ERITECH®

Facility Electrical Protection

ERICO®

FACILITY ELECTRICAL PROTECTION

Founded in 1903 as the Electric Railway Improvement Company, ERICO developed the CADWELD® exothermic welding process in 1938. CADWELD connections have found industry-wide acceptance as the ultimate grounding and bonding connection. During the 1970s, ERICO pioneered the copper-bonded steel ground rod electrode. Today, ERICO's range of facility electrical protection products includes ERITECH® ground rods, clamps, grounding and bonding assemblies, ground enhancement material, ground testers, structural lightning protection, equipotential mesh and mats, and signal reference grids; low-voltage TVSS devices; and CADWELD® exothermic connections.

Facility Electrical Protection

Lightning protection, grounding, equipotential bonding and surge protection are all interdependent disciplines and the focus of our Facility Electrical Protection product line. Reliable protection of personnel and structures demands a systematic and comprehensive approach to minimising threats caused by transients and other system disturbances. For instance, no air terminal can safely capture and arrest the lightning energy without a dependable route to ground. Equally, even the most expensive Surge Protection Device (SPD) will not provide optimum protection if a low-impedance electrical connection to the ground is not present. Additionally, a low-impedance ground system may create hazards to equipment and personnel alike if equipotential bonding is not in place. These interdependent disciplines are best applied when looking at a total facility rather than an individual piece of equipment or a portion of the facility.

Since no single technology can eliminate the harmful effects of lightning or induced-surge transients, ERICO has developed the Six Point Plan of Protection. The concept behind this plan is a holistic and coordinated approach that embraces all aspects of effective facility electrical protection.

The six interdependent disciplines that form the protection plan are:

1. Capture the lightning strike
2. Convey this energy to ground
3. Dissipate energy into the grounding system
4. Bond all ground points together
5. Protect incoming AC power feeders
6. Protect low voltage data/telecommunications circuits

CADWELD® CRITEC® ERITECH®

At ERICO, we offer innovative, efficient grounding and bonding products as well as engineering experience and technical support. With this experience, ERICO is a world-leading authority in the design and construction of permanent, low-impedance grounding systems.

ERICO employs a quality-assurance program to help ensure that detailed procedures required for every step of the operation produce the best possible system for our clients. This attention to detail includes design, materials procurement, manufacturing, installation and testing.

Our research and development capabilities provide continuous design improvement with new and improved products that preempt the challenging requirements of ever-evolving industry applications. Engineering expertise is shared among the other ERICO operations worldwide, to provide a comprehensive global knowledge pool.

Trust ERICO for all of your facility electrical protection needs.

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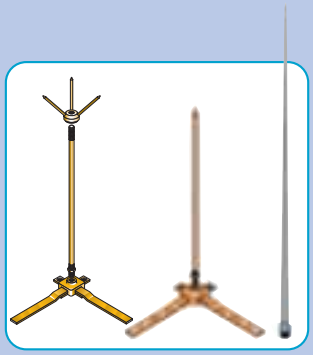

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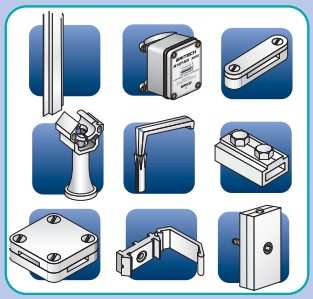

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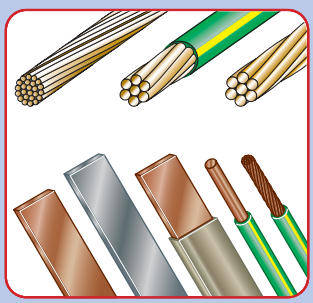

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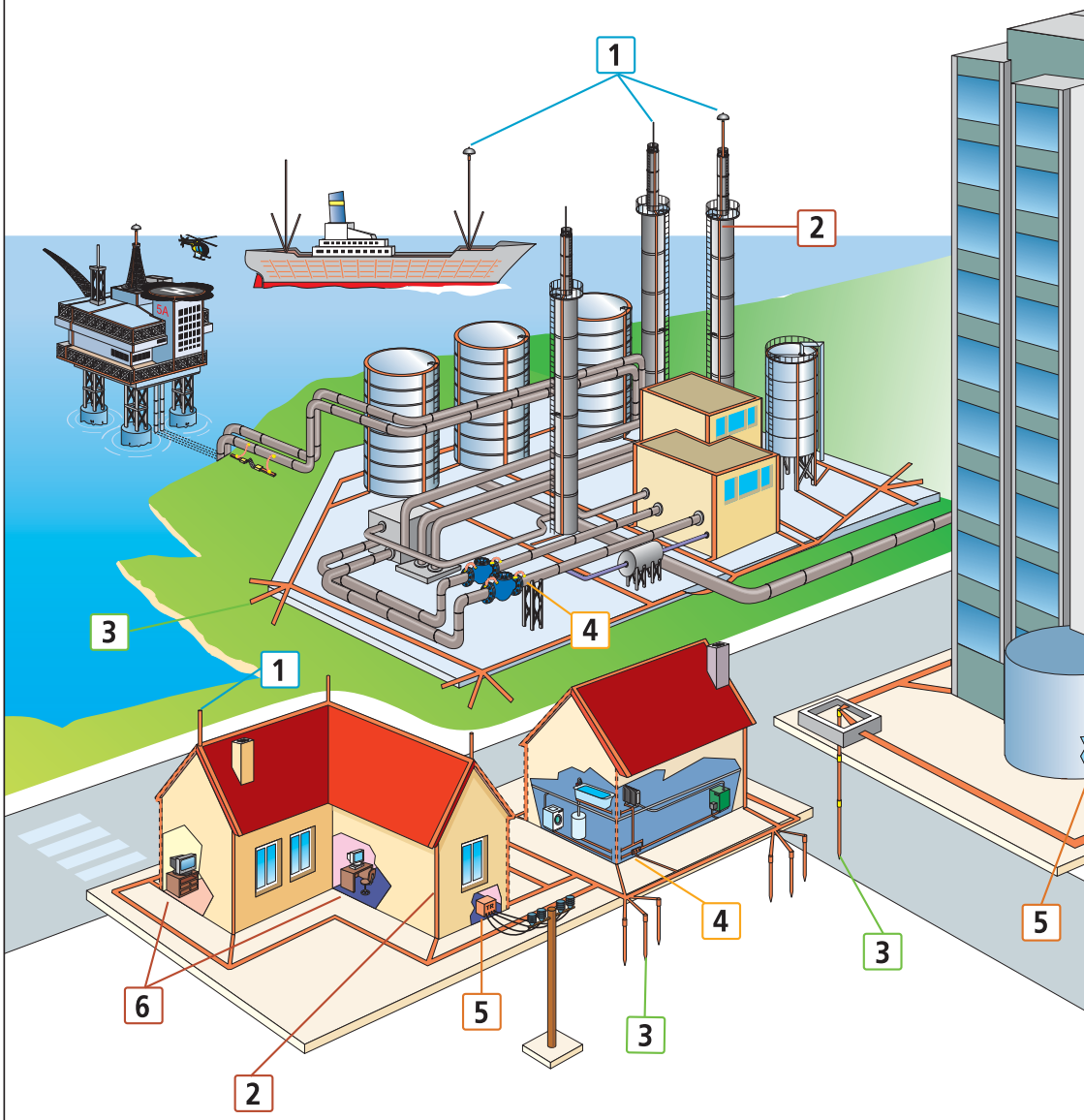
ERICO® Six Point Plan of Protection

