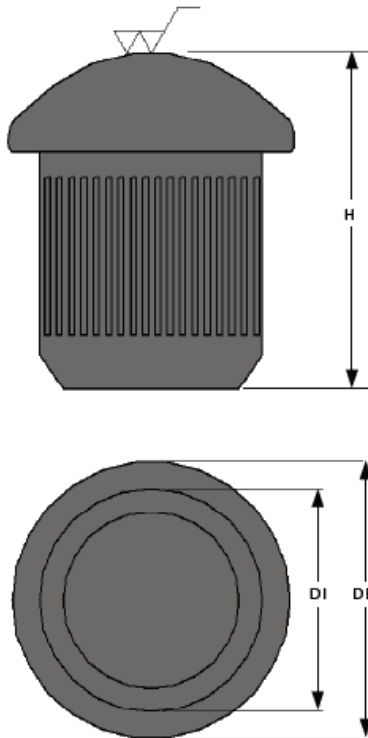


| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Dimensiones en mm<br>Dimensions in mm |     |    |
|---------------------|---------------------|---------------------------------------|-----|----|
|                     |                     | DE                                    | DI  | H  |
| TA36                | 13(1/2")            | 21                                    | 16  | 16 |
| TA37                | 19(3/4")            | 27                                    | 21  | 17 |
| TA38                | 25(1")              | 33                                    | 27  | 19 |
| TA39                | 32(1 1/4")          | 42                                    | 35  | 19 |
| TA40                | 38(1 1/2")          | 48                                    | 41  | 27 |
| TA41                | 51(2")              | 60                                    | 52  | 27 |
| TA42                | 64(2 1/2")          | 73                                    | 64  | 35 |
| TA43                | 76(3")              | 89                                    | 78  | 45 |
| TA44                | 89(3 1/2")          | 102                                   | 89  | 52 |
| TA45                | 102(4")             | 114                                   | 102 | 57 |
| TA46                | 114(4 1/2")         | 127                                   | 114 | 67 |

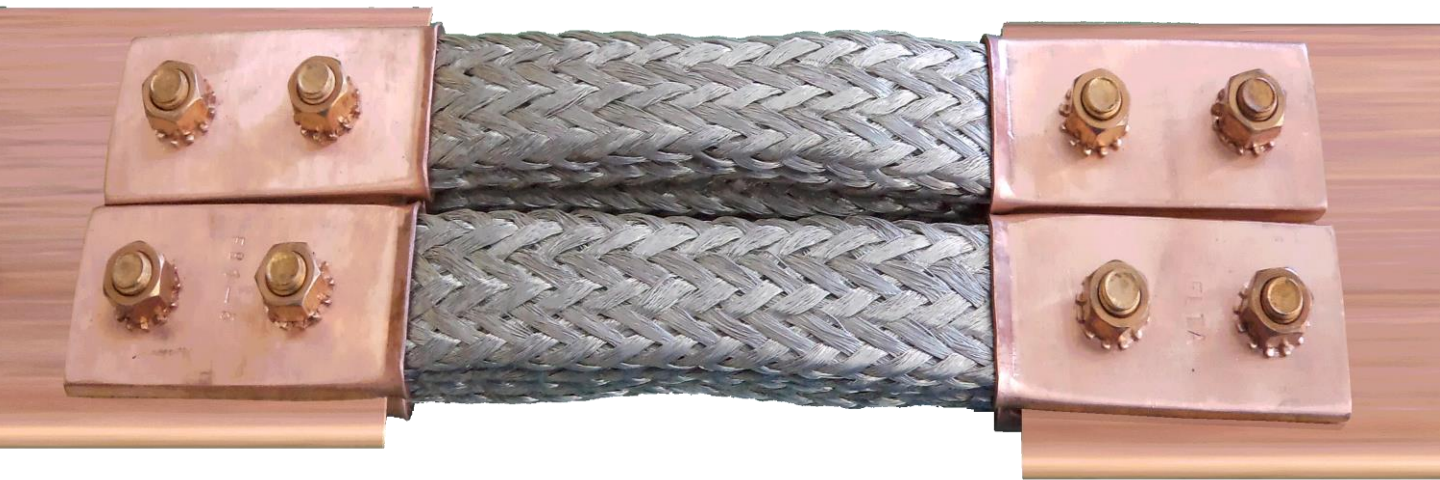
Tapón interno de aleación de aluminio que se instala introduciéndolo forzosamente en el extremo de un tubo de aluminio IPS. El tapón reduce apreciablemente las pérdidas electrostáticas y la radio interferencia además de que ofrece protección contra la lluvia y el exceso de humedad.

Internal type aluminum alloy corona bell for sealing IPS aluminum tube.

The corona bell reduce electrostatic losses and radio interference, sealing the end of the tube against rain and excessive humidity.



| Catálogo<br>Catalog | Tubo<br>Tube<br>IPS | Dimensiones en mm<br>Dimensions in mm |     |    |
|---------------------|---------------------|---------------------------------------|-----|----|
|                     |                     | DE                                    | DI  | H  |
| TA37A               | 19(3/4")            | 27                                    | 21  | 33 |
| TA38A               | 25(1")              | 33                                    | 27  | 38 |
| TA39A               | 32(1 1/4")          | 42                                    | 35  | 45 |
| TA40A               | 38(1 1/2")          | 48                                    | 41  | 49 |
| TA41A               | 51(2")              | 60                                    | 53  | 56 |
| TA42A               | 64(2 1/2")          | 73                                    | 63  | 60 |
| TA43A               | 76(3")              | 89                                    | 78  | 68 |
| TA44A               | 89(3 1/2")          | 102                                   | 90  | 83 |
| TA45A               | 102(4")             | 114                                   | 102 | 83 |
| TA46A               | 114(4 1/2")         | 127                                   | 115 | 89 |
| TA47A               | 127(5")             | 141                                   | 128 | 99 |



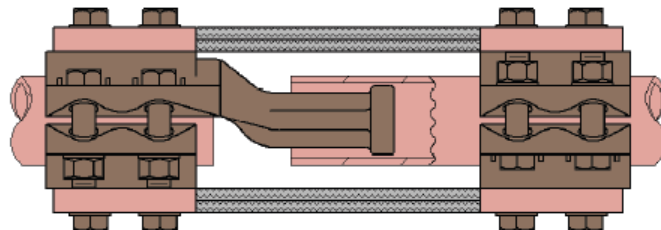
# Conectores de expansión

## Expansion connectors

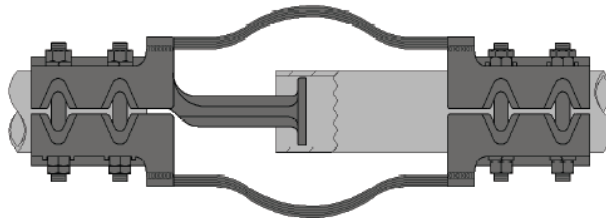
Los conectores de expansión están contruidos con elementos flexibles (trenclillas o laminillas) que permiten cierto movimiento entre conductores rígidos o entre un conductor rígido y un equipo, sin demerito de la conexión eléctrica. Los elementos flexibles cuentan con la suficiente sección transversal para conducir la corriente nominal del bus sin sobrecalentarse. Los conectores flexibles ofrecen el amortiguamiento de los esfuerzos provocados por la operación del equipo y absorben los movimientos provocados por el cambio de temperatura del bus. En los conectores flexibles de aleación de cobre se utilizan trenclillas flexibles de alambre de cobre estañado y en los semiflexibles soleras de cobre estañadas para retardar la corrosión en atmósferas contaminadas. Los conectores con guía aceptan movimientos longitudinales y angulares del bus, además de mantenerlo en posición, la guía debe estar dentro del extremo del tubo; los conectores sin guía permiten el movimiento del bus sin esfuerzo.

Expansion connectors are made of copper alloy by using flexible copper braid or laminated strips that allows certain conductors movements between rigid conductors or rigid conductors and the equipment, without affecting the electric connection. The flexible joint elements have enough transversal section for conducting the nominal bus current without overheating. The flexible connectors allows the damping of the stress as a consequence of the equipment operation and absorb the movements due to the change of the bus temperature. The flexible alloy copper connectors are manufactured with flexible wire of tinned copper braids, in the semi flexible tinned copper strips to delay the corrosion in polluted atmospheres. The connectors with guide accept longitudinal and angular movement of the bus, keeping the connector in position, the guide must be inside of the extreme of the tube; connectors without guide allows bus movement without any stress.

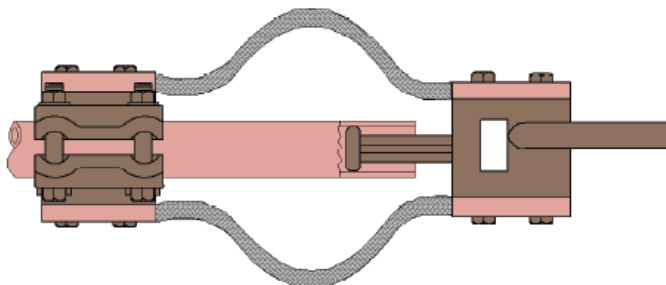
Tipo FE  
FE Type



Tipo FE-A  
FE-A Type

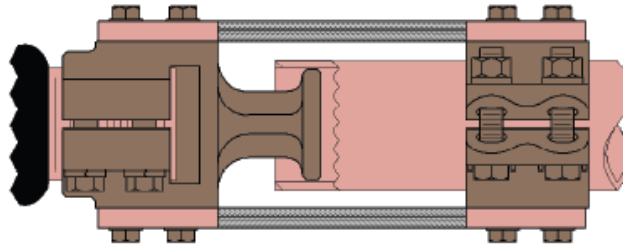


Tipo FZ  
FZ Type

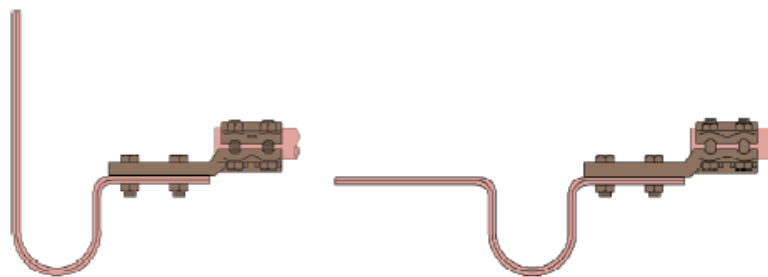
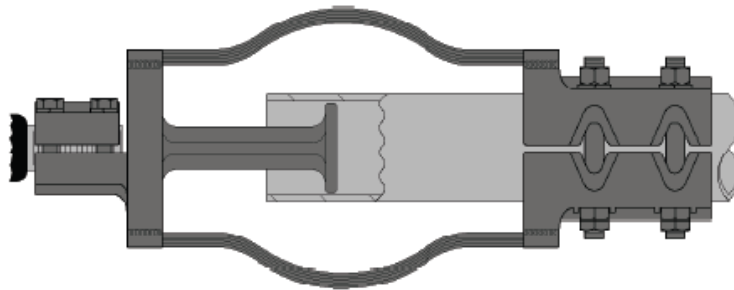


**Conectores de expansión**  
**Expansion Connectors**

**Tipo FP**  
**FP Type**



**Tipo FP-A**  
**FP-A Type**



**Tipo FPU**  
**FPU Type**

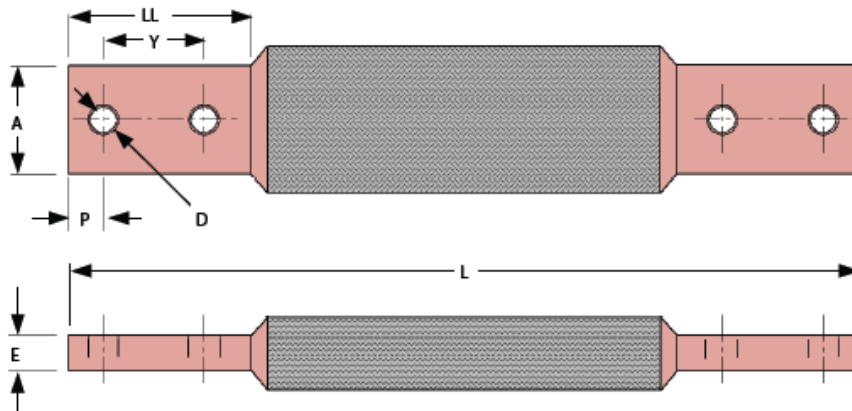
**Tipo FPW**  
**FPW Type**



Trencilla plana extra flexible de cobre estañado, cuenta con casquillos de cobre sin costura, prensados en frío a cada extremo. Son muy útiles en la conexión de los mangos móviles de interruptores y para aterrizar partes móviles o sujetas a vibraciones. La capacidad de corriente mostrada es para uso en interiores, referido a 60 ciclos de frecuencia con un incremento de 30°C, para uso en exteriores, aumenta la capacidad.

Tinned flexible copper braid with seamless ferrules on each end cold pressed in each end. Are very useful in connections of switches and grounding mobile components or equipment exposed to vibration.

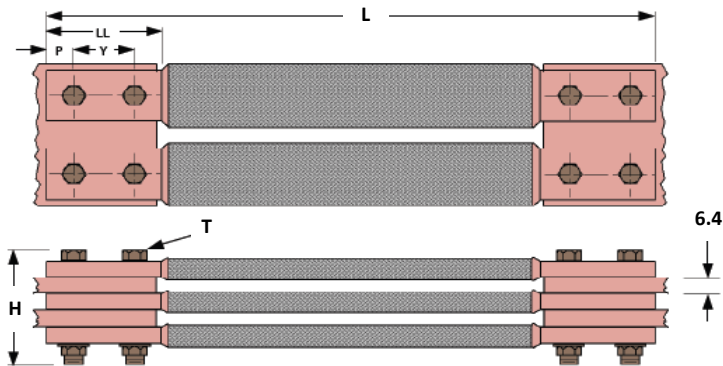
The current capacity shown on table is applicable for use in inner areas, refer to 60 frequency cycles with an increment of 30 °C, for external applications increase its capacity.



| Catálogo<br>Catalog | Capacidad<br>Capacity<br>A | Dimensiones en mm<br>Dimensions in mm |    |    |     |    |    |    |
|---------------------|----------------------------|---------------------------------------|----|----|-----|----|----|----|
|                     |                            | A                                     | D  | E  | L   | LL | P  | Y  |
| JD30                | 190                        | 24                                    | 11 | 3  | 305 | 64 | 16 | 32 |
| J2D30               | 380                        | 24                                    | 11 | 7  | 305 | 64 | 16 | 32 |
| J3D30               | 470                        | 30                                    | 11 | 7  | 305 | 64 | 16 | 32 |
| J4D30               | 600                        | 30                                    | 11 | 8  | 305 | 64 | 16 | 32 |
| JE30                | 340                        | 32                                    | 11 | 6  | 305 | 76 | 19 | 38 |
| J2E30               | 530                        | 41                                    | 11 | 6  | 305 | 76 | 19 | 38 |
| J3E30               | 700                        | 45                                    | 11 | 9  | 305 | 76 | 19 | 38 |
| J4E30               | 850                        | 45                                    | 11 | 11 | 305 | 76 | 19 | 38 |
| JF30                | 360                        | 30                                    | 11 | 6  | 305 | 76 | 19 | 38 |
| J2F30               | 600                        | 35                                    | 11 | 11 | 305 | 76 | 19 | 38 |
| J3F30               | 820                        | 37                                    | 11 | 14 | 305 | 76 | 19 | 38 |
| J4F30               | 1000                       | 37                                    | 11 | 20 | 305 | 76 | 19 | 38 |
| JG30                | 415                        | 38                                    | 11 | 6  | 305 | 76 | 19 | 38 |
| J2G30               | 700                        | 38                                    | 11 | 13 | 305 | 76 | 19 | 38 |
| J3G30               | 960                        | 43                                    | 11 | 17 | 305 | 76 | 19 | 38 |
| J4G30               | 1200                       | 44                                    | 11 | 23 | 305 | 76 | 19 | 38 |

Cople flexible para barra plana, fabricado con trencillas planas extra flexibles de cobre estañado, con casquillos de cobre sin costura en los extremos. Compensa la expansión o contracción en las instalaciones de las barras colectoras, evita rupturas de los aisladores o bujes a causa de vibraciones o asentamientos de terreno. El diseño considera barras de 6.4 mm de espesor separadas 6.4 mm. La capacidad de corriente es para uso en interiores, referida a 60 ciclos de frecuencia y teniendo 30°C de aumento de temperatura sobre 40°C de la del ambiente. Para usos en exteriores aumenta la capacidad.