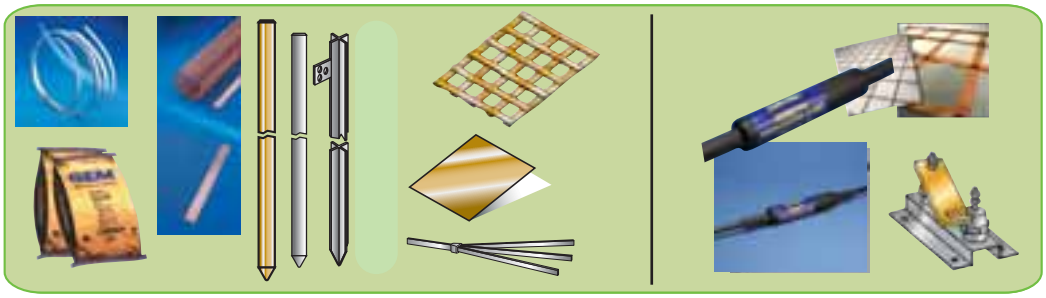
Effective lightning protection involves the integration of several concepts. ERICO® employs the Six Point Plan of Protection as a useful guide to ensure the highest level of system security.



GROUNDING & BONDING

Point 3 - Dissipate energy into the grounding system

Point 4 - Bond all ground points together



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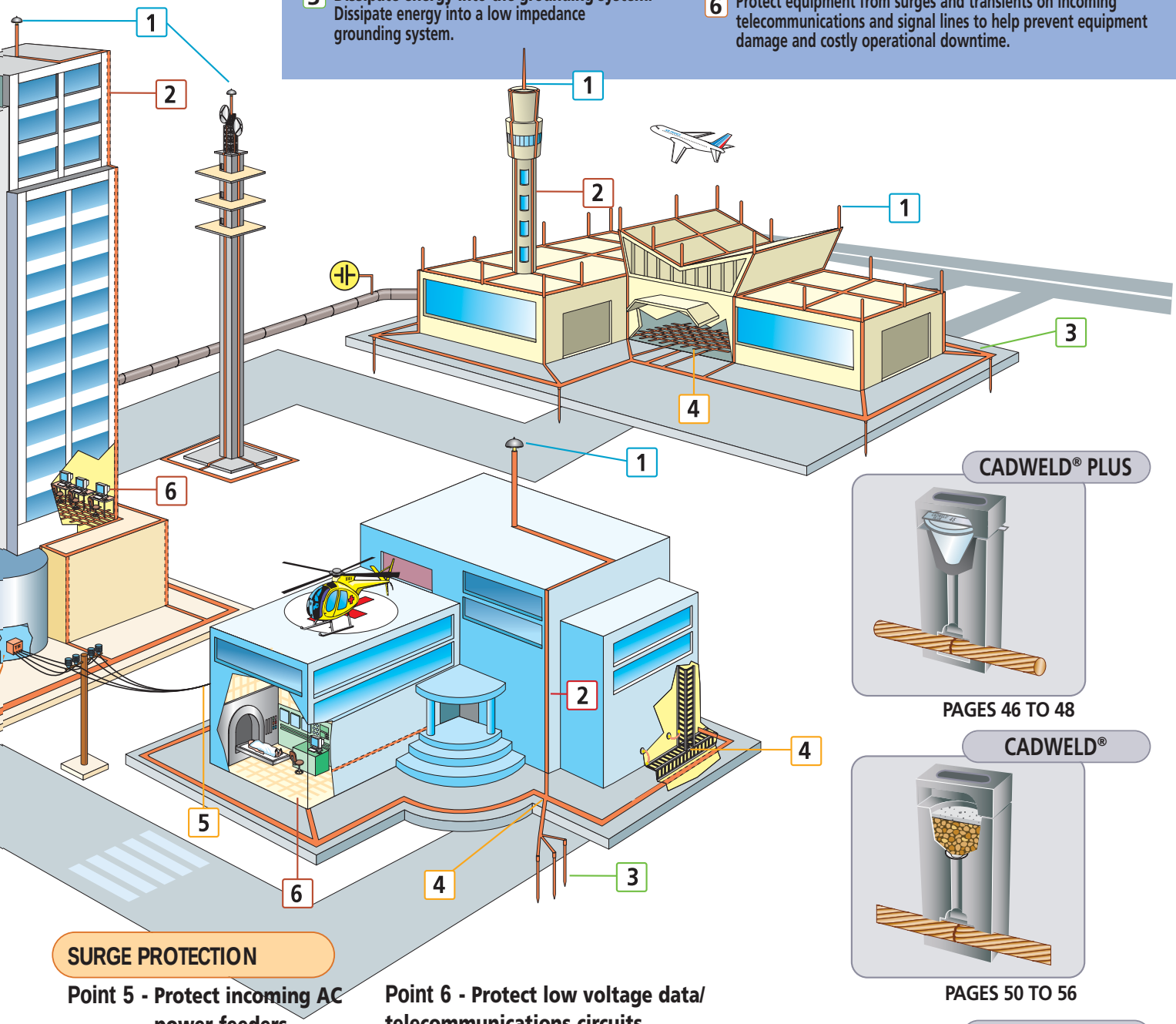
CATALOGUE OVERVIEW

1. **Capture the lightning strike.** Capture the lightning strike to a known and preferred attachment point using a purpose-designed air terminal system.
2. **Convey this energy to ground.** Conduct the energy to the ground via a purpose-designed downconductor.
3. **Dissipate energy into the grounding system.** Dissipate energy into a low impedance grounding system.
4. **Bond all ground points together.** Bond all ground points to help eliminate ground loops and create an equipotential plane.
5. **Protect incoming AC power feeders.** Protect equipment from surges and transients on incoming power lines to help prevent equipment damage and costly operational downtime.
6. **Protect low voltage data/telecommunications circuits.** Protect equipment from surges and transients on incoming telecommunications and signal lines to help prevent equipment damage and costly operational downtime.



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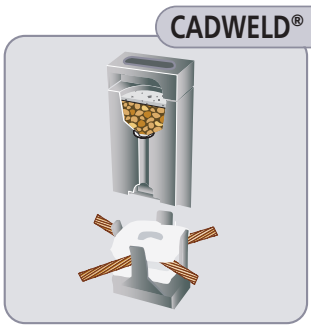

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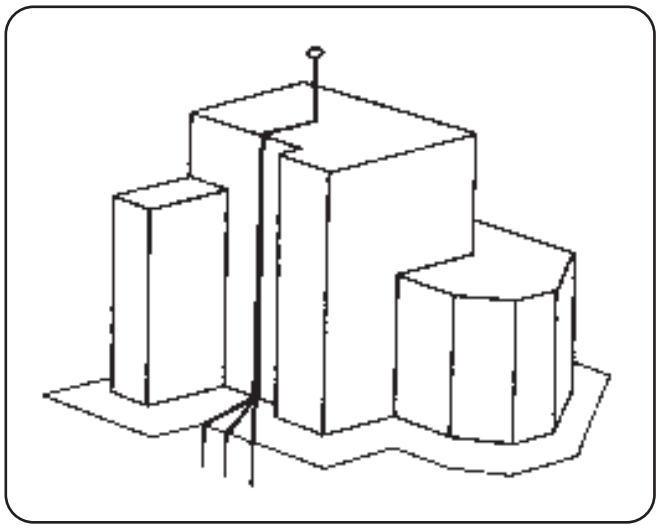
TECHNICAL INFORMATION

ERITECH® SYSTEM 3000

PROTECTION OF STRUCTURES AGAINST LIGHTNING

There are 2 types of devices for the protection of structures against lightning: the conventional one, based only on passive components (copper, galvanized steel...), and the active protection system, **The latter being based on advanced knowledge and more than 15 years of experience.**



ACTIVE PROTECTION

WHAT IS THE SYSTEM?

The ERITECH® SYSTEM 3000 is a technically advanced lightning-protection system. The unique features of this system allow the achievement of superior technical performance and hence provide more reliable lightning capture.

The ERITECH® DYNASPHERE air terminal provides a preferred point for lightning discharges which would otherwise strike and damage an unprotected structure and/or its contents. The ERITECH DYNASPHERE is connected to an ERITECH® ERICORE downconductor and the ground system in such a way as to provide a totally integrated system.

PROTECTION LEVEL

Lightning is a statistical phenomena where 100% protection is virtually impossible to achieve, and certainly, is not economically practical. IEC 62305-3 defines 4 protection levels together with associated interception efficiencies. This information is used to determine the appropriate air terminal location and spacing.

LEVEL I	**99%**	Very high risk structures
LEVEL II	**97%**	High risk structures
LEVEL III	**91%**	Medium risk structures
LEVEL IV	**84%**	Low risk structures, e.g. Residential

AIR TERMINAL

THE ERITECH DYNASPHERE ENHANCED AIR TERMINAL

The patented ERITECH DYNASPHERE is an enhanced air terminal.
- Non radioactive
- Not externally powered
- Has no moving parts
- Responds dynamically to the approach of a lightning downleader.

PRINCIPLES OF THE ERITECH DYNASPHERE

For more than 200 years little improvement was made in lightning protection systems.
Modern research and recording methods have led to a better understanding of the lightning discharge process and various breakthroughs have been achieved in the simulation of lightning electric-field conditions.
Two fundamental concepts have emerged from recent research into the lightning attachment process and air terminal performance:

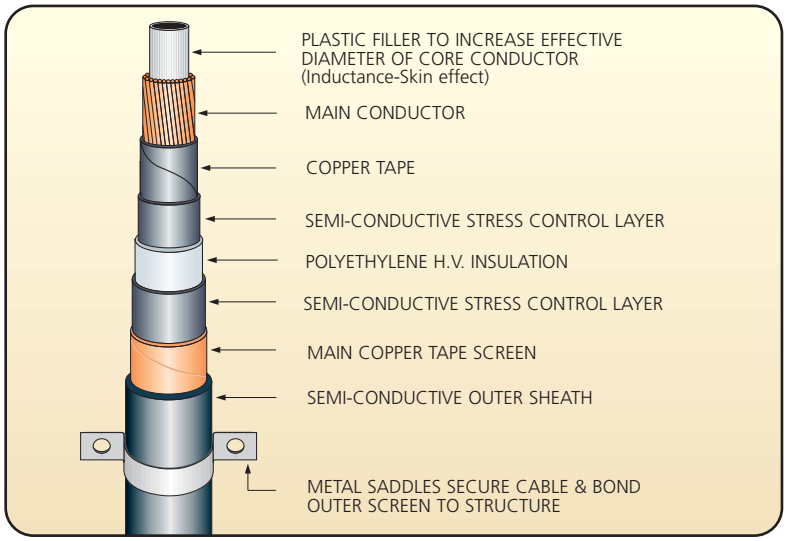
1. Air terminals that produce copious quantities of corona (space charge) are likely to be less efficient in the interception of a lightning downward leader.
2. An optimum air terminal is one which launches an upward streamer when it is highly likely to convert into a stable, propagating leader (to intercept the downward leader)

The ERITECH DYNASPHERE has been developed with these two concepts in mind.

The ERITECH DYNASPHERE is an enhanced Franklin rod with a spherical dome which is capacitively coupled to the electric field of an approaching lightning downleader.

This spherical conductive surface surrounds a central earthed lightning rod. The sphere is insulated from the rod but connected to ground via a high impedance with DC conduction.
The ERITECH DYNASPHERE is isolated from the structure using an insulated support mast. The mast also enables the safe connection of the ERITECH ERICORE downconductor to the air terminal.

TECHNICAL INFORMATION



TECHNICAL AND DESIGN CHARACTERISTICS OF ERITECH® ERICORE

The ERITECH ERICORE downconductors have been designed to meet the criteria for an effective and reliable downconductor with the following key characteristics:

- a low inductance per unit length
- a low surge impedance
- a carefully controlled internal electric field distribution to minimise field stresses under current impulse conditions
- carefully designed, stress reducing upper termination.

ERITECH® SYSTEM 1000

ERITECH® INTERCEPTOR SI ESE LIGHTNING TERMINALS

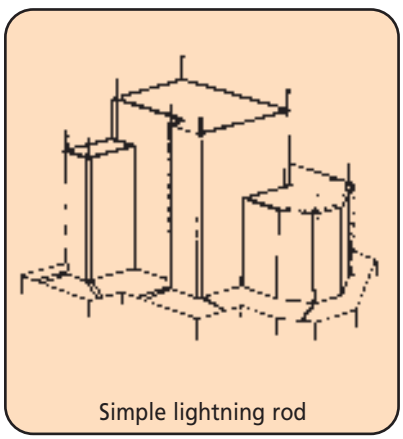
- Designed and tested to NFC17-102 and UNE-21186
- Stainless steel design suitable for most environments
- Available in three models to suit specific site requirements
- Suitable for connection to a variety of downconductor systems including tape, cable, smooth-weave and ERICORE conductor
- Fully compatible with the ERITECH® SYSTEM 3000 mast, ERITECH ERICORE cable and accessories

ERITECH® SYSTEM 2000

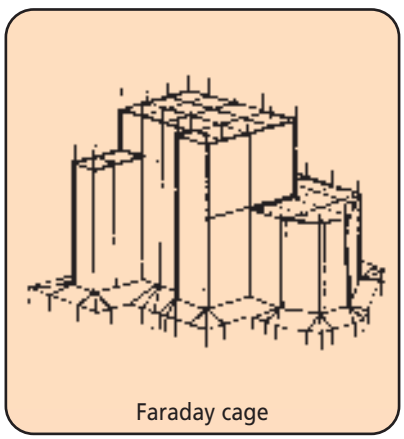
CONVENTIONAL PROTECTION

Conventional protection of buildings or structures involves the use of suitably positioned air terminals (lightning rods) which are interconnected with a metal downconductor network (usually copper) to provide the most direct path from the air termination to a low impedance grounding system.

This helps ensure a safe and effective dissipation of the lightning impulse. Comprehensive conventional systems are often referred to as Faraday Cages.