Expansion joint for flat bar designed to take up longitudinal and lateral motion or ground settling. Compensate the expansion or contraction in the buses and avoid the rupture of insulator or studs caused by vibration or ground settlement. Made of tinned flexible copper braid with seamless ferrules on both ends. This type expansion couple consider 6.4 mm of thickness separated from each other at 6.4 mm also. The current capacity is for interior use, refer to 60 cycles of frequency and having 30° C of temperature increment over 40°C of environment temperature. External application increase its capacity.



| Barras<br>Bars       |               | Catálogo<br>Catalog | Capacidad<br>Capacity<br>A | Dimensiones en mm<br>Dimensions in mm |     |    |    |    |    |
|----------------------|---------------|---------------------|----------------------------|---------------------------------------|-----|----|----|----|----|
| Cantidad<br>Quantity | Ancho<br>Wide |                     |                            | H                                     | L   | LL | P  | T  | Y  |
| 1                    | 51(2")        | FB1-2               | 700                        | 38                                    | 305 | 76 | 19 | 10 | 38 |
| 1                    | 76(3")        | FB1-3               | 1000                       | 38                                    | 305 | 76 | 19 | 10 | 38 |
| 1                    | 102(4")       | FB1-4               | 1350                       | 38                                    | 305 | 76 | 19 | 10 | 38 |
| 1                    | 127(5")       | FB1-5               | 1600                       | 38                                    | 305 | 76 | 19 | 10 | 38 |
| 2                    | 51(2")        | FB2-2               | 1100                       | 57                                    | 305 | 76 | 19 | 10 | 38 |
| 2                    | 76(3")        | FB2-3               | 1650                       | 57                                    | 305 | 76 | 19 | 10 | 38 |
| 2                    | 102(4")       | FB2-4               | 2250                       | 57                                    | 305 | 76 | 19 | 10 | 38 |
| 2                    | 127(5")       | FB2-5               | 2650                       | 57                                    | 305 | 76 | 19 | 10 | 38 |
| 3                    | 51(2")        | FB3-2               | 1600                       | 70                                    | 305 | 76 | 19 | 10 | 38 |
| 3                    | 76(3")        | FB3-3               | 2000                       | 64                                    | 305 | 76 | 19 | 10 | 38 |
| 3                    | 102(4")       | FB3-4               | 2700                       | 70                                    | 305 | 76 | 19 | 10 | 38 |
| 3                    | 127(5")       | FB3-5               | 3200                       | 70                                    | 305 | 76 | 19 | 10 | 38 |
| 4                    | 51(2")        | FB4-2               | 1800                       | 83                                    | 305 | 76 | 19 | 10 | 38 |
| 4                    | 76(3")        | FB4-3               | 2200                       | 75                                    | 305 | 76 | 19 | 10 | 38 |
| 4                    | 102(4")       | FB4-4               | 3000                       | 83                                    | 305 | 76 | 19 | 10 | 38 |
| 4                    | 127(5")       | FB4-5               | 3500                       | 75                                    | 305 | 76 | 19 | 10 | 38 |



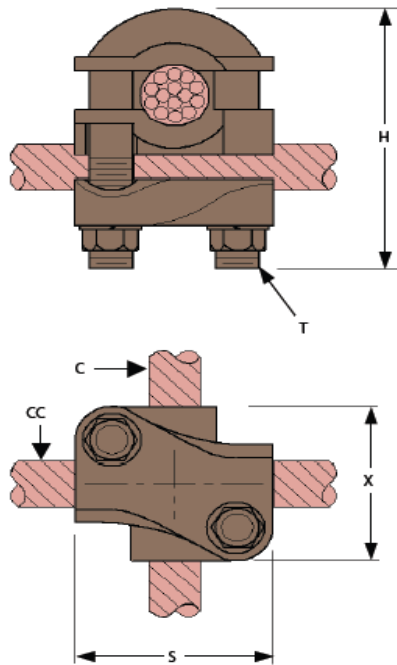
DELTA  
CONECTORES®



**Conectores para sistemas de tierra**  
**Ground connectors**

Conector de aleación de cobre para conectar en cruz a dos cables de cobre. Esta diseñado para utilizarse en sistemas de tierra, su uso principal es en la interconexión de redes de tierra para reducir el gradiente de voltaje, de ser necesario puede ser enterrado en concreto, ya que no cuenta con partes ferrosas.

Copper alloy connector to connect in cross two copper cables. It was designed for grounding systems, its main application is in the interconnection of grounding networks with the purpose to reduce the voltage gradient, if it is necessary can be buried in concrete considering that the hardware of this connector is made of non ferrous metal.

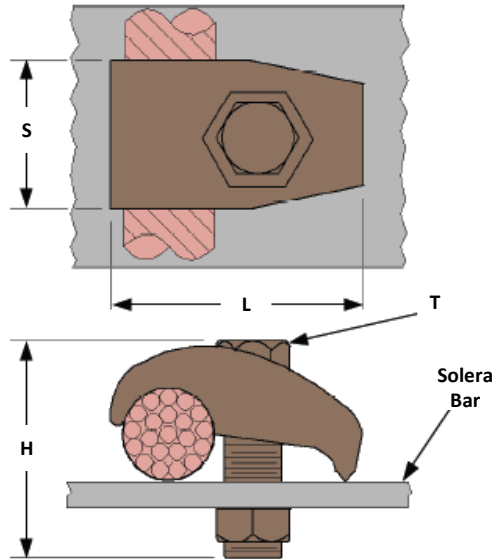


Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Cable AWG/MCM |              | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|---------------|--------------|---------------------------------------|----|----|----|
|                     | C             | CC           | H                                     | S  | T  | X  |
| TC1111              | 4S-2/0T (*)   | 4S-2/0T (*)  | 68                                    | 42 | 10 | 42 |
| TC1411              | 2/0S-250(*)   | 4S-2/0T(*)   | 68                                    | 46 | 10 | 46 |
| TC1414              | 2/0S-250(*)   | 2/0 S-250(*) | 68                                    | 46 | 10 | 46 |
| TC1919              | 300-500       | 300-500      | 92                                    | 64 | 13 | 64 |

Conector de aleación de cobre para unir un cable de cobre a superficie plana o cubiertas de equipo, el cable hace contacto directamente con la superficie a aterrizar. Se suministra con tornillo para absorber un espesor de 6.4mm (1/4")

Copper alloy connector for clamping ground cable to flat metal surface or equipment casing. The cast single body of this connector accommodates various cable size to grip bars up to 1/4" thickness.

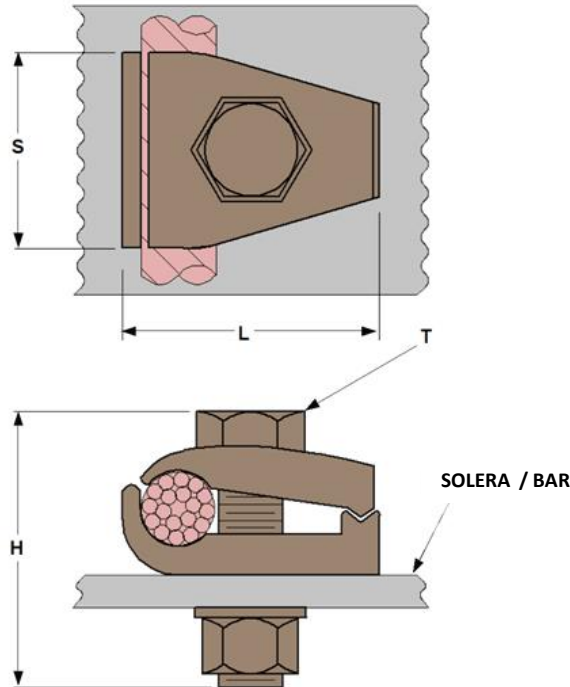


**Note (\*)**  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Cable AWG/MCM | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|---------------|---------------------------------------|----|----|----|
|                     |               | H                                     | L  | S  | T  |
| TSE20               | 4S-2/0T (*)   | 37                                    | 39 | 28 | 10 |
| TSE250              | 2/0S-250(*)   | 45                                    | 50 | 38 | 13 |
| TSE500              | 300-500       | 58                                    | 62 | 38 | 13 |

Conector de aleación de cobre que sirve para unir un cable de cobre a superficie plana o cubiertas de equipo. Se suministra con tornillería para absorber un espesor de barra de 6.4mm (1/4"). Puede surtirse con tornillería de bronce o de acero tropicalizado.

Copper alloy connector for clamping ground cable to flat metal surface of equipment casing. The double body of this connector accommodates various cable sizes to grip bars up to 1/4" thickness. It may be supplied with silicon bronze or galvanized steel bolts.

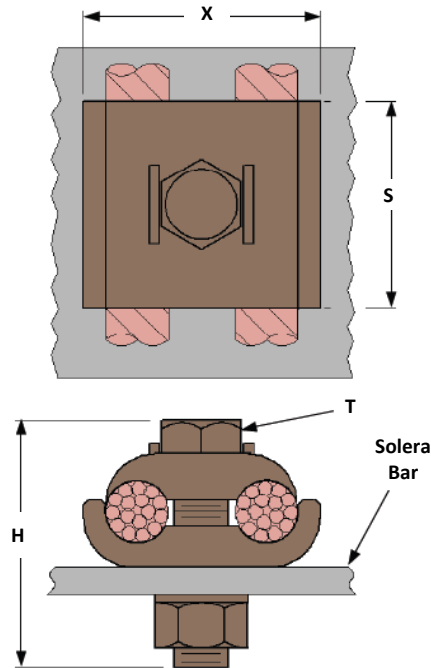


Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Cable AWG/MCM | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|---------------|---------------------------------------|----|----|----|
|                     |               | H                                     | L  | S  | T  |
| TE4T                | 8S-4T(*)      | 50                                    | 39 | 28 | 10 |
| TE20                | 4S-2/0T(*)    | 50                                    | 39 | 28 | 10 |
| TE250               | 2/0S-250(*)   | 58                                    | 50 | 38 | 13 |
| TE500               | 300-500       | 72                                    | 62 | 38 | 13 |
| TE750               | 550-750       | 87                                    | 73 | 48 | 16 |

Conector de aleación de cobre utilizado para unir dos cables de cobre, de igual calibre, a una superficie plana. Se suministra con tornillería para absorber un espesor hasta 6.4mm (1/4")

Copper alloy ground connector for two equal size cables to connect a flat bar. This ground connector is supplied with silicon bronze bolt to grip a flat bar of 1/4" thickness. Longer bolts may be supplied on request.

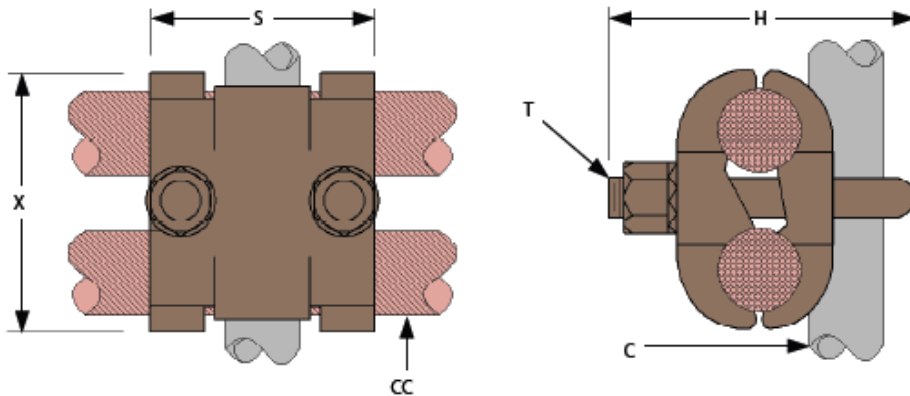


Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Cable<br>AWG/MCM | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|------------------|---------------------------------------|----|----|----|
|                     |                  | H                                     | S  | T  | X  |
| TD1111              | 4S-2/0T (*)      | 57                                    | 38 | 10 | 45 |
| TD1414              | 2/0S-250(*)      | 59                                    | 38 | 13 | 55 |
| TD1919              | 300-500          | 70                                    | 38 | 13 | 67 |

Conector de aleación de cobre de sistemas de tierra, se utiliza para conectar un par de cables de cobre. De igual calibre, a varilla o tubo IPS a 90°. Se puede utilizar uno de los cables como principal y el otro para efectuar una derivación hacia algún equipo.

Copper alloy ground connector for joining two equal size cables to connect a rod or IPS tube at 90°. It may be used as parallel connector installing one cable in the run and one at tap for connection to a fixed equipment.



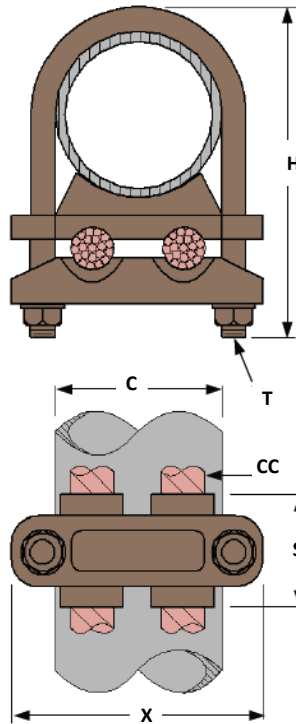
Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | C                    |                | CC               | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|----------------------|----------------|------------------|---------------------------------------|----|----|----|
|                     | Tubo IPS<br>IPS Tube | Varilla<br>Rod | Cable<br>AWG/MCM | H                                     | S  | T  | X  |
| TDH5611             | 10(3/8")             | 19(3/4)        | 4 S-2/0 T(*)     | 70                                    | 43 | 10 | 50 |
| TDH5614             | 10(3/8")             | 19(3/4)        | 2/0 S-250(*)     | 70                                    | 43 | 10 | 50 |
| TDH5619             | 10(3/8")             | 19(3/4)        | 300-500          | 83                                    | 71 | 13 | 84 |
| TDH5625             | 10(3/8")             | 19(3/4)        | 600-800          | 83                                    | 71 | 13 | 84 |



Conector de aleación de cobre de sistemas de tierra, se utiliza para conectar un par de cables de cobre, de igual calibre, a una varilla o tubo IPS, en forma paralela. Comúnmente se aplica para aterrizar postes de cercas. Si es necesario puede ser enterrado en concreto ya que no cuenta con partes ferrosas.

Copper alloy ground connector for two equal size parallel cables to connect a rod or IPS tube. May be used for fence poles, if its necessary can be buried in concrete because it does not have ferrous metal components.