Simple lightning rod



Faraday cage

TECHNICAL INFORMATION

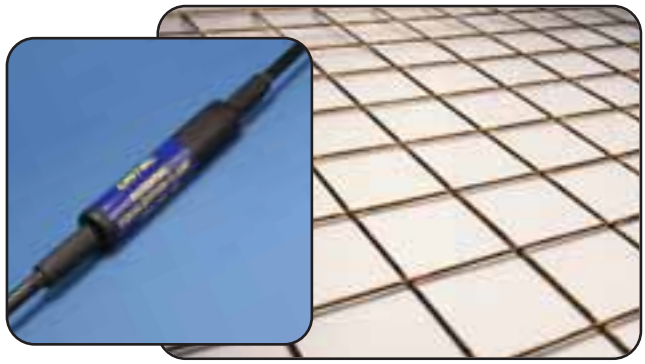
For the efficient performance of a lightning protection system, it is essential that a low impedance ground be provided to facilitate the dissipation of the lightning energy into the earth mass.
Because soil conditions and seasonal patterns vary from site to site, the methods of grounding need to be considered on an individual basis.

GROUND RODS, TAPES AND CLAMPS

ERITECH® copper-bonded, galvanised and stainless steel earth rods facilitate the transfer of surges and fault currents into the earth, and provide a long service life due to superior construction and quality.

GROUND ENHANCEMENT MATERIAL (GEM)

Ground enhancing materials can be applied around the conductors in a grounding system to reduce the local soil resistivity and lower ground impedance. They are particularly useful in areas of moisture variation, sandy soils and rocky ground.

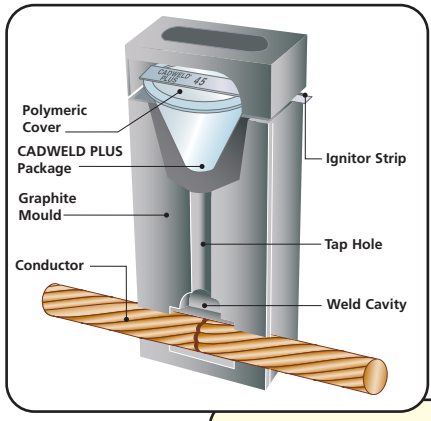


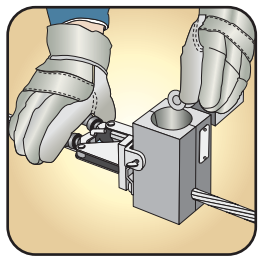
GROUND POTENTIAL EQUALISATION

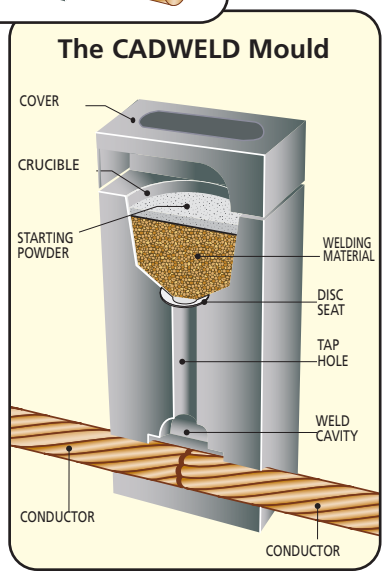
ERICO's range of equipotential ground bars, plates, pre-engineered grids, and Potential Equalization Clamps combine to create a safe equipotential ground plane for the protection of personnel and equipment.

CADWELD® / CADWELD® PLUS MOLECULAR BONDING

Connections are often the most critical element of grounding systems, and subsequently can become the weak point due to ageing and corrosion. The preferred method of connection is the CADWELD® exothermic welding process producing a molecular bond. The capacity of an earthing circuit to protect the safety of personnel depends on the quality of the connections made.





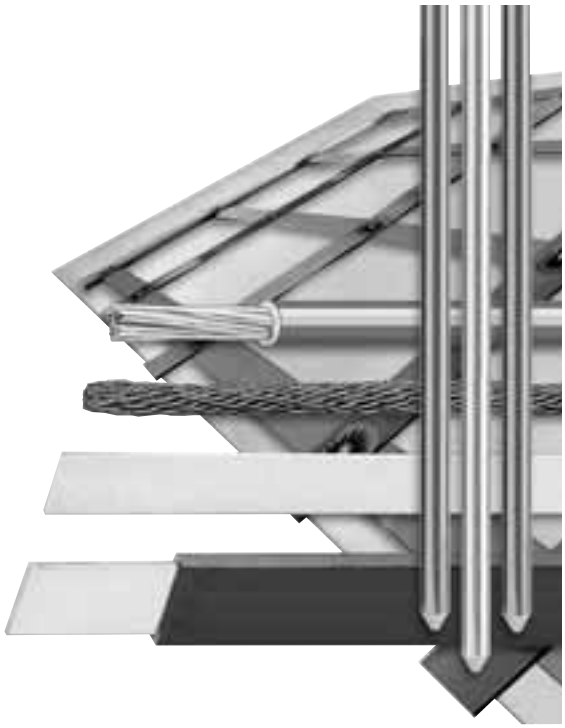


TECHNICAL INFORMATION

GROUND ELECTRODES

The ground electrode is a critical component of the grounding system. Many different types of electrodes are available, some "natural" and some "made". The natural types include metal underground water pipe, the metal frame of a building (if effectively grounded), a copper wire or reinforcing bar in a concrete foundation or underground structures or systems. Consideration should be given to bonding of natural earths to ensure electrical continuity with a facilities' other "earths".

"Made" electrodes are specifically installed to improve the system grounding or earthing. These earth electrodes must ideally penetrate into the moisture level below the ground level to reduce resistance. They must also consist of metal conductors (or a combination of metal conductor types), which do not corrode excessively for the period of time they are expected to serve. Made electrodes include rods or pipes driven into the earth, metallic plates buried in the earth or a copper wire ring encircling the structure. Underground gas piping or aluminium electrodes are NOT permitted for use as ground electrodes.



GROUND RODS

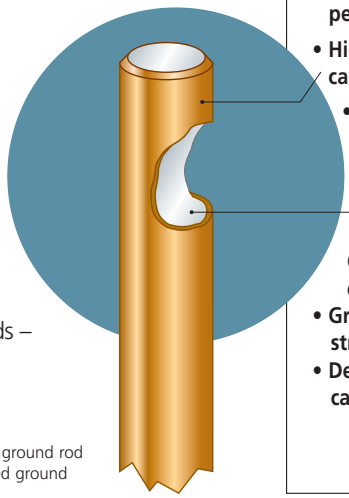
Which ground rod should be used?

Ground rods are often selected on the basis of their resistance to corrosion. The other major factor is cost. All too often, the cost of a product is seen as the initial up front price, but the real cost is determined by the serviceable life of the ground rod.

Galvanised steel rods are one of the cheapest electrodes available. However, they are not the most cost effective since they have a relatively short service life. Solid copper and stainless steel rods have a long service life. However, they are considerably more expensive than galvanised steel rods. In addition to this, solid copper rods are not suited to deep driving or even driving short lengths into hard ground, without bending.

As a compromise, steel cored ground rods, swaged in a copper or stainless steel sheath were developed. These ground rods are much less expensive than their solid counterparts. They are capable of being deep driven. However, the sheath of this rod type has been known to slip or tear, particularly the copper version. Once this sheath has been damaged, the integrity of the entire electrode is at risk.

Ask for the ERICO® White Paper on Ground Rods – Copper-bonded vs. Galvanised.



Copper-bonded ground rod versus Galvanised ground rod.

COPPER-BONDED GROUND ROD	GALVANISED GROUND ROD
• Cost effective long service life	• Lower purchase price - not as cost effective as Copper-bonded
Copper-bonded coating: • Permanent molecular bond • Low resistance performance • High fault current capacity (IEEE® Std 80) • Will not slip or tear when driven • Will not crack if rod is bent	Galvanised coating: • Relatively short service life • May crack if rod is bent
Carbon Steel core and tip: • Greater tensile strength • Deep driving capability	Steel core and tip: • High tensile strength • Deep driving capability

TECHNICAL INFORMATION

GROUND ELECTRODES

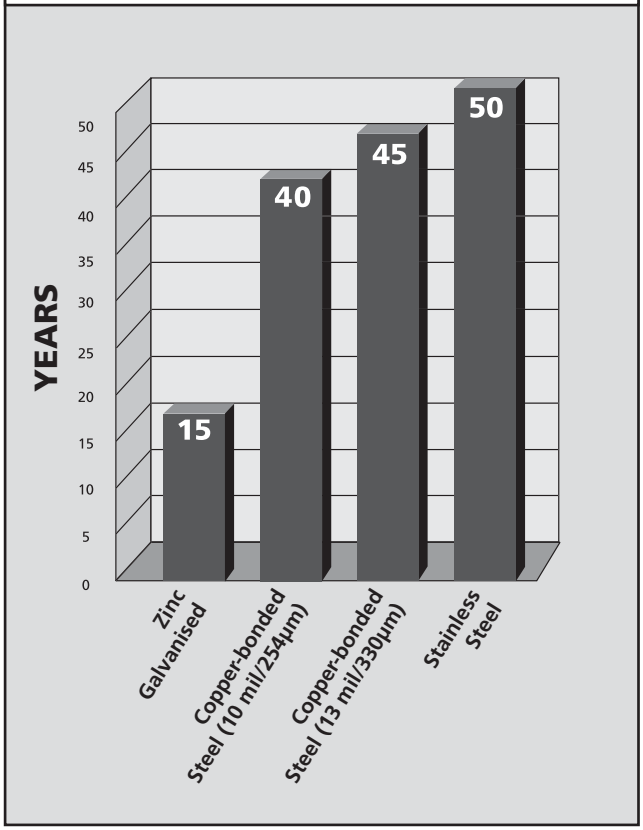
The copper-bonded ground rod has an electrolytic coating of copper deposited over a layer of nickel. This process ensures a long lasting, molecular bond between the copper layer and the steel core. ERICO® recommends copper-bonded ground rods because the copper coating will not slip or tear when driven nor will it crack if the rod is bent. The tough, carbon steel core has good characteristics for deep driving. Copper-bonded ground rods have a high resistance to corrosion and provide a low resistance path to ground.

Above photo shows two ground rods subjected to the same pressure load test. The ERITECH® copper-bonded ground rod, shown on the left, will bend without tears, cracks or folds, to the outer sheath. The inferior copperclad rod shown on the right, has developed cracks and creases to the outer sheath, which will significantly reduce its serviceable life and put the integrity of the entire electrode at risk.

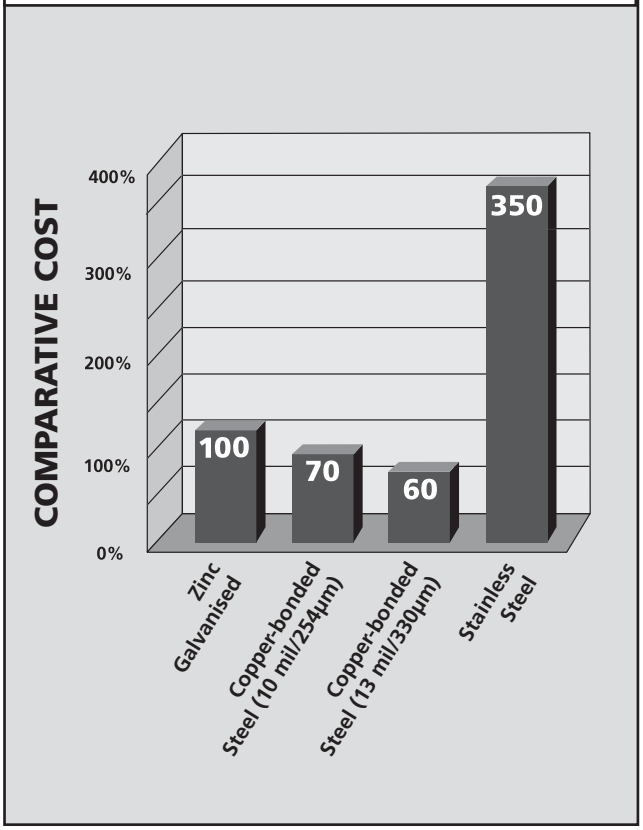
The Stainless Steel Option

It is important to note that certain soils and land fill areas may not be compatible with copper. In these situations, stainless steel is a better proposition. Stainless steel may also be an alternative, where structures or components, such as steel towers, poles or lead sheathed cables are in close proximity to an array of ground electrodes. In these circumstances, consideration must be given to the consequence of galvanic corrosion. The high cost of stainless steel rods prohibits their widespread use.

GROUND ROD LIFE EXPECTANCY



GROUND ROD ANNUAL COST



TECHNICAL INFORMATION

WHY IS GOOD GROUNDING IMPORTANT?

The transient nature of lightning with its associated fast rise times and large magnitude currents mean that special consideration needs to be given to grounding, for lightning protection to be effective. Many factors such as soil resistivity variations, installation accessibility, layout and existing physical features are all site specific and tend to affect decisions on grounding methods employed. The primary aim of a direct strike grounding system is to:

- Efficiently dissipate lightning surge energy into the ground
- Help ensure safety of equipment and personnel

GROUNDING PRINCIPLES

Low impedance is the key to lightning protection. All grounding connections should be as short and direct as possible to minimise inductance and reduce peak voltages induced in the connections. The ground electrode system must efficiently couple lightning surges into the ground by maximising capacitive coupling to the soil. The resistance of the ground itself to lightning currents must also be minimised. Only when all these factors are taken into account will maximum lightning protection be achieved.

GROUND IMPEDANCE

Soil resistivity is an important design consideration. It varies markedly for different soil types, moisture content and temperatures and gives rise to variations in ground impedances.

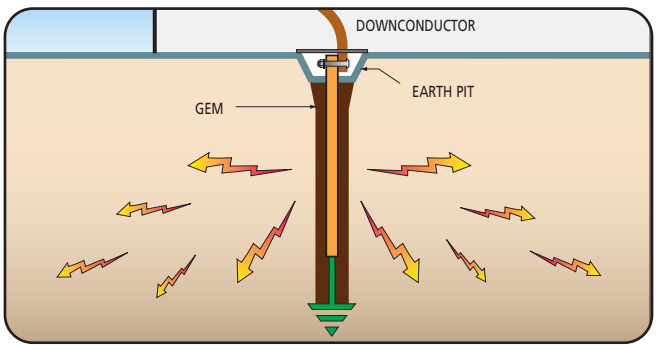
Figure 1-B illustrates current flow from the injection point of a single ground electrode. As current flows out from the central injection point, a voltage gradient on the ground surface around the electrode is produced. This gradient levels off to a plateau at some distance from the electrode, as seen in Figure 1-A. The impedance seen by the current is determined by the soil particles in direct contact with the surface of the rod, and by the general impedance of the soil.