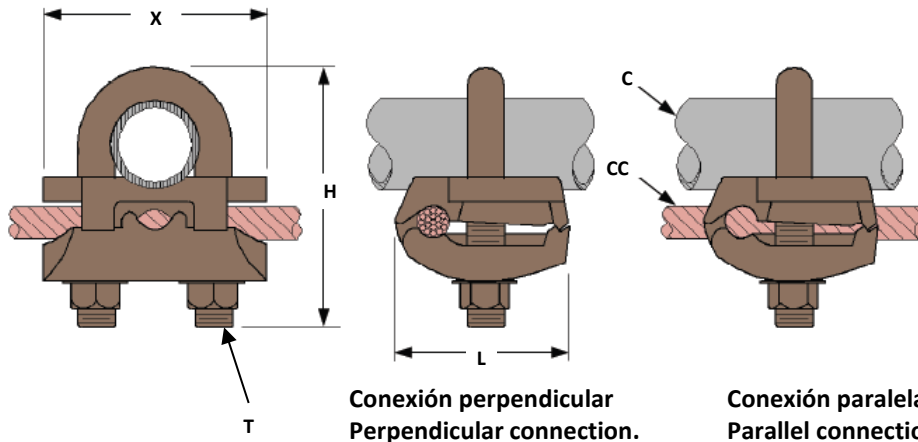


**Note (\*)**  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | C                    |                | CC               | Dimensiones en mm<br>Dimensions in mm |    |    |     |
|---------------------|----------------------|----------------|------------------|---------------------------------------|----|----|-----|
|                     | Tubo IPS<br>IPS Tube | Varilla<br>Rod | Cable<br>AWG/MCM | H                                     | S  | T  | X   |
| TDV4011             | 38(1 1/2")           | 41-48          | 4S-2/OT(*)       | 98                                    | 33 | 10 | 84  |
| TDV4014             | 38(1 1/2")           | 41-48          | 2/OT-250(*)      | 98                                    | 33 | 10 | 84  |
| TDV4111             | 51(2")               | 51-60          | 4S-2/OT(*)       | 114                                   | 33 | 10 | 91  |
| TDV4114             | 51(2")               | 51-60          | 2/OS-250(*)      | 114                                   | 33 | 10 | 91  |
| TDV4211             | 64(2 1/2")           | 54-64          | 4S-2/OT(*)       | 128                                   | 37 | 10 | 104 |
| TDV4214             | 64(2 1/2")           | 54-64          | 2/OS-250(*)      | 128                                   | 37 | 10 | 104 |
| TDV4311             | 76(3")               | 65-76          | 4S-2/OT(*)       | 144                                   | 38 | 10 | 122 |
| TDV4314             | 76(3")               | 65-76          | 2/OS-250(*)      | 144                                   | 38 | 10 | 122 |
| TDV4411             | 89(3 1/2")           | -----          | 4S-2/OT(*)       | 158                                   | 38 | 10 | 135 |
| TDV4414             | 89(3 1/2")           | -----          | 2/OS-250(*)      | 158                                   | 38 | 10 | 135 |
| TDV4511             | 102(4")              | -----          | 4S-2/OT(*)       | 188                                   | 41 | 10 | 152 |
| TDV4514             | 102(4")              | -----          | 2/OS-250(*)      | 188                                   | 41 | 10 | 152 |

Conector de aleación de cobre para sistemas de tierra que conecta un cable de cobre a un tubo o varilla ya sea en forma paralela o perpendicular. La tornillería es de bronce al silicio, resistente a la corrosión.

Copper alloy ground connector for clamping copper cable to driven rod or pipe either parallel or perpendicular. Silicon bronze hardware is used to prevent corrosion.



Conexión perpendicular  
Perpendicular connection.

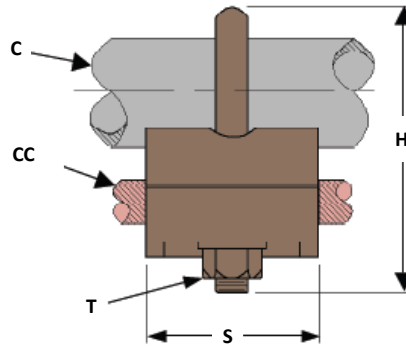
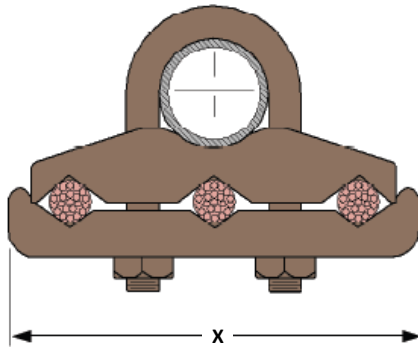
Conexión paralela  
Parallel connection

Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalogo | C                    |                | CC               | Dimensiones en mm<br>Dimensions in mm |    |    |     |
|----------------------|----------------------|----------------|------------------|---------------------------------------|----|----|-----|
|                      | Tubo IPS<br>IPS Tube | Varilla<br>Rod | Cable<br>AWG/MCM | H                                     | L  | T  | X   |
| TR3711               | 13-19 (1/2-3/4")     | 22-25          | 4 S-2/0 T(*)     | 76                                    | 37 | 10 | 60  |
| TR3714               | 13-19(1/2-3/4")      | 22-25          | 2/0 T-250(*)     | 76                                    | 45 | 10 | 60  |
| TR3811               | 25(1")               | ---            | 4 S-2/0 T(*)     | 82                                    | 45 | 10 | 72  |
| TR3814               | 25(1")               | ---            | 2/0 T-250(*)     | 82                                    | 45 | 10 | 72  |
| TR3911               | 32(1 1/4")           | ---            | 4 S-2/0 T(*)     | 89                                    | 40 | 10 | 77  |
| TR3914               | 32(1 1/4")           | ---            | 2/0 T-250(*)     | 89                                    | 40 | 10 | 77  |
| TR4011               | 38(1 1/2")           | ---            | 4 S-2/0 T(*)     | 103                                   | 45 | 10 | 83  |
| TR4014               | 38(1 1/2")           | ---            | 2/0 T-250(*)     | 103                                   | 45 | 10 | 83  |
| TR4111               | 51(2")               | ---            | 4 S- 2/0 T(*)    | 112                                   | 43 | 10 | 95  |
| TR4114               | 51(2")               | ---            | 2/0 T-250(*)     | 112                                   | 43 | 10 | 95  |
| TR4211               | 64(2 1/2")           | ---            | 4 S-2/0 T(*)     | 123                                   | 56 | 10 | 108 |
| TR4214               | 64(2 1/2")           | ---            | 2/0 T-250(*)     | 123                                   | 56 | 10 | 108 |
| TR4311               | 76(3")               | ---            | 4 S-2/0 T(*)     | 145                                   | 46 | 10 | 122 |
| TR4314               | 76(3")               | ---            | 2/0 T-250(*)     | 145                                   | 46 | 10 | 122 |
| TR5611               | 10(3/8")             | 16-19          | 4 S-2/0 T(*)     | 65                                    | 40 | 10 | 52  |
| TR5614               | 10(3/8")             | 16-19          | 2/0 T-250(*)     | 72                                    | 46 | 10 | 54  |

Conector de aleación de cobre para sistemas de tierra, conecta de uno a tres cables de cobre de igual calibre a un tubo o varilla en forma paralela. La tornillería es de bronce al silicio, resistente a la corrosión.

Copper alloy connector for grounding systems connect one to three copper cables of same range to a tube in parallel to driven rod or tube. Its supplied with silicon bronze hardware, to prevent corrosion.

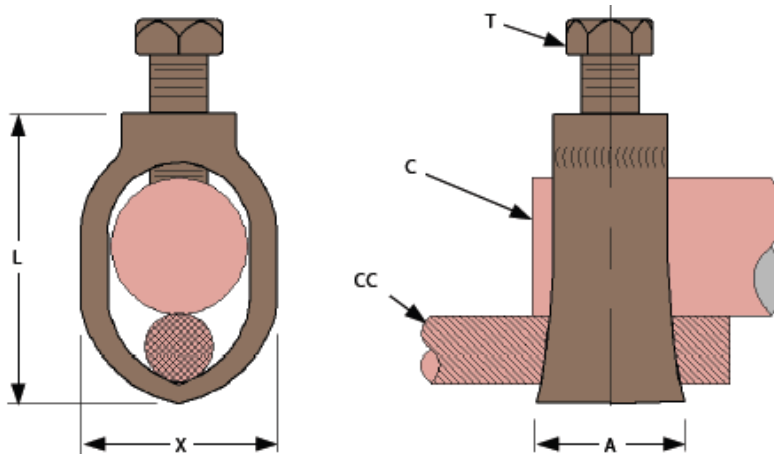


Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | C                    |                | CC               | Dimensiones en mm<br>Dimensions in mm |    |    |     |
|---------------------|----------------------|----------------|------------------|---------------------------------------|----|----|-----|
|                     | Tubo IPS<br>IPS Tube | Varilla<br>Rod | Cable<br>AWG/MCM | H                                     | S  | T  | X   |
| TT3714              | 12-19 (3/4")         | 22-25          | 2S-250 (*)       | 91                                    | 44 | 13 | 106 |
| TT3811              | 25(1")               | 29-32          | 4S-2/0T (*)      | 95                                    | 44 | 13 | 106 |
| TT3814              | 25(1")               | 29-32          | 2S-250 (*)       | 95                                    | 44 | 13 | 106 |
| TT5611              | 10(3/8")             | 16-19          | 4S-2/0T(*)       | 72                                    | 39 | 10 | 83  |
| TT5614              | 10(3/8")             | 16-19          | 2S-250(*)        | 85                                    | 41 | 13 | 94  |
| TT5619              | 10(3/8")             | 16-19          | 300-500          | 91                                    | 45 | 13 | 109 |

Conector mecánico para unir varilla de tierra a conductor de cobre. Su cuerpo de bronce al aluminio y diseño compacto lo hace un conector confiable, con excelente resistencia mecánica y anticorrosiva. El conector debe deslizarse por el extremo de la varilla hasta el punto de la conexión.

Mechanical copper alloy connector for joining ground wire or cable to driven rod. Made of aluminum bronze and compact design, with reliable performance and excellence mechanical and corrosion resistance. Installation must begin sliding connector along the driven rod to the connection point required.



Especificación CFE 2DI00-25  
CFE specification CFE 2DI00-25

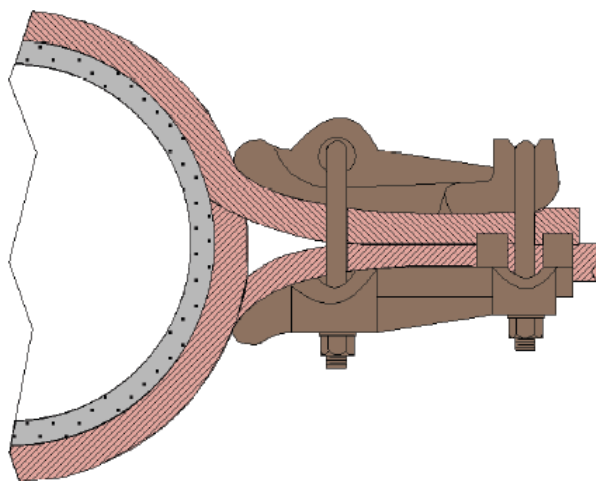
|        |       |
|--------|-------|
| MET 16 | TJ555 |
|--------|-------|

Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Varilla<br>Rod | Cable<br>AWG/MCM | Dimensiones en mm<br>Dimensions in mm |    |    |    |
|---------------------|----------------|------------------|---------------------------------------|----|----|----|
|                     | C              | CC               | A                                     | L  | T  | X  |
| TJ555               | 16 (5/8")      | 8 S-1T(*)        | 21                                    | 43 | 10 | 26 |
| TJ56                | 19(3/4")       | 8 S-1/OT(*)      | 23                                    | 44 | 10 | 28 |

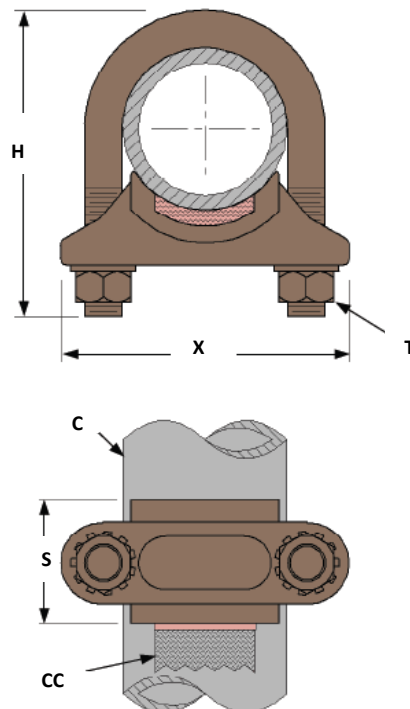
Conector de aleación de cobre para conectar un cable de cobre a un tubo de gran diámetro o poste en sistemas de tierra.

Copper alloy ground connector to join copper cable to a large diameter tube or pole in grounding systems.



Conector de aleación de cobre para unir una trenchilla flexible a tubo o varilla. Es de gran utilidad para aterrizar partes móviles como mango de interruptores y puertas, además de postes de cercas y varillas del sistema de tierras. Es un conector resistente a la corrosión.

Copper alloy ground connector to join flat flexible copper braid to pipe or rod . It is designed to be used with fence rods, ground pipes or columns. Highly resistant to corrosion.



| Catálogo<br>Catalog | C                    |                | CC                  | Dimensiones en mm<br>Dimensions in mm |    |    |     |
|---------------------|----------------------|----------------|---------------------|---------------------------------------|----|----|-----|
|                     | Tubo IPS<br>IPS Tube | Varilla<br>Rod | Trenchilla<br>Braid | H                                     | S  | T  | X   |
| TG40-1              | 38(1 1/2")           | 41-48          | 25(1")              | 87                                    | 40 | 10 | 81  |
| TG40-15             | 38(1 1/2")           | 41-48          | 38(1 1/2")          | 87                                    | 40 | 10 | 81  |
| TG41-15             | 51(2")               | 51-60          | 38(1 1/2")          | 107                                   | 40 | 10 | 92  |
| TG41-2              | 51(2")               | 51-60          | 51(2")              | 107                                   | 40 | 13 | 92  |
| TG42-2              | 64(2 1/2")           | 64-73          | 51(2")              | 123                                   | 47 | 13 | 114 |
| TG42-25             | 64(2 1/2")           | 64-73          | 64(2 1/2")          | 123                                   | 47 | 13 | 114 |
| TG43-2              | 76(3")               | 76-89          | 51(2")              | 145                                   | 51 | 13 | 132 |



DELTA  
CONECTORES®

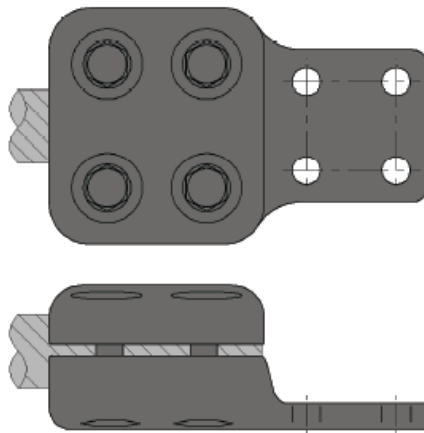


**Conectores para extra alto voltaje**  
**Extra high voltage connectors**

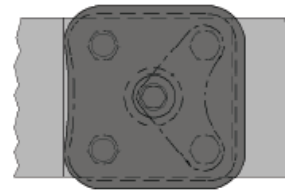
## Conectores de Extra Alto Voltaje Extra high Voltage Connectors

Los conectores de extra alto voltaje están hechos con aleación de aluminio, su exterior se fabrica con radios generosos (aerodinámico) y con superficie lisa, libre de asperezas y filos. Son utilizados en subestaciones de potencia para conexiones de circuitos que operan a más de 230 kV, estos conectores cumplen los requerimientos mecánicos y eléctricos de los conectores convencionales. Además no presentan corona ni radiointerferencia operando hasta su voltaje nominal, independientemente del ambiente; su voltaje nominal de operación es de 550 kV, excepto los conectores de expansión de los cuales es de 345 kV.

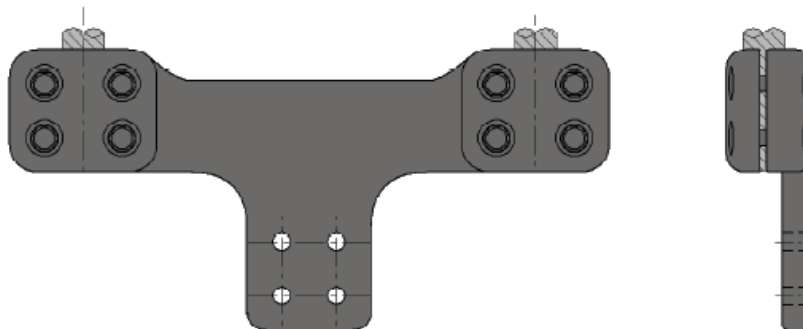
Extra high voltage connectors are made of aluminum alloy. Their external surface is manufactured with aerodynamic shape and its surface is smooth and polished, free of sharp edges. These type of connectors are used in power substations for circuits with operations over 230kV, and fulfill all the mechanical and electric requirements of the conventional connectors. Also do not present Corona and Radio Interference effect in operation until its nominal voltage, independently of the environment; their nominal operation voltage is 550 kV, except for the expansion connectors whose nominal voltage is 345 kV.



Tipo EHZ-A  
EHZ-A Type



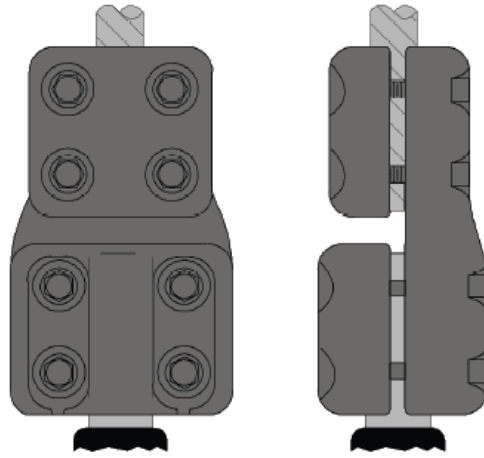
Tipo ETT-A  
ETT- A Type



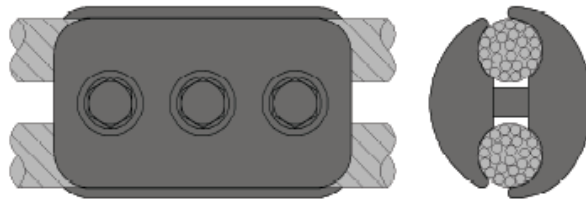
Tipo EH2Z-A  
EH2Z-A Type



Conectores de Extra Alto Voltaje  
Extra high Voltage Connectors



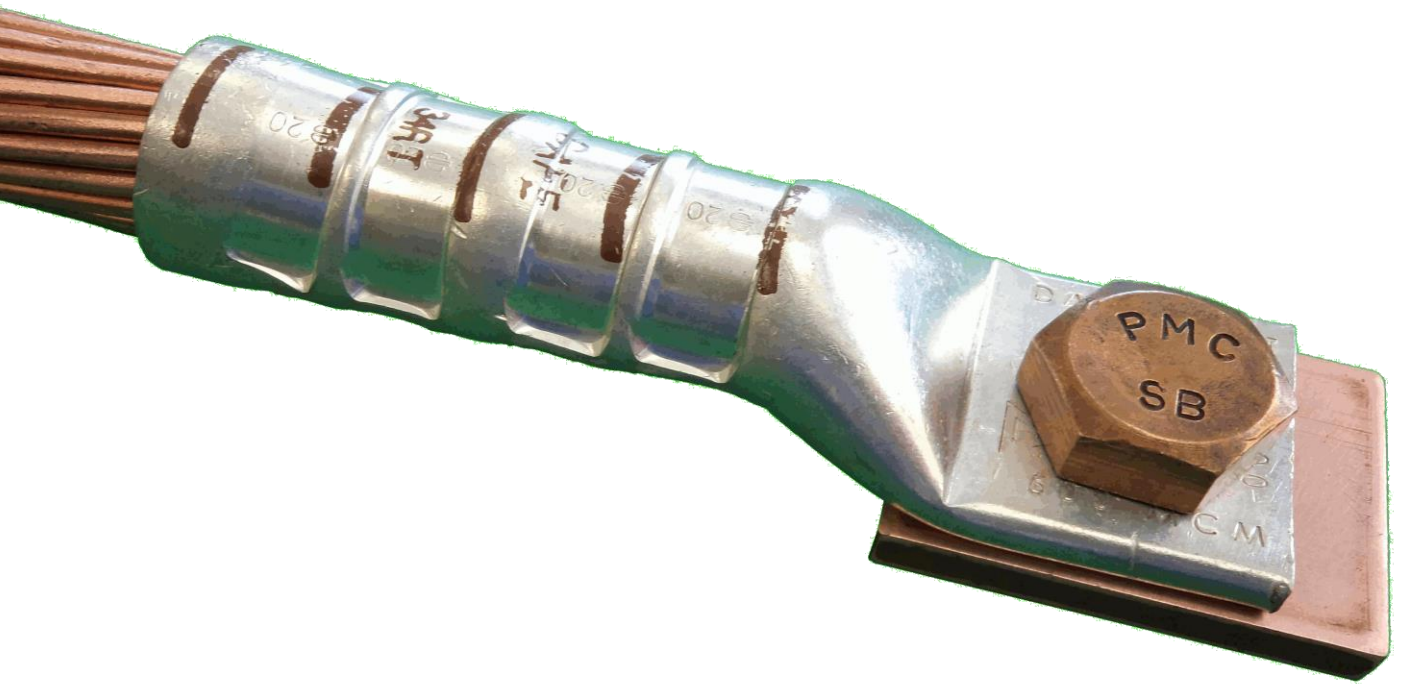
Tipo EHP-A  
EHP-A Type



Tipo EGP-A  
EGP-A Type



Tipo ES-A  
ES-A Type

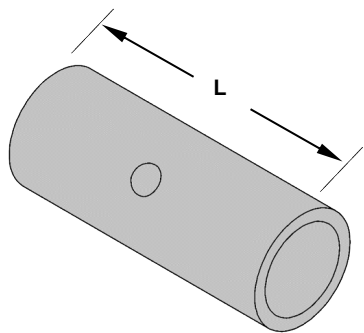


# Conectores de compresión

## Compression connectors

Conector empalme de compresión de cobre estañado, para conexiones a tensión mínima de cobre-cobre. Marcado con código de color.

Copper tin plated compression sleeve, for minimum tension connections, for joining copper-copper. Color code marked.



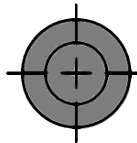
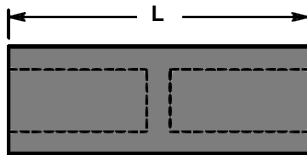
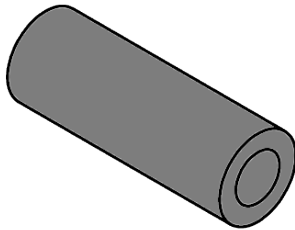
Note (\*)  
T - Stranded

| Conductor<br>AWG<br>MCM | Cañón Largo<br>Long Barrel |         |                     | Cañón Corto<br>Short Barrel |         |                     | Color           |
|-------------------------|----------------------------|---------|---------------------|-----------------------------|---------|---------------------|-----------------|
|                         | Catálogo<br>Catalog        | L<br>mm | Herramienta<br>Tool | Catálogo<br>Catalog         | L<br>mm | Herramienta<br>Tool |                 |
| 8T(*)                   | XE8                        | 45      | MY29 (2)            | XEC8                        | 25      | MY29 (1)            | Rojo-Red        |
| 6T(*)                   | XE6                        | 60      | MY29 (2)            | XEC6                        | 45      | MY29 (1)            | Azul-Blue       |
| 4T(*)                   | XE4                        | 62      | MY29 (2)            | XEC4                        | 45      | MY29 (1)            | Gris-Grey       |
| 2T(*)                   | XE2                        | 72      | MY29 (2)            | XEC2                        | 51      | MY29 (1)            | Café-Brown      |
| 1/0T(*)                 | XE10                       | 78      | MY29 (2)            | XEC10                       | 53      | MY29 (1)            | Rosa-Pink       |
| 2/0T(*)                 | XE20                       | 84      | MY29 (2)            | XEC20                       | 56      | MY29 (1)            | Negro-Black     |
| 3/0T(*)                 | XE30                       | 84      | MY29 (2)            | XEC30                       | 59      | MY29 (1)            | Naranja-Orange  |
| 4/0T(*)                 | XE40                       | 91      | MY29 (2)            | XEC40                       | 60      | MY29 (1)            | Violeta -Purple |
| 250                     | XE250                      | 91      | MY29 (2)            | XEC250                      | 61      | MY29 (1)            | Amarillo-Yellow |
| 300                     | XE300                      | 110     | 30RT (4)            | XEC300                      | 63      | 30RT (2)            | Blanco-White    |
| 350                     | XE350                      | 111     | 31RT (4)            | XEC350                      | 66      | 31RT (2)            | Rojo-Red        |
| 500                     | XE500                      | 125     | 34RT (4)            | XEC500                      | 75      | 34RT (2)            | Café-Brown      |
| 750                     | XE750                      | 162     | 39RT (4)            | - - -                       | -       | - -                 | Negro-Black     |

Nota: Indentaciones con herramientas marca "Burndy"  
Note: Crimp with "Burndy" tools.

Conector empalme de compresión de aluminio, para conexiones a tensión mínima de aluminio-aluminio y aluminio-cobre. Se surte embolsado y con pasta antioxidante "Deltactron".

Aluminum alloy compression sleeve, for minimum tension connections, for joining aluminum-aluminum and aluminum-copper. Its packaged in plastic bag with inhibitor paste "Deltactron".



Note (\*)  
S - Solid  
T - Stranded

| Catálogo<br>Catalog | Conductor<br>AWG     |                              | Dimensiones en mm<br>Dimensions in mm |
|---------------------|----------------------|------------------------------|---------------------------------------|
|                     | Aluminio<br>Aluminum | ACSR                         | L                                     |
| XE10R               | 10 S (*)<br>1/0 T(*) | 8 T(6/1) (*)<br>1/0T(6/1)(*) | 51                                    |
| XE12R               | 6 S (*)<br>3/0 T(*)  | 6 T(6/1)(*)<br>3/0T(6/1)(*)  | 76                                    |

**Nota**

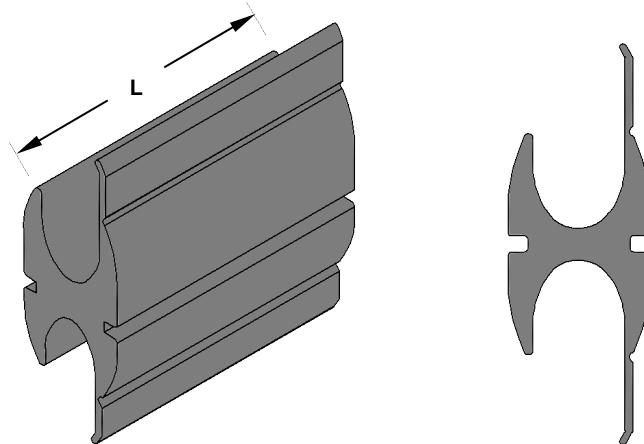
Indentación: 2 -"VC6" por lado ( Herramientas marca "Anderson")

**Note:**

Crimping: 2 -"VC6" by side ( Tools: "Anderson" brand )

Conector derivador de aluminio a compresión tipo "H", para conectar dos cables paralelos en combinaciones aluminio-aluminio y aluminio-cobre. Está fabricado con pestañas que pueden doblarse para facilitar la instalación. Se surte embolsado y con pasta antioxidante "Deltatron".

Aluminum compression tap connector "H" type, for two parallel cables connection. Used in combination of aluminum-aluminum and aluminum-copper cables. Made with bendable tabs for easy installation. It is packaged in plastic bag with an inhibitor paste "Deltatron".



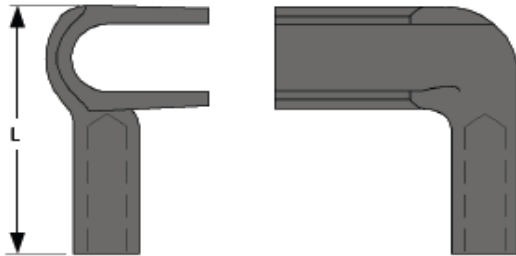
Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Principal<br>Run<br><br>AWG             | Derivación<br>Tap<br><br>AWG            | L<br><br>mm | Herramienta – Dado – Indentaciones<br>Tool – Die – Crimps |         |
|---------------------|---|---|-------------|---|---------|
|                     |   |   |             | MD6   | Y35     |
| XH10                | Alum. 4-2/0T(*)<br>ACSR 4-1/0T(*)       | Alum. 4-2/0T(*)<br>ACSR 4-1/0T(*)       | 45          | O – 4   | UO – 2  |
| XH11                | Alum. 2-3/0T(*)<br>ACSR 2-2/0T(*)       | Alum. 2-3/0T(*)<br>ACSR 2-2/0T(*)       | 48          | D3 – 5  | UD3 – 2 |
| XH1311              | Alum. 3/0T-4/0T(*)<br>ACSR 3/0T-4/0T(*) | Alum. 2-3/0T(*)<br>ACSR 2-2/0T(*)       | 58          | D3 – 7  | UD3 – 3 |
| XH13                | Alum. 3/0T-4/0T(*)<br>ACSR 3/0T-4/0T(*) | Alum. 3/0T-4/0T(*)<br>ACSR 3/0T-4/0T(*) | 64          | D3 – 7  | UD3 – 3 |

Nota: Indentaciones con herramientas marca "Burndy"  
Note: Crimp with "Burndy" tools.

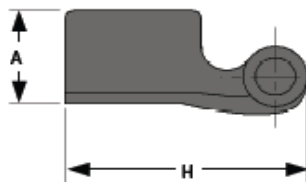
Conector de compresión de aluminio, tiene derivación tipo "L" de forma cerrada, es útil para derivaciones de aluminio-aluminio y aluminio-cobre. Se surte embolsado y con pasta antioxidante "Deltactron".

Aluminum alloy compression connector "L" type, for aluminum and ACSR cable run and aluminum and ACSR tap. May be used for copper cable tap by using an inhibitor paste. Its packaged in plastic bag with inhibitor paste "Deltactron".



Especificación CFE 55000-98  
CFE specification CFE 55000-98

CD9 9-12/9-12 XL1313R



Note (\*)  
T - Stranded

| Catálogo<br>Catalog | Principal / Run<br>AWG |                             | Derivación / Tap<br>AWG |                              | Dimensiones en mm<br>Dimensions in mm |    |    |
|---------------------|------------------------|-----------------------------|-------------------------|------------------------------|---------------------------------------|----|----|
|                     | Aluminio<br>Aluminum   | ACSR                        | Aluminio<br>Aluminum    | ACSR                         | A                                     | H  | L  |
| XL1110R             | 6 T(*)<br>2/0 T(*)     | 6T(6/1) (*)<br>2/0T(6/1)(*) | 8 T(*)<br>1/0 T(*)      | 8 T(6/1)(*)<br>1/0 T(6/1)(*) | 28                                    | 62 | 64 |
| XL1313R             | 4 T(*)<br>4/0 T(*)     | 4T(6/1)(*)<br>4/0T(6/1)(*)  | 4 T(*)<br>4/0 T(*)      | 4 T(6/1)(*)<br>4/0 T(6/1)(*) | 28                                    | 67 | 79 |

**Nota**

Indentación: 3 -"VC5" o 2 -"VC6" por lado, excepto el "XL 1313R" requiere 4 -"VC6" en la derivación.  
( Herramientas marca "Anderson")

**Note:**

Crimping: 3 -"VC5" or 2 -"VC6" by side, except "XL1313R, this type require 4 -"VC6" in the tap.  
( Tools: Anderson brand )

Derivador de compresión tipo estribo, con su cuerpo de aluminio y estribo de cobre. Acepta la conexión de un conector de línea viva sobre el estribo. En las derivaciones con línea viva evita el arqueo y el desgaste del conductor principal. Se surte embolsado y con pasta antioxidante "Deltatron".

Cast aluminum alloy compression body in the run and copper wire stirrup for tapping. Used with live line clamp on the stirrup to protect the main conductor from arching and corrosion. Its packaged in plastic bag with inhibitor paste "Deltatron".