SHORT, DIRECT GROUND CONNECTIONS

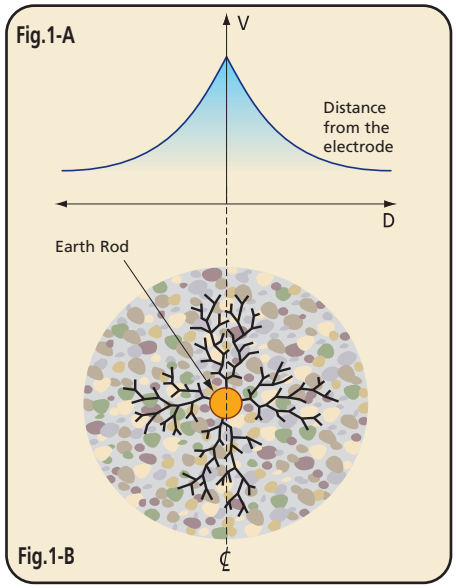
The voltage generated by a lightning surge depends primarily on the risetime of the surge current and the impedance (primarily inductance) of the path to ground. Extremely fast rise times result in significant voltage rises due to any series inductance resulting from long, indirect paths, or sharp bends in the routing of ground conductors.

COUPLING FROM THE ELECTRODE SYSTEM TO THE GROUND

The efficiency of a ground electrode system in coupling a lightning surge current to ground is dependent on a number of factors, including the geometry of the ground electrode system, the shape of the conductors and the effective coupling into the soil.



A typical grounding system.



CHARACTERISTICS OF A GOOD GROUNDING SYSTEM

- Good electrical conductivity
- Conductors capable of withstanding high fault currents
- Long life - at least 40 years
- Low ground resistance and impedance

  The basis philosophy of any grounding installation should be an attempt to maximise the surface area of electrodes or conductors with the surrounding soil. Not only does this help to lower the earth resistance of the grounding system, but it also greatly improves the impedance of the grounding system under lightning surge conditions.

- Equipotential bonding

  Equipotential bonding helps ensure that hazardous potential differences do not occur between different incoming conductors such as metallic water services, power systems, telecommunication systems and the local ground, and also minimises step and touch potentials.

- Good corrosion resistance

  The ground electrode system should be corrosion resistant, and compatible with other conductors that are buried and bonded to the ground system. Copper is by far the most common material used for grounding conductors. In general, some form of maintenance or inspection procedure should be adopted to ensure the long-term effectiveness of a grounding system.

- Electrically and mechanically robust and reliable

Mechanical coupling can be used to join ground conductors, but suffers from corrosion effects when dissimilar metals are involved. As well as mechanical strength, CADWELD® connections provide excellent low impedance, long life electrical connections with excellent corrosion resistance.

TECHNICAL INFORMATION

COMPONENTS OF A GROUNDING SYSTEM

A grounding system for lightning protection serves to deliver the lightning current into ground. It consists of one or more ground electrodes (earthing rods) along with any interconnecting conductors. Components include:

- Ground rods
- Ground enhancing materials
- CADWELD® exothermic welded connections
- Ground connectors – tapes, stranded cables, rod clamps, mesh, plates etc
- Ground pits - for access to the ground system

DESIGNING A GROUND ELECTRODE SYSTEM

A significant factor governing the choice of a grounding system are the applicable standards and codes:

European	**IEC/EN 62305-3, EN 50164 Series, EN 60364-54, NFC 17-102**
American	**NFPA® 780, IEEE® STD80, IEEE 837, NFPA 70**
Australian	**AS1768**

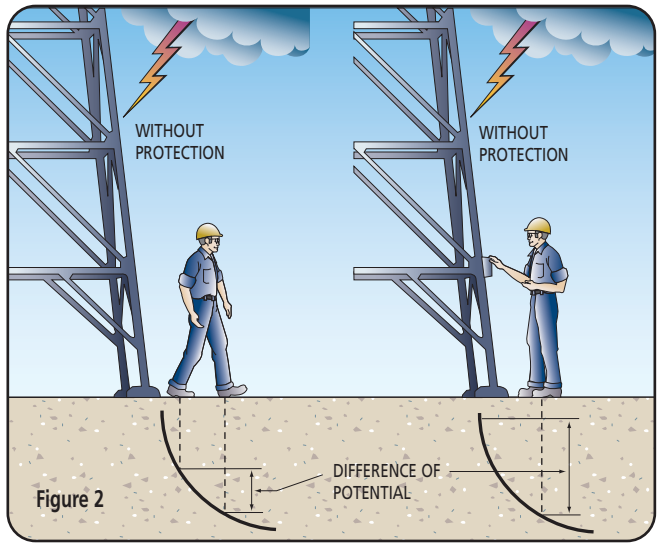
Other factors to consider include:

- **The needs and layout of the facility** (location and space confinement issues)
- **The ground environment of the facility itself** (eg soil resistivity)
- **Existing grounding systems**
- **Susceptibility to seasonal variations in soil moisture content and temperature**
- **Exposure to pedestrian traffic**
- **Step and Touch Potentials**

While it is clear that a low impedance grounding system will allow the lightning surge energy to be dissipated into the ground, this will not necessarily minimise hazards to personnel in close proximity to the grounding system. High voltage gradients on the surface of the ground give rise to undesirable step and touch potential hazards. In order to reduce the chance of injury to personnel, both step and touch potentials must be minimised. Figure 2 graphically illustrates the danger of such potentials.

• Selecting the right connections

The connections between the conductors and the main grid, and between the grid and ground rods, are as important as the conductors themselves in maintaining a permanent low-resistance path to ground.



Step and Touch Potential. Step potential is the voltage difference between a person's feet caused by the dissipation gradient of a fault entering the earth. Touch potential is similar to "step potential" except that the fault current passes through the person's arm and torso on the way to the ground.

• Reducing ground impedance

Resistivity of the soil varies markedly for different soil types, moisture content and temperatures, and this gives rise to variations in ground system impedance. The lower the resistivity, the easier it is to achieve an effective grounding system. Measures that can be used for reducing earth impedance include:

- Connecting additional buried conductors to the ground electrode
- Use of multiple interconnected ground electrodes
- Use of flat tape rather than circular conductors
- Use of spaced conductors connected in parallel
- Use of equipotential mesh electrodes
- Use of multiple short interconnected buried conductor

• Use of ground enhancing compounds

Electrically conductive ground enhancing compounds can be applied to help lower ground resistance and impedance. They are particularly useful for rocky ground, areas of moisture variation and sandy soils. These compounds are generally applied around electrodes in oversized drill holes and around horizontal buried conductors.

• Use of mineral or chemical ground rods

Mineral or chemical ground rods are also used to decrease ground impedance. These consist of a perforated hollow copper tube sealed at the bottom. A salt compound is placed inside the tube which gradually leaches out to maintain a conductive environment around the electrode.