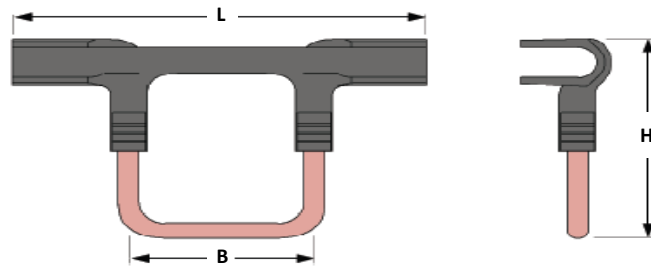


Fig. 1

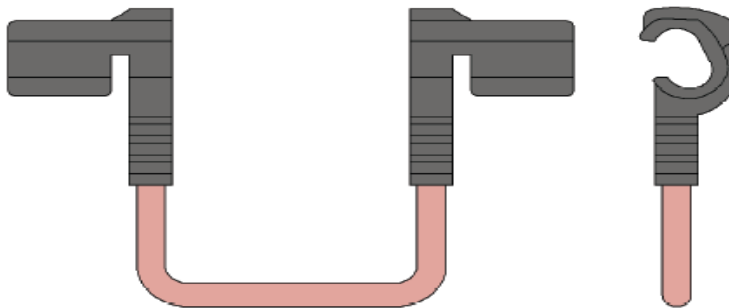


Fig. 2

Note (\*)  
S - Solid  
T - Stranded

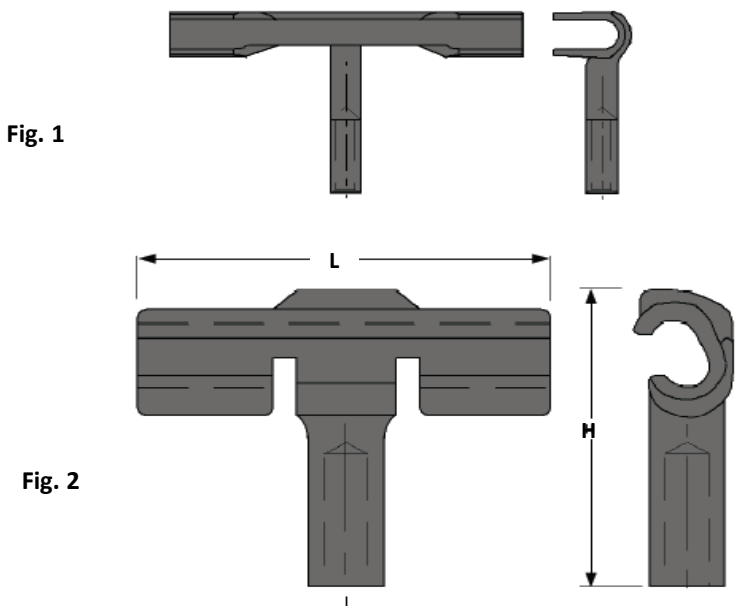
| Catálogo<br>Catalog | Cable<br>AWG/MCM     |                              | Estribo<br>Stirrup | Figura<br>Figure | Indentaciones<br>Indentations | Dimensiones en mm<br>Dimensions in mm |     |     |
|---------------------|----------------------|------------------------------|--------------------|------------------|-------------------------------|---------------------------------------|-----|-----|
|                     | Aluminio<br>Aluminum | ACSR                         |                    |                  |                               | B                                     | H   | L   |
| XS11R               | 6T(*)<br>2/0 T(*)    | 6T (6/1) (*)<br>2/0T(6/1)(*) | 2 S (*)            | 1                | 4 - VC5<br>o/or<br>2 - VC6    | 92                                    | 107 | 185 |
| XS13R               | 4T(*)<br>266.8T(*)   | 4T(6/1)(*)<br>4/0T(6/1)(*)   | 1 S(*)             | 1                | 4 - VC5<br>o/or<br>2 - VC6    | 92                                    | 109 | 185 |
| XS21R               | 3/0T(*)<br>500       | 3/0(6/1)<br>477(18/1)        | 2/0 S(*)           | 2                | 2 - VC6 - 3                   | 127                                   | 142 | 248 |

**Nota:**  
Indentaciones con herramientas marca Anderson

**Note:**  
Crimping with Anderson tools.

Conector de compresión de aluminio para derivación en " T ". Para el cable principal tiene forma abierta y en la derivación forma cerrada, es útil para derivaciones de aluminio-aluminio y aluminio cobre. Se surte embolsado y con pasta antioxidante "Deltactron".

" T " aluminum compression connector for tapping. Run section is open for easy cable support and closed tap section. Used in combination of aluminum-aluminum and aluminum-copper cables. It is packaged in plastic bag with an inhibitor paste "Deltactron".



| Especificación CFE 55000-98<br>CFE specification CFE 55000-98 |          |
|---|----------|
| CD9 9-12/4-8  | XT13R10R |
| CD9 9-12/9-12   | XT13R13R |
| CD9 14-22/14-8  | XT20R10R |
| CD9 14-22/9-12  | XT20R13R |
| CD9 14-22/14-22   | XT20R20R |

| Catálogo<br>Catalog | Figura<br>Figure | Principal<br>Tap<br>AWG/MCM |                     | Derivación<br>Run<br>AWG/MCM |                     | Dimensiones en mm<br>Dimensions in mm |     | Herra-<br>mienta<br>Tool |
|---------------------|------------------|-----------------------------|---------------------|------------------------------|---------------------|---------------------------------------|-----|--------------------------|
|                     |                  | Aluminio<br>Aluminum        | ACSR                | Aluminio<br>Aluminum         | ACSR                | H                                     | L   |                          |
| XT11R11R            | 1                | 6-2/0                       | 6 (6/1)-2/0 (6/1)   | 6-2/0                        | 6 (6/1)-2/0 (6/1)   | 65                                    | 104 | VC6                      |
| XT13R10R            | 1                | 1/0-4/0                     | 1/0(6/1)-4/0(6/1)   | 8-1/0                        | 8(6/1)-1/0(6/1)     | 71                                    | 114 | VC6                      |
| XT13R13R            | 1                | 1/0-4/0                     | 1/0(6/1) - 4/0(6/1) | 1/0-267                      | 1/0(6/1) - 4/0(6/1) | 80                                    | 114 | VC6                      |
| XT171R10R           | 2                | 3/0-350                     | 3/0(6/1)-336(18/1)  | 8-1/0                        | 8(6/1)-1/0(6/1)     | 104                                   | 142 | VC6-3                    |
| XT171R11R           | 2                | 3/0-350                     | 3/0(6/1)-336(18/1)  | 6-2/0                        | 6(6/1)-2/0(6/1)     | 104                                   | 142 | VC6-3                    |
| XT171R13R           | 2                | 3/0-350                     | 3/0(6/1)-336(18/1)  | 1/0-267                      | 1/0(6/1)-4/0(6/1)   | 108                                   | 142 | VC6-3                    |
| XT20R10R            | 2                | 3/0-500                     | 3/0(6/1)-477(18/1)  | 8-1/0                        | 8(6/1)-1/0(6/1)     | 104                                   | 142 | VC6-3                    |
| XT20R11R            | 2                | 3/0-500                     | 3/0(6/1)-477(18/1)  | 6-2/0                        | 6(6/1)-2/0(6/1)     | 104                                   | 142 | VC6-3                    |
| XT20R13R            | 2                | 3/0-300                     | 3/0(6/1)-477(18/1)  | 1/0-267                      | 1/0(6/1)-4/0(6/1)   | 108                                   | 142 | VC6-3                    |
| XT20R20R            | 2                | 3/0-500                     | 3/0(6/1)-477(18/1)  | 4/0-500                      | 4/0(6/1)-477(18/1)  | 161                                   | 142 | VC6-3                    |

**Nota:**  
Indentaciones con herramientas marca Anderson

**Note:**  
Crimping with Anderson tools.



Terminal de compresión de barril largo fabricada en cobre estañado, para conectar cable de cobre a superficie plana. Marcado con código de color.

Copper tin plated compression terminal, long barrel, for copper cable to flat surface. Color code marked.

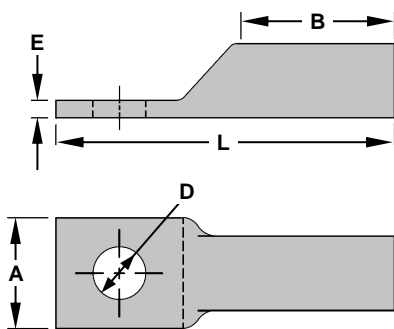


Fig. 1

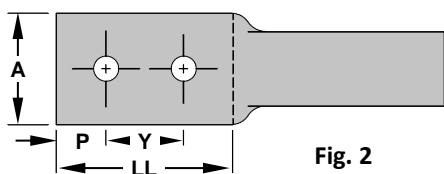
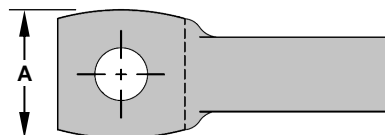


Fig. 2

**CABLE 6 AWG– 500 MCM**  
**Homologado por el LAPEM-CFE**  
**Especificación: NMX-J-170-ANCE-2002**  
**Prototype approved by LAPEM-CFE**  
**Specification: NMX-J-170-ANCE-2002**

| Catálogo<br>Catalog | Cable<br>AWG<br>MCM | Fig. | Tornillo<br>sujeción<br>Bolt hole<br>size | Dimensiones en mm<br>Dimensions in mm |    |    |   |    |    |    |    | Herra-<br>mienta<br>Tool | Color     |
|---------------------|---------------------|------|---|---------------------------------------|----|----|---|----|----|----|----|--------------------------|-----------|
|                     |                     |      |   | A                                     | B  | D  | E | L  | LL | P  | Y  |                          |           |
| XZ8                 | 8                   | 1    | 6 (1/4")                                  | 10                                    | 21 | 7  | 2 | 38 | 13 | 6  | -- | MY29 (2)                 | Rojo-Red  |
| XZ8-D6              | 8                   | 1    | 10 (3/8")                                 | 15                                    | 21 | 10 | 2 | 47 | 19 | 10 | -- | MY29 (2)                 | Rojo-Red  |
| XZ8-2D4             | 8                   | 2    | 6 (1/4")                                  | 10                                    | 21 | 7  | 2 | 57 | 32 | 8  | 16 | MY29 (2)                 | Rojo-Red  |
| XZ8-2D6             | 8                   | 2    | 10 (3/8")                                 | 15                                    | 21 | 10 | 2 | 74 | 46 | 10 | 25 | MY29 (2)                 | Rojo-Red  |
| XZ6                 | 6                   | 1    | 6 (1/4")                                  | 10                                    | 28 | 7  | 2 | 47 | 13 | 6  | -- | MY29 (2)                 | Azul-Blue |
| XZ6-D6              | 6                   | 1    | 10 (3/8")                                 | 15                                    | 28 | 10 | 2 | 53 | 19 | 10 | -- | MY29 (2)                 | Azul-Blue |
| XZ6-2D4             | 6                   | 2    | 6 (1/4")                                  | 11                                    | 28 | 7  | 2 | 67 | 32 | 8  | 16 | MY29 (2)                 | Azul-Blue |
| XZ6-2D6             | 6                   | 2    | 10 (3/8")                                 | 15                                    | 28 | 10 | 2 | 80 | 46 | 10 | 25 | MY29 (2)                 | Azul-Blue |
| XZ6N                | 6                   | 3    | 13 (1/2")                                 | 20                                    | 28 | 14 | 2 | 53 | 19 | 10 | -- | MY29 (2)                 | Azul-Blue |
| XZ4                 | 4                   | 1    | 6 (1/4")                                  | 13                                    | 28 | 7  | 2 | 49 | 13 | 6  | -- | MY29 (2)                 | Gris-Gray |
| XZ4-D6              | 4                   | 1    | 10 (3/8")                                 | 15                                    | 28 | 10 | 2 | 55 | 19 | 10 | -- | MY29 (2)                 | Gris-Gray |
| XZ4-2D4             | 4                   | 2    | 6 (1/4")                                  | 13                                    | 28 | 7  | 2 | 68 | 32 | 8  | 16 | MY29 (2)                 | Gris-Gray |
| XZ4-2D6             | 4                   | 2    | 10 (3/8")                                 | 15                                    | 28 | 10 | 2 | 82 | 46 | 10 | 25 | MY29 (2)                 | Gris-Gray |
| XZ4N                | 4                   | 3    | 13 (1/2")                                 | 20                                    | 28 | 14 | 2 | 55 | 19 | 10 | -- | MY29 (2)                 | Gris-Gray |

Indentaciones con herramientas marca "Burndy"  
 Crimp with "Burndy" tools.

| Catálogo<br>Catalog | Cable<br>AWG<br>MCM | Fig. | Tornillo<br>sujeción<br>Bolt hole<br>size | Dimensiones en mm<br>Dimensions in mm |    |    |   |     |    |    |    | Herra-<br>mienta<br>Tool | Color            |
|---------------------|---------------------|------|---|---------------------------------------|----|----|---|-----|----|----|----|--------------------------|------------------|
|                     |                     |      |   | A                                     | B  | D  | E | L   | LL | P  | Y  |                          |                  |
| XZ2                 | 2                   | 1    | 8 (5/16")                                 | 15                                    | 32 | 9  | 3 | 58  | 19 | 10 | -- | MY29 (2)                 | Café-Brown       |
| XZ2N                | 2                   | 1    | 13 (1/2")                                 | 18                                    | 32 | 14 | 2 | 58  | 19 | 10 | -- | MY29 (2)                 | Café-Brown       |
| XZ2-D6              | 2                   | 1    | 10 (3/8")                                 | 15                                    | 32 | 10 | 3 | 58  | 19 | 10 | -- | MY29 (2)                 | Café-Brown       |
| XZ2-2D4             | 2                   | 2    | 6 (1/4")                                  | 15                                    | 32 | 7  | 3 | 71  | 32 | 8  | 16 | MY29 (2)                 | Café-Brown       |
| XZ2-2D6             | 2                   | 2    | 10 (3/8")                                 | 15                                    | 32 | 10 | 3 | 86  | 46 | 10 | 25 | MY29 (2)                 | Café-Brown       |
| XZ10                | 1/0                 | 1    | 8 (5/16")                                 | 19                                    | 35 | 9  | 3 | 65  | 19 | 10 | -- | MY29 (2)                 | Rosa-Pink        |
| XZ10-D6             | 1/0                 | 1    | 10 (3/8")                                 | 19                                    | 35 | 10 | 3 | 65  | 19 | 10 | -- | MY29 (2)                 | Rosa-Pink        |
| XZ10N               | 1/0                 | 1    | 13 (1/2")                                 | 21                                    | 35 | 14 | 3 | 73  | 25 | 13 | -- | MY29 (2)                 | Rosa-Pink        |
| XZ10-2D6            | 1/0                 | 2    | 10 (3/8")                                 | 19                                    | 35 | 10 | 3 | 92  | 46 | 10 | 25 | MY29 (2)                 | Rosa-Pink        |
| XZ10-2N             | 1/0                 | 2    | 13 (1/2")                                 | 21                                    | 35 | 14 | 3 | 122 | 76 | 16 | 45 | MY29 (2)                 | Rosa -Pink       |
| XZ20                | 2/0                 | 1    | 10 (3/8")                                 | 21                                    | 38 | 10 | 3 | 74  | 22 | 11 | -- | MY29 (2)                 | Negro-Black      |
| XZ20N               | 2/0                 | 1    | 13 (1/2")                                 | 21                                    | 38 | 14 | 3 | 78  | 25 | 13 | -- | MY29 (2)                 | Negro-Black      |
| XZ20-2N             | 2/0                 | 2    | 13 (1/2")                                 | 21                                    | 38 | 14 | 3 | 129 | 76 | 16 | 45 | MY29 (2)                 | Negro-Black      |
| XZ30                | 3/0                 | 1    | 13 (1/2")                                 | 23                                    | 38 | 14 | 3 | 77  | 25 | 13 | -- | MY29 (2)                 | Naranja-Orange   |
| XZ30-D6             | 3/0                 | 1    | 10 (3/8")                                 | 23                                    | 38 | 10 | 3 | 77  | 25 | 10 | -- | MY29 (2)                 | Naranja-Orange   |
| XZ30-2D6            | 3/0                 | 2    | 10 (3/8")                                 | 23                                    | 38 | 10 | 3 | 98  | 46 | 10 | 25 | MY29 (2)                 | Naranja-Orange   |
| XZ30-2N             | 3/0                 | 2    | 13 (1/2")                                 | 23                                    | 38 | 14 | 3 | 128 | 76 | 16 | 45 | MY29 (2)                 | Naranja-Orange   |
| XZ40T               | 4/0                 | 1    | 10 (3/8")                                 | 25                                    | 41 | 10 | 4 | 79  | 25 | 13 | -- | MY29 (2)                 | Violeta-Purple   |
| XZ40                | 4/0                 | 1    | 13 (1/2")                                 | 25                                    | 41 | 14 | 4 | 79  | 25 | 13 | -- | MY29 (2)                 | Violeta-Purple   |
| XZ40-2D6            | 4/0                 | 2    | 10 (3/8")                                 | 25                                    | 41 | 10 | 4 | 101 | 46 | 10 | 25 | MY29 (2)                 | Violeta-Purple   |
| XZ40-2N             | 4/0                 | 2    | 13 (1/2")                                 | 25                                    | 41 | 14 | 4 | 131 | 76 | 16 | 45 | MY29 (2)                 | Violeta -Purple  |
| XZ250               | 250                 | 1    | 13 (1/2")                                 | 28                                    | 41 | 14 | 4 | 85  | 28 | 14 | -- | MY29 (2)                 | Amarillo-Yellow  |
| XZ250-2N            | 250                 | 2    | 13 (1/2")                                 | 28                                    | 41 | 14 | 4 | 132 | 76 | 16 | 45 | MY29 (2)                 | Amarillo -Yellow |
| XZ300               | 300                 | 1    | 13 (1/2")                                 | 31                                    | 51 | 14 | 4 | 95  | 28 | 14 | -- | 30RT (4)                 | Blanco-White     |
| XZ300-2D6           | 300                 |      | 10 (3/8")                                 | 31                                    | 51 | 10 | 4 | 112 | 46 | 10 | 25 | 30RT (4)                 | Blanco-White     |
| XZ300-2N            | 300                 | 2    | 13 (1/2")                                 | 31                                    | 51 | 14 | 5 | 143 | 76 | 16 | 45 | 30RT (4)                 | Blanco-White     |
| XZ350               | 350                 | 1    | 13 (1/2")                                 | 33                                    | 51 | 14 | 5 | 96  | 28 | 14 | -- | 31RT (4)                 | Rojo-Red         |
| XZ350-2D6           | 350                 | 2    | 10 (3/8")                                 | 33                                    | 51 | 10 | 5 | 115 | 46 | 10 | 25 | 31RT (4)                 | Rojo-Red         |
| XZ350-2N            | 350                 | 2    | 13 (1/2")                                 | 33                                    | 51 | 14 | 5 | 144 | 76 | 16 | 45 | 31RT (4)                 | Rojo-Red         |
| XZ500               | 500                 | 1    | 16 (5/8")                                 | 39                                    | 57 | 18 | 6 | 112 | 35 | 17 | -- | 34RT (4)                 | Café-Brown       |
| XZ500N              | 500                 | 1    | 13 (1/2")                                 | 39                                    | 57 | 14 | 6 | 112 | 35 | 17 | -- | 34RT (4)                 | Café-Brown       |
| XZ500-2N            | 500                 | 2    | 13 (1/2")                                 | 39                                    | 57 | 14 | 6 | 154 | 76 | 16 | 45 | 34RT (4)                 | Café-Brown       |
| XZ750-2D6           | 750                 | 2    | 10 (3/8")                                 | 48                                    | 73 | 10 | 7 | 149 | 46 | 10 | 25 | 39RT (4)                 | Negro-Black      |
| XZ750-2N            | 750                 | 2    | 13 (1/2")                                 | 48                                    | 73 | 14 | 7 | 176 | 76 | 16 | 45 | 39RT (4)                 | Negro-Black      |
| XZ1000-2N           | 1000                | 2    | 13 (1/2")                                 | 55                                    | 76 | 14 | 8 | 186 | 76 | 16 | 45 | 44RT (4)                 | Blanco-White     |

Indentaciones con herramientas marca "Burndy"

Crimp with "Burndy" tools.

Zapata terminal de compresión fabricada en aluminio, para conectar cable de aluminio o ACSR a superficie plana. Se surte prellenado de pasta antioxidante "Deltactron".

Aluminum alloy compression terminal for aluminum or ACSR cables to flat surface. The tubular section is filled with inhibitor paste "Deltactron".

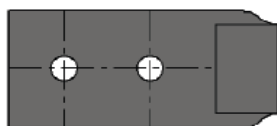


Fig. 1

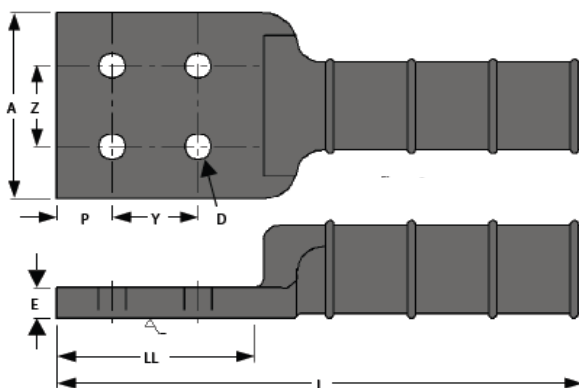


Fig. 2

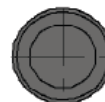


Fig. A

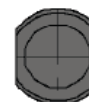


Fig. B

| Catálogo<br>Catalog | Cable<br>AWG/MCM      |                      | Figura<br>Figure | Dimensiones en mm<br>Dimensions in mm |    |    |     |    |    |     |
|---------------------|-----------------------|----------------------|------------------|---------------------------------------|----|----|-----|----|----|-----|
|                     | ACSR                  | Aluminio<br>Aluminum |                  | A                                     | D  | E  | L   | LL | P  | Y-Z |
| XZF2R-2N            | 2 (6/1)               | 2                    | 1A               | 59                                    | 14 | 8  | 152 | 76 | 16 | 44  |
| XZF10R-2N           | 1/0 (6/1)             | 1/0                  | 1A               | 59                                    | 14 | 9  | 180 | 76 | 16 | 44  |
| XZF10R-4N           | 1/0 (6/1)             | 1/0                  | 2A               | 76                                    | 14 | 10 | 180 | 76 | 16 | 44  |
| XZF12R-2N           | 3/0 (6/1)             | 3/0                  | 1A               | 59                                    | 14 | 10 | 180 | 76 | 16 | 44  |
| XZF13R-2N           | 3/0 (6/1)             | 4/0                  | 1A               | 59                                    | 14 | 10 | 180 | 76 | 16 | 44  |
| XZF171R-2N          | 336 (18/1)            | 336-350              | 1B               | 59                                    | 14 | 10 | 180 | 76 | 16 | 44  |
| XZF171R-4N          | 336 (18/1)            | 336-350              | 2B               | 76                                    | 14 | 10 | 185 | 76 | 16 | 44  |
| XZF18R-2N           | 336 (26/7,30/7)       | 397                  | 1A               | 59                                    | 14 | 10 | 191 | 76 | 16 | 44  |
| XZF18R-4N           | 336 (26/7,30/7)       | 397                  | 2A               | 76                                    | 14 | 10 | 191 | 76 | 16 | 44  |
| XZF22R-2N           | 477 (24/7,26/7,30/7)  | 557                  | 1A               | 63                                    | 14 | 10 | 215 | 76 | 16 | 44  |
| XZF22R-4N           | 477 (24/7,26/7, 30/7) | 557                  | 2A               | 76                                    | 14 | 10 | 215 | 76 | 16 | 44  |
| XZF24R-2N           | 557 (24/7,26/7)       | 557                  | 1A               | 64                                    | 14 | 10 | 215 | 76 | 16 | 44  |
| XZF24R-4N           | 557 (24/7,26/7)       | 557                  | 2A               | 76                                    | 14 | 10 | 215 | 76 | 16 | 44  |
| XZF30R-2N           | 795 (26/7,54/7)       | 900                  | 1B               | 64                                    | 14 | 16 | 248 | 76 | 16 | 44  |
| XZF30R-4N           | 795 (26/7,54/7)       | 900                  | 2B               | 76                                    | 14 | 16 | 248 | 76 | 16 | 44  |
| XZF35R-4N           | 1034(54/7)-1113(45/7) | 1272                 | 2B               | 76                                    | 14 | 19 | 255 | 76 | 16 | 44  |

Nota: Indentaciones con herramientas marca "Burndy"

Note: Crimp with "Burndy" tools.

La pasta antioxidante Deltactron contiene partículas de zinc en suspensión que rompen la película de óxido que se puede llegar a formar después de limpiar los conductores.

Cuando entre dos metales diferentes esta presente un electrolito se produce una diferencia de potencial, uno de los metales se vuelve positivo (cátodo) y el otro negativo (ánodo) y circula una corriente entre ellos, ocasionando la corrosión del metal anódico. Al conectar aluminio con cobre tenderá a corroerse el aluminio con cobre, sin embargo sellando la conexión con el Deltactron, la corrosión galvánica que pudiera existir es de efectos despreciables, pues se forma un sello resistente a los cambios bruscos de temperatura, que no se escurre, ni se compacta, manteniendo la conexión libre de electrolitos, igualmente el sellado impide que penetren a la conexión otros elementos corrosivos.

Antes de aplicar la pasta antioxidante se recomienda limpiar la superficie de contacto del conector y del cable utilizando lija y cepillo con fibras de acero, debiendo quedar brillante. Los conectores de compresión de aluminio se surten con la pasta adecuada, no requiere más aplicación. Los conectores con recubrimiento metálico no deben cepillarse.

La pasta se debe de aplicar inmediatamente después de la limpieza. Al apretar los tornillos con las manos debe fluir cierta cantidad de la pasta. El exceso de pasta puede dejarse o repartirse por la unión. Para los conectores de extra alto voltaje debe removerse el exceso de pasta que salga del contorno del conector.

Deltactron is an inhibiting paste with high contain of zinc particles in suspension that break the oxide coat formed after cleaning the conductors surface. When two different metals are joined, a potential difference exist, one metal turns to positive (cathode) and the other one turns to negative (anode), a flux of currents circulate between them, causing corrosion of the anode metal. When connecting aluminum to copper, aluminum tends to be corroded, but sealing the connection with Deltactron, the galvanic corrosion is reduced drastically to a negligible amount, the sealing resist the changes in temperature, without draining and compacting, keeping the connection free of electrolytes and the penetration of another corrosive elements.

Before the application of the Deltactron paste, its recommended to clean the connector and cable surface contacts with a brush with steel fibers.

The compression aluminum connectors are supplied with inhibitor paste. Connectors with metallic cover do not need to be brushed.

The inhibitor paste must be applied as soon the metal surfaces are cleaned. The excess of the inhibitor paste draining from the connector after tightening the bolts should be left or spread out along the union. For extra high voltage connectors, the excess of inhibitor paste must be removed.



Para conexiones sujetas a tensión media y tensión plena, favor de ponerse en contacto con nosotros y le recomendamos la pasta antioxidante Deltatron adecuada al tipo de trabajo.

El Deltatron es una pasta antioxidante y selladora recomendada para aplicarse en conexiones eléctricas de tipo aluminio aluminio y de aluminio cobre, usualmente no se requiere para las uniones cobre cobre pero puede emplearse para sellar la conexión cuando sean instalaciones en ambientes muy corrosivos.

En el aluminio la superficie se oxida muy rápidamente, dando lugar a la alúmina, que es dura, de alta resistencia eléctrica y fuertemente adherida al sustrato de aluminio, si se deja en las superficies de contacto generará una alta resistencia eléctrica.

For partial or full mechanical tension connections, please contact us and we will recommend you the Deltatron suitable for these kind of applications. Deltatron is antioxidant and sealant paste recommended for aluminum aluminum and aluminum copper connections . Usually its not required for copper copper unions but can be applied for sealing the connection in very corrosive environments.

The oxide of aluminum is very hard with high electric resistance and strongly added to the surface of the metal, that must be removed for better electric connections.



**TORNILLOS / BOLTS**

( Incluyendo tipo U / Including U type

| Diámetro<br>Diameter |                    | Acero y bronce<br>Steel and bronze |                      | Aluminio (lubricado)<br>Aluminum ( lubricated) |                      |
|----------------------|--------------------|------------------------------------|----------------------|--|----------------------|
| mm                   | Pulgadas<br>Inches | Nm                                 | Lb-Pie<br>Pound-foot | Nm   | Lb-Pie<br>Pound-foot |
| 9.5                  | 3/8                | 27                                 | 20                   | 20   | 15                   |
| 12.7                 | 1/2                | 54                                 | 40                   | 34   | 25                   |
| 15.9                 | 5/8                | 75                                 | 55                   | 54   | 40                   |

**LÍNEAS DE CONECTORES / CONNECTORS LINE**

| Conductor  | Nm | Libra-pie<br>Pound-foot |
|--|----|-------------------------|
| <b>CZ, CE y Derivaciones<br/>CZ, CE and similars</b> |    |                         |
| 8T   | 9  | 7                       |
| 4T   | 12 | 9                       |
| 1T   | 15 | 11                      |
| 2/0  | 18 | 13                      |
| 4/0  | 23 | 17                      |
| 350  | 27 | 20                      |
| 500  | 34 | 25                      |
| 800  | 46 | 34                      |
| 1000   | 46 | 34                      |
| <b>AZ, AT y Derivaciones<br/>AZ, AT and similars</b> |    |                         |
| 4/0  | 23 | 17                      |
| 300  | 28 | 21                      |
| 500  | 34 | 25                      |
| 800  | 46 | 34                      |
| 1000   | 46 | 34                      |

| Conductor     | Nm | Libra-pie<br>Pound-foot |
|---------------|----|-------------------------|
| <b>LZ</b>     |    |                         |
| 4T            | 3  | 2                       |
| 1/0           | 18 | 13                      |
| 250           | 23 | 17                      |
| 500           | 34 | 25                      |
| 800           | 41 | 30                      |
| <b>R y RH</b> |    |                         |
| 2T            | 15 | 11                      |
| 1/0           | 18 | 13                      |
| 2/0           | 18 | 13                      |
| 250           | 28 | 21                      |
| 350           | 28 | 21                      |
| 500           | 34 | 25                      |

## VALORES DE CORRIENTE DE COBRE Y ALUMINIO CURRENT VALUES IN COPPER AND ALUMINUM

### VALORES DE CORRIENTE EN CONDUCTORES DE COBRE CURRENT VALUES IN COPPER CONDUCTORS

| Tamaño del conductor<br>Conductor size |         | Diámetro<br>Diameter | Corriente (A)<br>Current (A) |                        |
|--|---------|----------------------|------------------------------|------------------------|
| mm <sup>2</sup>                        | AWG/MCM | mm                   | En Interior<br>Indoor        | En Exterior<br>Outdoor |
| <b>Sólido / Solid</b>                  |         |                      |                              |                        |
| 53.5                                   | 1/0     | 8.3                  | 190                          | 270                    |
| 67.4                                   | 2/0     | 9.3                  | 220                          | 310                    |
| 107.2                                  | 4/0     | 11.7                 | 270                          | 380                    |
| <b>Trenzado / Stranded</b>             |         |                      |                              |                        |
| 53.5                                   | 1/0     | 9.5                  | 170                          | 240                    |
| 67.4                                   | 2/0     | 10.6                 | 210                          | 290                    |
| 107.2                                  | 4/0     | 13.4                 | 260                          | 370                    |
| 126.7                                  | 250     | 14.6                 | 310                          | 430                    |
| 202.7                                  | 400     | 18.5                 | 430                          | 580                    |
| 253.3                                  | 500     | 20.7                 | 500                          | 670                    |
| 304.1                                  | 600     | 22.7                 | 590                          | 780                    |
| 380.0                                  | 750     | 25.3                 | 680                          | 880                    |
| 506.7                                  | 1000    | 29.3                 | 840                          | 1040                   |
| 760.1                                  | 1500    | 35.9                 | 1020                         | 1300                   |
| 1013.6                                 | 2000    | 41.4                 | 1200                         | 1500                   |