• Use of concrete slabs or footings

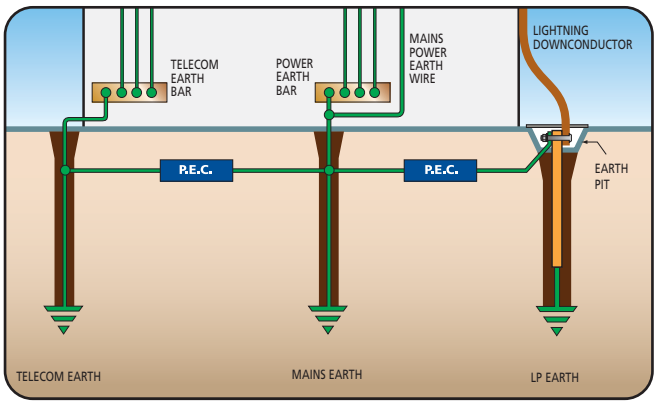
The use of reinforced concrete slabs and footings is one of the most effective ways to provide a low impedance ground electrode system. If addressed at the design stage this method can provide a very stable, permanent distributed ground electrode system at very little additional cost to the civil works.

TECHNICAL INFORMATION

GROUND POTENTIAL EQUALISATION

Creating an equipotential earth plane under transient conditions is essential for equipment and personnel safety. However, separate earths are sometimes installed for lightning, mains power, computer and communications equipment in buildings and other installations. Although this may be desirable under normal operating conditions, when lightning or other transient voltages occur, potential differences between the separate earths are inevitable. These can enter buildings, destroying equipment and creating dangers for personnel.

The PEC (Potential Equalization Clamp) usually operates as an effective open circuit. However, once the earth potential difference exceeds the breakdown voltage of the PEC (under transient conditions), the circuit closes immediately and the earth potential's are equalised, thereby protecting equipment and people.



Equipotential earth plane created by bonding all earths together with Potential Equalization Clamps (PEC).

• Appropriate depth and separation of electrodes

The length, number and placement of ground rods affects the resistivity of the path to ground. The most cost-effective depth to which an electrode should be driven is usually dependent on specific soil conditions. Soils are rarely homogeneous or uniform and it may be advantageous to install electrodes to a particular depth where a low resistivity soil layer, such as a clay base, is encountered. Electrode depths commonly used are in the range of 1 to 4 m. Electrodes should be separated by a distance of at least twice the depth to which they are installed.

• Equipotential Bonding

Potential equalisation ensures that any potential rise due to the injection of lightning current into the impedance of the grounding network, is experienced by all the conductive services in the building. Thus everything rises in potential together and hazardous potential differences are avoided.

GROUND ENHANCEMENT MATERIAL (GEM)

A superior conductive material that improves grounding effectiveness, especially in areas of poor conductivity (rocky ground, areas of moisture variation, sandy soils) :

Estimated linear feet of ground conductor covering with each bag of GEM

Trench Width	Total thickness of GEM			
	2, 5 cm (1")	5, 1 cm (2")	7, 6 cm (3")	10, 2 cm (4")
10 cm (4")	4.3 m (14.0')	2.1 m (7.0')	1.4 m (4.7')	1.1 m (3.5')
15 cm (6")	2.8 m (9.3')	1.4 m (4.7')	0.9 m (3.1')	0.7 m (2.3')
20 cm (8")	2.1 m (7.0')	1.1 m (3.5')	0.7 m (2.3')	0.5 m (1.8')
25 cm (10")	1.7 m (5.6')	0.9 m (2.8')	0.6 m (1.9')	0.4 m (1.4')
30 cm (12")	1.4 m (4.7')	0.7 m (2.3')	0.5 m (1.6')	0.4 m (1.2')

Estimated bags of GEM for backfilling around ground rods to a density of 90 lb/cu ft (1442 kg/m3)

Dia. of hole	Depth of hole (Feet) *						
	1.8 m (6')	2.1 m (7')	2.4 m (8')	2.7 m (9')	5.2 m (17')	5.8 m (19')	6.1 m (20')
7.5 cm (3")	2	2	2	2	4	4	4
10.0 cm (4")	2	3	3	3	6	7	7
12.5 cm (5")	3	4	4	5	9	10	10
15.0 cm (6")	5	5	6	7	13	14	15
17.5 cm (7")	6	7	8	9	17	19	20
20.0 cm (8")	8	9	11	12	22	25	26
22.5 cm (9")	10	12	13	15	28	31	32
25.0 cm (10")	12	14	16	18	34	38	40

TECHNICAL INFORMATION

PROTECTION FROM POWER SURGES

To meet the fundamental requirements of performance, longer service life and greater safety under real world conditions, ERICO® has developed a range of technologies covering all aspects of the Six Point Plan of Protection. In the field of surge protection, several technologies play a critical role in the provision of premium performance.

The DINLINE Product range offers both shunt or series protection utilising differing technologies in compact DIN rail mounted products. A number of different options are available to suit your individual application or performance requirements.

SHUNT SURGE PROTECTION DEVICES

The DINLINE Surge Diverters (DSD) offer economical and reliable protection from transients on power lines with the convenience of easy installation on 35 mm DIN rail mountings.

The DSD range includes the three phase DSD340 series for simple installation into TN-C, TN-S and TT systems. Alternatively multiple DSD1x units may be configured for TN-C, TN-S, TN-C-S, TT & IT systems with surge ratings ranging form 10kA to 150kA.

Internal thermal disconnect devices ensure safe isolation during sustained and abnormal events on the distribution network. Most units feature visual indication in the event of such operation. In addition, select units are available with voltage-free contacts for remote signaling if replacement is due.

PROTECTION OF COMMUNICATIONS EQUIPMENT

Transients and surges caused by lightning, or switching of power equipment, affect communications signals carried on copper cables. Telecommunications lines, industrial process control, coaxial feeders and computer networks are all vulnerable to surges, which may be up to 20kA for some high-risk environments. In the field of communications surge protection, several product variations are required to ensure all applications are met. Therefore ERICO® offers protection products to meet a wide variety of applications, from telecommunication line protectors for either KRONE® or DIN connection to coaxial surge protectors suitable for either BNC or N type coax cables.

The various product families and applications are summarised below:

Subscriber Line Protection (SLP) and High Speed Digital Protection (HSP) Product family
- High 20kA (8/20us) surge rating
- KRONE LSA-Plus Termination
- Both Single Stage and Multi-Stage models available

Co-axial Surge Protectors (CSP)
- Robust, plug-in style design
- Range of connections types and operating voltages available
- Wide operating frequency from DC up to 3GHz

Universal Transient Barrier (UTB)
- High 20kA (8/20us) surge rating
- Premium three stage protection
- Self-resetting, over-voltage and over-current protection

Data Line Protectors (DLP) / Data Equipment Protectors (DEP) / Local Area Network Protectors (LAN)
- Range of connections types available, from DB to RJ45 and KRONE
- Wide range of operating voltages and frequencies available
- Surge Ratings from 500A to 20kA depending on product and application

TECHNICAL INFORMATION

Transient Discriminating Technology

To meet the fundamental requirements of performance, longer service life and greater safety under real world conditions, ERICO has developed Transient Discriminating (TD) Technology.