### VALORES DE CORRIENTE EN CONDUCTORES DE ALUMINIO CURRENT VALUES IN ALUMINUM CONDUCTORS

| Tamaño del conductor<br>Conductor size |         | Diámetro<br>Diameter | Corriente (A)<br>Current (A) |                        |
|--|---------|----------------------|------------------------------|------------------------|
| mm <sup>2</sup>                        | AWG/MCM | mm                   | En Interior<br>Indoor        | En Exterior<br>Outdoor |
| <b>Sólido / Solid</b>                  |         |                      |                              |                        |
| 53.5                                   | 1/0     | 8.3                  | 130                          | 170                    |
| 67.4                                   | 2/0     | 9.3                  | 160                          | 215                    |
| 107.2                                  | 4/0     | 11.7                 | 210                          | 280                    |
| <b>Trenzado / Stranded</b>             |         |                      |                              |                        |
| 53.5                                   | 1/0     | 9.5                  | 135                          | 180                    |
| 67.4                                   | 2/0     | 10.6                 | 165                          | 220                    |
| 107.2                                  | 4/0     | 13.4                 | 215                          | 280                    |
| 126.7                                  | 250     | 14.6                 | 250                          | 330                    |
| 202.7                                  | 400     | 18.5                 | 340                          | 440                    |
| 253.3                                  | 500     | 20.7                 | 390                          | 490                    |
| 304.1                                  | 600     | 22.7                 | 450                          | 570                    |
| 380.0                                  | 750     | 25.3                 | 520                          | 660                    |
| 506.7                                  | 1000    | 29.3                 | 630                          | 790                    |
| 760.1                                  | 1500    | 35.9                 | 800                          | 1000                   |
| 1013.6                                 | 2000    | 41.4                 | 950                          | 1175                   |

**CARACTERISTICAS DEL CABLE ACSR**  
**ACSR SPECIFICATIONS**

| Palabra<br>Código<br>Code | Sección Transversal<br>Cross Section |                 |                          | Equivalente<br>Cobre<br>AWG/CM<br>Equivalent<br>Copper<br>AWG/CM | Trenzado<br>Aluminio/<br>Acero<br>Stranded<br>Aluminum/<br>Steel | Diámetro<br>Exterior<br>mm<br>External<br>Diameter<br>mm |
|---------------------------|--------------------------------------|-----------------|--------------------------|--|--|--|
|                           | Aluminio / Aluminum                  |                 | Total<br>mm <sup>2</sup> |  |  |  |
|                           | AWG/CM                               | mm <sup>2</sup> |                          |  |  |  |
| Turkey                    | 6                                    | 13.3            | 15.5                     | 8  | 6/1  | 5  |
| Swan                      | 4                                    | 21.2            | 24.7                     | 6  | 6/1  | 6.4  |
| Swanate                   | 4                                    | 21.2            | 26.5                     | 6  | 7/1  | 6.5  |
| Sparrow                   | 2                                    | 33.6            | 39.2                     | 4  | 6/1  | 8  |
| Sparate                   | 2                                    | 33.6            | 42.1                     | 4  | 7/1  | 8.3  |
| Raven                     | 1/0                                  | 53.5            | 62.4                     | 2  | 6/1  | 10.1   |
| Quail                     | 2/0                                  | 67.4            | 78.6                     | 1  | 6/1  | 11.4   |
| Pigeon                    | 3/0                                  | 85.0            | 99.2                     | 1/0  | 6/1  | 12.8   |
| Penguin                   | 4/0                                  | 107.2           | 125.1                    | 2/0  | 6/1  | 14.3   |
| Waxwing                   | 266800                               | 135.2           | 142.6                    | 3/0  | 18/1   | 15.5   |
| Partridge                 | 266800                               | 135.2           | 157.2                    | 3/0  | 26/7   | 16.3   |
| Merlin                    | 336400                               | 170.5           | 179.9                    | 4/0  | 18/1   | 17.4   |
| Linnet                    | 336400                               | 170.5           | 198.2                    | 4/0  | 26/7   | 18.3   |
| Oriole                    | 336400                               | 170.5           | 210.3                    | 4/0  | 30/7   | 18.8   |
| Chickadee                 | 397500                               | 201.4           | 212.6                    | 250000   | 18/1   | 18.9   |
| Brant                     | 397500                               | 201.4           | 227.4                    | 250000   | 24/7   | 19.6   |
| Ibis                      | 397500                               | 201.4           | 234.2                    | 250000   | 26/7   | 19.9   |
| Pelican                   | 477000                               | 241.7           | 255.1                    | 300000   | 18/1   | 20.7   |
| Flicker                   | 477000                               | 241.7           | 272.9                    | 300000   | 24/7   | 21.5   |
| Hawk                      | 477000                               | 241.7           | 281.0                    | 300000   | 26/7   | 21.8   |
| Hen                       | 477000                               | 241.7           | 298.1                    | 300000   | 30/7   | 22.4   |
| Osprey                    | 556500                               | 281.9           | 297.7                    | 350000   | 18/1   | 22.3   |
| Parakeet                  | 556500                               | 281.9           | 318.6                    | 350000   | 24/7   | 23.2   |
| Dove                      | 556500                               | 281.9           | 327.9                    | 350000   | 26/7   | 23.5   |
| Kingbird                  | 636000                               | 322.3           | 340.1                    | 400000   | 18/1   | 23.9   |
| Rook                      | 636000                               | 322.3           | 364.1                    | 400000   | 24/7   | 24.8   |
| Grosbeak                  | 636000                               | 322.3           | 374.8                    | 400000   | 26/7   | 25.1   |
| Tern                      | 795000                               | 402.8           | 430.7                    | 500000   | 45/7   | 27.0   |
| Cuckoo                    | 795000                               | 402.8           | 455.0                    | 500000   | 24/7   | 27.7   |
| Drake                     | 795000                               | 402.8           | 468.5                    | 500000   | 26/7   | 28.1   |
| Rail                      | 954000                               | 483.4           | 516.8                    | 600000   | 45/7   | 29.6   |
| Cardinal                  | 954000                               | 483.4           | 546.1                    | 600000   | 54/7   | 30.4   |
| Bluejay                   | 1113000                              | 563.9           | 602.9                    | 700000   | 45/7   | 31.9   |
| Finch                     | 1113000                              | 563.9           | 635.4                    | 700000   | 54/19  | 32.8   |
| Bittern                   | 1272000                              | 644.5           | 689.0                    | 800000   | 45/7   | 34.2   |
| Pheasant                  | 1272000                              | 644.5           | 726.2                    | 800000   | 54/19  | 35.1   |
| Bobolink                  | 1431000                              | 725.2           | 775.5                    | 900000   | 45/7   | 36.2   |
| Plover                    | 1431000                              | 725.2           | 816.9                    | 900000   | 54/19  | 37.2   |
| Lapwing                   | 1590000                              | 805.8           | 861.3                    | 1000000  | 45/7   | 38.2   |
| Falcon                    | 1590000                              | 805.8           | 908.1                    | 1000000  | 54/19  | 39.2   |



DIMENSIONES TUBO DE ALUMINIO I.P.S. REGULAR  
REGULAR I.P.S. ALUMINUM TUBE DIMENSIONS

| Tamaño Size |                 | Diámetro en mm<br>Diameter in mm |                 | Espesor de pared.<br>Wall thickness | Área de la Sección mm <sup>2</sup><br>Cross Section mm <sup>2</sup> |
|-------------|-----------------|----------------------------------|-----------------|-------------------------------------|---|
| mm          | Pulgadas Inches | Exterior Outside                 | Interior Inside |                                     |   |
| 12.7        | 1/2             | 21.3                             | 15.8            | 2.8                                 | 161.5   |
| 19.1        | 3/4             | 26.7                             | 20.9            | 2.9                                 | 214.6   |
| 25.4        | 1               | 33.4                             | 26.6            | 3.4                                 | 318.6   |
| 31.8        | 1-1/4           | 42.2                             | 35.1            | 3.6                                 | 431.3   |
| 38.1        | 1-1/2           | 48.3                             | 40.9            | 3.7                                 | 515.8   |
| 50.8        | 2               | 60.3                             | 52.5            | 3.9                                 | 693.2   |
| 63.5        | 2-1/2           | 73.0                             | 62.7            | 5.2                                 | 1,099.4   |
| 76.2        | 3               | 88.9                             | 77.9            | 5.4                                 | 1,437.7   |
| 88.9        | 3-1/2           | 101.6                            | 90.1            | 5.7                                 | 1,728.7   |
| 101.6       | 4               | 114.3                            | 102.3           | 6.0                                 | 2,047.8   |
| 114.3       | 4-1/2           | 127.0                            | 114.5           | 6.3                                 | 2,379.5   |
| 127.0       | 5               | 141.3                            | 128.2           | 6.6                                 | 2,774.1   |
| 152.4       | 6               | 168.3                            | 154.1           | 7.1                                 | 3,600.9   |

VALORES DE CORRIENTE EN TUBOS CONDUCTORES TIPO I.P.S.  
CURRENT VALUES IN I.P.S. CONDUCTOR TUBES.

| Tamaño Size |                 | Capacidad de Corriente (A)<br>Current Capacity (A) |                  |                                      |                  |
|-------------|-----------------|--|------------------|--------------------------------------|------------------|
|             |                 | Aluminio – Cédula 40<br>Aluminum – Schedule 40     |                  | Cobre – Regular<br>Regular – Copper. |                  |
| mm          | Pulgadas Inches | Interior Indoor                                    | Exterior Outdoor | Interior Indoor                      | Exterior Outdoor |
| 12.7        | 1/2             | 315  | 400              | 380                                  | 510              |
| 19.1        | 3/4             | 400  | 495              | 540                                  | 710              |
| 25.4        | 1               | 535  | 650              | 650                                  | 850              |
| 31.8        | 1-1/4           | 680  | 810              | 870                                  | 1,120            |
| 38.1        | 1-1/2           | 790  | 930              | 1,020                                | 1,280            |
| 50.8        | 2               | 1,000  | 1,155            | 1,250                                | 1,550            |
| 63.5        | 2-1/2           | 1,365  | 1,550            | 1,700                                | 2,000            |
| 76.2        | 3               | 1,670  | 1,895            | 2,175                                | 2,550            |
| 88.9        | 3-1/2           | 1,945  | 2,170            | 2,575                                | 3,050            |
| 101.6       | 4               | 2,230  | 2,460            | 2,850                                | 3,400            |
| 114.3       | 4-1/2           | 2,515  | 2,750            | 3,100                                | 3,700            |
| 127.0       | 5               | 2,845  | 3,080            | 3,450                                | 4,100            |
| 152.4       | 6               | 3,500  | 3,735            | 4,000                                | 4,700            |

**CARACTERÍSTICAS DE ALAMBRES CONDUCTORES DE COBRE**  
**WIRE COPPER CONDUCTORS CHARACTERISTICS**

| ALAMBRES CONDUCTORES DE COBRE<br>WIRE COPPER CONDUCTORS |                                      |                  |   |         |                                      |                                 |                            |
|---|--------------------------------------|------------------|---|---------|--------------------------------------|---------------------------------|----------------------------|
| CALIBRE<br>SIZE<br>AWG                                  | DIÁMETRO A 20°C<br>DIAMETER AT 20 °C |                  | SECCIÓN TRANSVERSAL A 20°C<br>CROSS SECTION AT 20°C |         |                                      | PESO APROXIMADO<br>ROUGH WEIGHT |                            |
|   | mm                                   | Pulgada<br>Inche | mm <sup>2</sup>                                     | CM      | Pulg <sup>2</sup><br>in <sup>2</sup> | Kg/Km                           | lb/1000 Pies<br>lb/1000 ft |
| 4/0   | 11.684                               | 0.4600           | 107.20  | 211,600 | 0.1662                               | 953.2                           | 640.5                      |
| 3/0   | 10.404                               | 0.4096           | 85.01   | 167,772 | 0.1318                               | 755.9                           | 507.9                      |
| 2/0   | 9.266                                | 0.3648           | 67.43   | 133,079 | 0.1045                               | 599.5                           | 402.8                      |
| 1/0   | 8.252                                | 0.3249           | 53.48   | 105,560 | 0.08291                              | 475.4                           | 319.5                      |
| 1   | 7.348                                | 0.2893           | 42.41   | 83,694  | 0.06573                              | 377.0                           | 253.3                      |
| 2   | 6.543                                | 0.2576           | 33.62   | 66,368  | 0.05212                              | 299.0                           | 200.9                      |
| 3   | 5.827                                | 0.2294           | 26.67   | 52,624  | 0.04133                              | 237.1                           | 159.3                      |
| 4   | 5.189                                | 0.2043           | 21.15   | 41,738  | 0.03278                              | 188.0                           | 126.4                      |
| 5   | 4.620                                | 0.1819           | 16.76   | 33,088  | 0.02599                              | 149.1                           | 100.2                      |
| 6   | 4.115                                | 0.1620           | 13.30   | 26,244  | 0.02061                              | 118.3                           | 79.5                       |
| 7   | 3.665                                | 0.1443           | 10.55   | 20,822  | 0.01635                              | 93.8                            | 63.0                       |
| 8   | 3.264                                | 0.1285           | 8.367   | 16,512  | 0.01297                              | 74.4                            | 50.0                       |
| 9   | 2.906                                | 0.1144           | 6.633   | 13,087  | 0.01028                              | 59.0                            | 39.6                       |
| 10  | 2.588                                | 0.1019           | 5.260   | 10,384  | 0.008156                             | 46.8                            | 31.4                       |
| 11  | 2.305                                | 0.09074          | 4.173   | 8,234   | 0.006467                             | 37.7                            | 24.9                       |
| 12  | 2.063                                | 0.08081          | 3.310   | 6,530   | 0.005129                             | 29.4                            | 19.8                       |
| 13  | 1.828                                | 0.07196          | 2.624   | 5,178   | 0.004067                             | 23.3                            | 15.7                       |
| 14  | 1.628                                | 0.06408          | 2.082   | 4,106   | 0.003225                             | 18.5                            | 12.4                       |
| 15  | 1.450                                | 0.05707          | 1.651   | 3,257   | 0.002558                             | 14.7                            | 9.86                       |
| 16  | 1.291                                | 0.05082          | 1.309   | 2,583   | 0.002029                             | 11.6                            | 7.82                       |
| 17  | 1.150                                | 0.04526          | 1.039   | 2,048   | 0.001608                             | 9.23                            | 6.20                       |
| 18  | 1.024                                | 0.04030          | 0.8236  | 1,624   | 0.001275                             | 7.32                            | 4.92                       |
| 19  | 0.9116                               | 0.03589          | 0.6527  | 1,288   | 0.001012                             | 5.80                            | 3.90                       |
| 20  | 0.8118                               | 0.03196          | 0.5176  | 1,021   | 0.0008019                            | 4.60                            | 3.09                       |
| 21  | 0.7229                               | 0.02846          | 0.4104  | 810     | 0.0006362                            | 3.65                            | 2.45                       |
| 22  | 0.6439                               | 0.02535          | 0.3259  | 642.6   | 0.0005047                            | 2.89                            | 1.95                       |
| 23  | 0.5733                               | 0.02257          | 0.2581  | 509.4   | 0.0004001                            | 2.30                            | 1.54                       |
| 24  | 0.5105                               | 0.02010          | 0.2047  | 404.0   | 0.0003173                            | 1.82                            | 1.22                       |
| 25  | 0.4547                               | 0.01790          | 0.1624  | 320.4   | 0.0002516                            | 1.44                            | 0.97                       |
| 26  | 0.4049                               | 0.01594          | 0.1288  | 254.1   | 0.0001996                            | 1.15                            | 0.769                      |
| 27  | 0.3607                               | 0.01420          | 0.1022  | 201.6   | 0.0001583                            | 0.908                           | 0.610                      |
| 28  | 0.3211                               | 0.01264          | 0.0810  | 159.8   | 0.0001255                            | 0.720                           | 0.484                      |
| 29  | 0.2860                               | 0.01126          | 0.0642  | 126.8   | 0.0000996                            | 0.571                           | 0.384                      |
| 30  | 0.2548                               | 0.01003          | 0.0510  | 100.6   | 0.0000790                            | 0.453                           | 0.304                      |
| 31  | 0.2268                               | 0.00893          | 0.0404  | 79.71   | 0.0000626                            | 0.359                           | 0.241                      |
| 32  | 0.2019                               | 0.00795          | 0.0320  | 63.20   | 0.0000496                            | 0.285                           | 0.191                      |
| 33  | 0.1798                               | 0.00708          | 0.0254  | 50.13   | 0.0000394                            | 0.226                           | 0.152                      |
| 34  | 0.1601                               | 0.00631          | 0.0201  | 39.75   | 0.0000312                            | 0.179                           | 0.120                      |

**CARACTERISTICAS DE CABLES CONDUCTORES DE COBRE**  
**CABLE COPPER CONDUCTORS CHARACTERISTICS**

| CABLES CONDUCTORES DE COBRE<br>CABLE COPPER CONDUCTORS |     |                                       |  |                 |                                       |  |                 |
|--|-----|---------------------------------------|--|-----------------|---------------------------------------|--|-----------------|
| CALIBRE<br>SIZE  |     | CLASE AA<br>CLASS AA                  |  |                 | CLASE A<br>CLASS A                    |  |                 |
| MCM  | AWG | NÚMERO<br>DE HILOS<br>WIRES<br>NUMBER | DIÁMETRO DE CADA HILO<br>DIAMETER OF EACH WIRE |                 | NÚMERO<br>DE HILOS<br>WIRES<br>NUMBER | DIÁMETRO DE CADA HILO<br>DIAMETER OF EACH WIRE |                 |
|  |     |                                       | mm   | Pulg.<br>Inches |                                       | mm   | Pulg.<br>Inches |
| 1000   |     | 37                                    | 4.176  | 0.1644          | 61                                    | 3.251  | 0.1280          |
| 900  |     | 37                                    | 3.962  | 0.1560          | 61                                    | 3.086  | 0.1215          |
| 800  |     | 37                                    | 3.734  | 0.1470          | 61                                    | 2.908  | 0.1145          |
| 750  |     | 37                                    | 3.617  | 0.1424          | 61                                    | 2.817  | 0.1109          |
| 700  |     | 37                                    | 3.493  | 0.1375          | 61                                    | 2.720  | 0.1071          |
| 650  |     | 37                                    | 3.366  | 0.1325          | 61                                    | 2.621  | 0.1032          |
| 600  |     | 37                                    | 3.233  | 0.1273          | 37                                    | 3.233  | 0.1273          |
| 550  |     | 37                                    | 3.096  | 0.1219          | 37                                    | 3.096  | 0.1219          |
| 500  |     | 19                                    | 4.120  | 0.1622          | 37                                    | 2.951  | 0.1162          |
| 450  |     | 19                                    | 3.909  | 0.1539          | 37                                    | 2.802  | 0.1103          |
| 400  |     | 19                                    | 3.686  | 0.1451          | 19                                    | 3.686  | 0.1451          |
| 350  |     | 12                                    | 4.338  | 0.1708          | 19                                    | 3.447  | 0.1357          |
| 300  |     | 12                                    | 4.016  | 0.1581          | 19                                    | 3.193  | 0.1257          |
| 250  |     | 12                                    | 3.665  | 0.1443          | 19                                    | 2.913  | 0.1147          |
| 211.6  | 4/0 | 7                                     | 4.417  | 0.1739          | 7                                     | 4.417  | 0.1739          |
| 167.8  | 3/0 | 7                                     | 3.932  | 0.1548          | 7                                     | 3.932  | 0.1548          |
| 133.1  | 2/0 | 7                                     | 3.503  | 0.1379          | 7                                     | 3.503  | 0.1379          |
| 105.6  | 1/0 | 7                                     | 3.119  | 0.1228          | 7                                     | 3.119  | 0.1228          |
| 83.69  | 1   | 3                                     | 4.242  | 0.1670          | 7                                     | 2.776  | 0.1093          |
| 66.36  | 2   | 3                                     | 3.777  | 0.1487          | 7                                     | 2.474  | 0.0974          |
| 52.62  | 3   | 3                                     | 3.366  | 0.1325          | 7                                     | 2.202  | 0.0867          |
| 41.74  | 4   | 3                                     | 2.997  | 0.1180          | 7                                     | 1.961  | 0.0772          |

## CARACTERISTICAS DE ALAMBRE CONDUCTORES DE ALUMINIO WIRE ALUMINUM CONDUCTORS CHARACTERISTICS

| ALAMBRES CONDUCTORES DE ALUMINIO (TEMPLE DURO)<br>WIRE ALUMINUM CONDUCTORS ( HARD TEMPER) |  |                 |  |   |  |
|---|--|-----------------|--|---|--|
| CALIBRE<br>SIZE<br>AWG  | DIÁMETRO DEL<br>ALAMBRE<br>WIRE DIAMETER |                 | ÁREA DE LA SECCION TRANSVERSAL<br>CROSS SECTION AREA |   | EQUIVALENTE<br>COBRE<br>AWG<br>EQUIVALENT<br>COPPER<br>AWG |
|   | mm                                       | Pulg.<br>Inches | mm <sup>2</sup>                                      | Pulg. <sup>2</sup><br>Inches <sup>2</sup> |  |
| 10  | 2.59                                     | 0.1019          | 5.2613   | 0.008155                                  | 12   |
| 9   | 2.91                                     | 0.1144          | 6.6322   | 0.010280                                  | 11   |
| 8   | 3.26                                     | 0.1285          | 8.3677   | 0.012970                                  | 10   |
| 7   | 3.67                                     | 0.1443          | 10.5484  | 0.016350                                  | 9  |
| 6   | 4.11                                     | 0.1620          | 13.2967  | 0.020610                                  | 8  |
| 5   | 4.62                                     | 0.1819          | 16.7677  | 0.025990                                  | 7  |
| 4   | 5.19                                     | 0.2043          | 21.1483  | 0.032780                                  | 6  |
| 3   | 5.83                                     | 0.2294          | 26.6645  | 0.041330                                  | 5  |
| 2   | 6.54                                     | 0.2676          | 33.6257  | 0.052120                                  | 4  |
| 1   | 7.36                                     | 0.2893          | 42.4064  | 0.065730                                  | 3  |
| 1/0   | 8.25                                     | 0.3249          | 53.4902  | 0.082910                                  | 2  |
| 2/0   | 9.27                                     | 0.3648          | 67.4192  | 0.104500                                  | 1  |
| 3/0   | 10.40                                    | 0.4096          | 85.0321  | 0.131800                                  | 1/0  |
| 4/0   | 11.68                                    | 0.4800          | 107.2256   | 0.186200                                  | 2/0  |

## CARACTERISTICAS DE CABLES CONDUCTORES DE ALUMINIO CABLE ALUMINUM CONDUCTORS CHARACTERISTICS

| CABLE CONDUCTORES DE ALUMINIO (TEMPLE DURO)<br>CABLE ALUMINUM CONDUCTORS ( HARD TEMPER) |                |                                       |  |                |  |   |  |
|---|----------------|---------------------------------------|--|----------------|--|---|--|
| CALIBRE<br>SIZE<br>AWG<br>MCM   | CLASE<br>CLASS | NÚMERO<br>DE HILOS<br>WIRES<br>NUMBER | DIÁMETRO NOMINAL DEL CABLE<br>NOMINAL CABLE DIAMETER |                | ÁREA DE LA SECCION TRANSVERSAL<br>CROSS SECTION AREA |   | EQUIVALENTE<br>COBRE<br>AWG<br>EQUIVALENT<br>COPPER<br>AWG |
|   |                |                                       | mm   | Pulg<br>Inches | mm <sup>2</sup>                                      | Pulg. <sup>2</sup><br>Inches <sup>2</sup> |  |
| 4   | A              | 7                                     | 5.893  | 0.232          | 21.1612  | 0.0328                                    | 6  |
| 3   | A              | 7                                     | 6.604  | 0.260          | 26.6451  | 0.0413                                    | 5  |
| 2   | A,AA           | 7                                     | 7.417  | 0.292          | 33.6128  | 0.0521                                    | 4  |
| 1   | A,AA           | 7                                     | 8.331  | 0.328          | 42.3870  | 0.0657                                    | 3  |
| 1/0   | A,AA           | 7                                     | 9.347  | 0.368          | 53.4838  | 0.0829                                    | 2  |
| 2/0   | A,AA           | 7                                     | 10.516   | 0.414          | 67.4192  | 0.1045                                    | 1  |
| 3/0   | A,AA           | 7                                     | 11.786   | 0.464          | 85.0321  | 0.1318                                    | 1/0  |
| 4/0   | A,AA           | 7                                     | 13.259   | 0.522          | 107.2256   | 0.1662                                    | 2/0  |
| 266.8   | AA             | 7                                     | 14.884   | 0.586          | 135.1610   | 0.2095                                    | 3/0  |
| 300.0   | A              | 19                                    | 15.977   | 0.629          | 151.9997   | 0.2356                                    | 188.8  |
| 336.4   | A              | 19                                    | 16.916   | 0.666          | 170.4513   | 0.2642                                    | 4/0  |
| 397.5   | A,AA           | 19                                    | 18.364   | 0.723          | 201.4190   | 0.3122                                    | 250.0  |
| 477.0   | AA             | 19                                    | 20.117   | 0.792          | 241.6769   | 0.3746                                    | 300.0  |
| 500.0   | AA             | 19                                    | 20.599   | 0.811          | 253.3543   | 0.3927                                    | 314.5  |
| 556.5   | AA             | 19                                    | 21.742   | 0.856          | 281.9994   | 0.4371                                    | 350.0  |
| 636.0   | A,AA           | 37                                    | 23.317   | 0.918          | 322.2574   | 0.4995                                    | 400  |

**EQUIVALENCIAS DECIMALES Y METRICOS DE FRACCIONES COMUNES DE PULGADA  
DECIMAL AND METRIC EQUIVALENTS OF COMMON FRACTIONS OF AN INCH**

| <b>FRACCIONES DE PULGADAS<br/>FRACTION<br/>INCH</b> | <b>DECIMALES DE PULGADAS<br/>DECIMAL<br/>INCH</b> | <b>MILIMETROS<br/>MILLIMETERS</b> | <b>FRACCIONES DE PULGADA<br/>FRACTION<br/>INCH</b> | <b>DECIMALES DE PULGADAS<br/>DECIMAL<br/>INCH</b> | <b>MILIMETROS<br/>MILLIMETERS</b> |
|---|---|-----------------------------------|--|---|-----------------------------------|
| 1/64  | 0.01562   | 0.397                             | 33/64  | 0.51562   | 13.097                            |
| 1/32  | 0.31250   | 0.794                             | 17/32  | 0.53125   | 13.494                            |
| 3/64  | 0.04687   | 2.191                             | 35/64  | 0.54687   | 13.890                            |
| 1/16  | 0.06250   | 1.588                             | 9/16   | 0.56250   | 14.288                            |
| 5/64  | 0.07812   | 1.984                             | 37/64  | 0.57812   | 14.684                            |
| 3/32  | 0.09375   | 2.381                             | 19/32  | 0.59375   | 15.081                            |
| 7/64  | 0.10937   | 2.778                             | 39/64  | 0.60937   | 15.478                            |
| 1/8   | 0.12500   | 3.175                             | 5/8  | 0.62500   | 15.875                            |
| 9/64  | 0.14062   | 3.572                             | 40/64  | 0.64062   | 16.272                            |
| 5/32  | 0.015625  | 3.969                             | 21/32  | 0.65625   | 16.669                            |
| 11/64   | 0.17187   | 4.366                             | 43/64  | 0.67187   | 17.066                            |
| 3/16  | 0.18750   | 4.763                             | 11/16  | 0.68750   | 17.463                            |
| 13/64   | 0.20312   | 5.159                             | 45/64  | 0.70312   | 17.859                            |
| 7/32  | 0.21875   | 5.556                             | 23/32  | 0.71875   | 18.256                            |
| 15/64   | 0.23437   | 5.953                             | 47/64  | 0.73437   | 18.653                            |
| 1/4   | 0.25000   | 6.350                             | 3/4  | 0.75000   | 19.050                            |
| 17/64   | 0.26562   | 6.747                             | 49/64  | 0.76520   | 19.447                            |
| 9/32  | 0.28125   | 7.144                             | 25/32  | 0.78125   | 19.844                            |
| 19/64   | 0.29687   | 7.541                             | 51/64  | 0.79687   | 20.241                            |
| 5/16  | 0.31250   | 7.938                             | 13/16  | 0.81250   | 20.638                            |
| 21/64   | 0.32812   | 8.334                             | 53/64  | 0.82812   | 21.034                            |
| 11/32   | 0.34375   | 8.731                             | 27/32  | 0.84375   | 21.431                            |
| 23/64   | 0.35937   | 9.128                             | 55/64  | 0.85937   | 21.828                            |
| 3/8   | 0.37500   | 9.525                             | 7/8  | 0.87500   | 22.225                            |
| 25/64   | 0.39062   | 9.922                             | 57/64  | 0.89062   | 22.622                            |
| 11/32   | 0.40625   | 10.319                            | 29/32  | 0.90625   | 23.019                            |
| 27/64   | 0.41287   | 10.716                            | 59/64  | 0.92187   | 23.416                            |
| 7/16  | 0.43750   | 11.113                            | 15/16  | 0.93750   | 23.813                            |
| 29/64   | 0.45312   | 11.509                            | 61/64  | 0.95312   | 24.209                            |
| 15/32   | 0.46875   | 11.906                            | 31/32  | 0.96875   | 24.606                            |
| 31/64   | 0.48437   | 12.303                            | 63/64  | 0.98437   | 25.003                            |
| 1/2   | 0.50000   | 12.700                            | 1  | 1.00000   | 25.400                            |

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# ¿Sabías qué?

En Delta Conectores somos:

**Líderes en desarrollo, fabricación y venta de conectores especiales.**

Contamos con un robusto y consolidado departamento de ingeniería, área técnica, desarrollo de producto y laboratorio de pruebas que nos permite mantener la capacidad para satisfacer las necesidades específicas que tenga de este tipo de productos, ya sea modificando algún producto existente o desarrollarlo de manera particular.



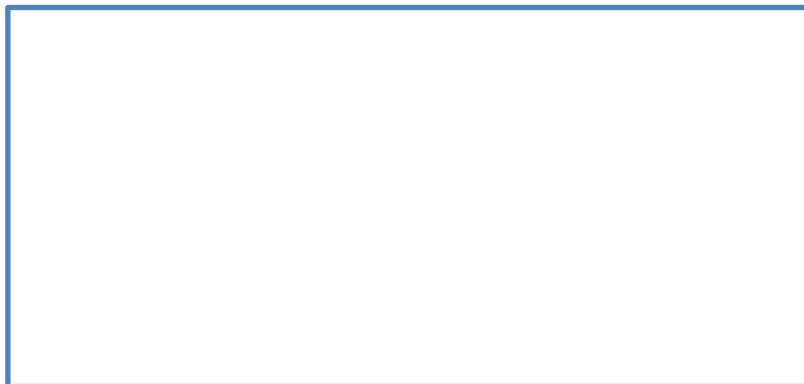
... y con el mejor tiempo de entrega.

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