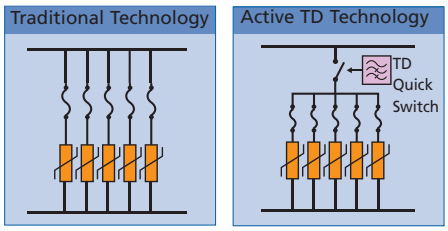
This quantum leap in technology adds a level of "intelligence" to the Surge Protection Device enabling it to discriminate between sustained abnormal over-voltage conditions and true transient or surge events. Not only does this help ensure safe operation under practical application, but it also prolongs the life of the protector since permanent disconnects are not required as a means of achieving internal over-voltage protection.

TRADITIONAL TECHNOLOGIES

Conventional SPD technologies utilize metal oxide varistors and/or silicon avalanche diodes to clamp or limit transient events. However, these devices are susceptible to sustained 50/60Hz mains over-voltage conditions which often occur during faults to the utility system. Such occurrences present a significant safety hazard when the suppression device attempts to clamp the peak of each half cycle on the mains over-voltage. This condition can cause the device to rapidly accumulate heat and in turn fail with the possibility of inducing a fire hazard.

THE CORE OF TD TECHNOLOGY

The secret to ERICO's Transient Discriminating Technology is its active frequency discrimination circuit. This patented device can discriminate between a temporary over-voltage (TOV) condition and a very fast transient,

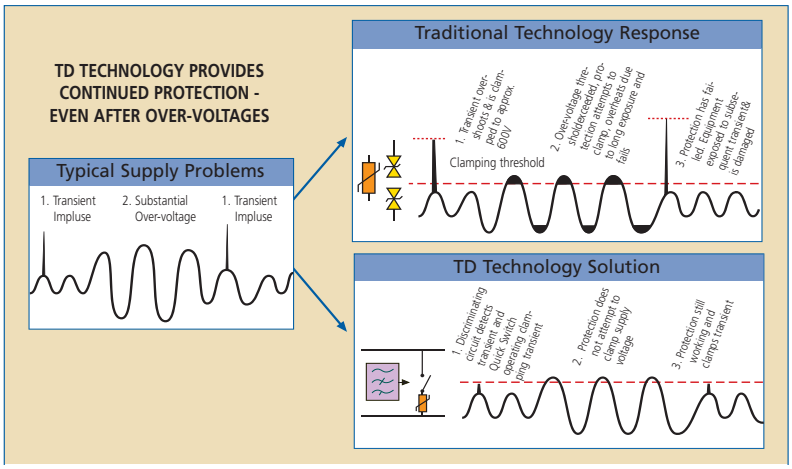


which is associated with lightning or switching-induced surges. When the transient frequencies are detected, the patented Quick-Switch within TD activates to allow the robust protection to limit the incoming transient. The frequency discriminating circuit that controls the Quick-Switch helps ensure that the SPD device is immune to the effects of a sustained 50 or 60Hz TOV. This allows the device to keep operating, in order to help provide safe and reliable transient protection, even after an abnormal over-voltage condition has occurred.

MEETING & EXCEEDING UL® STANDARDS

Surge protection devices from ERICO® employing TD Technology have been specifically designed to meet and exceed the new safety requirements of UL 1449 Edition 3. To meet the abnormal over-voltage testing of UL 1449 Edition 3, many manufacturers of SPD devices have incorporated fuse or thermal disconnect devices which permanently disconnect all protection from the circuit during an over-voltage event. Transient Discriminating Technology on the other hand will allow the SPD device to experience an abnormal over-voltage up to twice its nominal operating voltage and still remain operational even after this event! This allows the device to help provide safe, reliable and continuous protection to your sensitive electronic equipment. TD Technology is especially recommended for any site where sustained over-voltages are known to occur, and where failure of traditional SPD technologies cannot be tolerated.

The UL 1449 testing standard addresses the safety of an SPD device under temporary and abnormal overvoltage conditions, but does not specifically mandate a design that will give a reliable, long length of service in the real world. Specifically, UL 1449 tests that the SPD remains operational at 10% above nominal supply voltage, allowing SPD manufacturers to design products that permanently disconnect just above that. Most reputable manufacturer's designs allow for up to a 25% overvoltage, while ERICO's TD Technology gives even greater overhead.



TECHNICAL INFORMATION

CADWELD® / CADWELD® PLUS THE MOLECULAR BOND

CADWELD® EXOTHERMIC CONNECTION

A welding process that eliminates the connection by forming a molecular bond.

Connections are the weak point of all electrical circuits and especially earthing circuits subjected to ageing and corrosion. The capacity of an earthing circuit to protect the safety of personnel depends on the quality of the connections made.

THE CADWELD® PROCESS

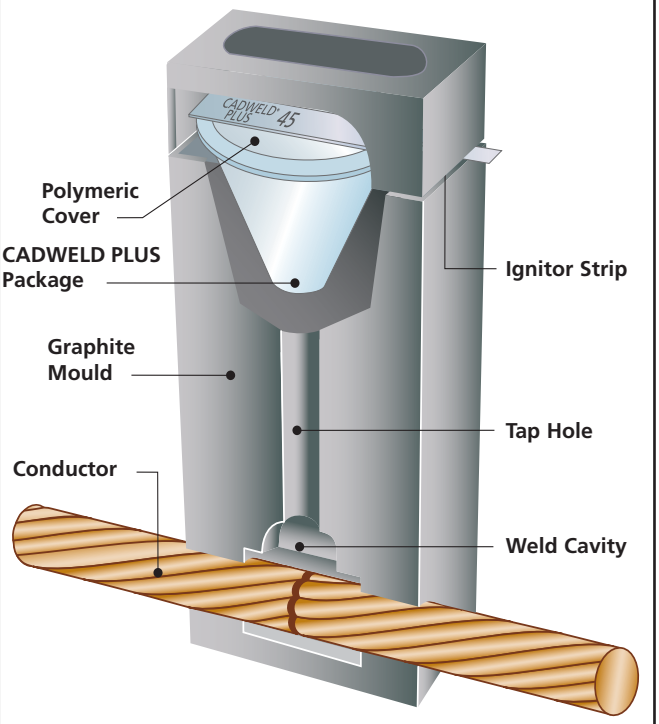
The CADWELD® process provides a way to produce copper/copper, copper/galvanised or plain steel, copper/copper clad steel, copper/bronze/brass/stainless steel, steel/steel, molecular bonds with no external energy or heat source.

The principle consists of bringing together a welding filler material and ignition agent in a suitable graphite mould.

The reduction of copper oxide by aluminium produces molten copper and aluminium oxide slag at extremely high temperatures.

The shape of the mould, its dimensions, and the size of the weldmetal, are all dependent on the items to be welded and their size.

THE CADWELD® MOULD USING CADWELD PLUS



Installation Is Easy!

4 Simple Steps For Permanently Welded Electrical Connections

CADWELD® PLUS Control Unit initiates the reaction of the metal crucible. The standard unit includes a 6-foot (1.8 meter) high temperature control unit lead. The lead attaches to the ignition strip using a custom made, purpose-designed termination clip.

After the termination clip is installed on the ignition strip, the installer pushes and holds the ignition button to start a charging and discharging sequence. Within a few seconds the control unit sends a predetermined voltage to the ignition strip and the reaction is initiated.

Insert CADWELD PLUS package into mould

Attach control unit termination clip to ignition strip

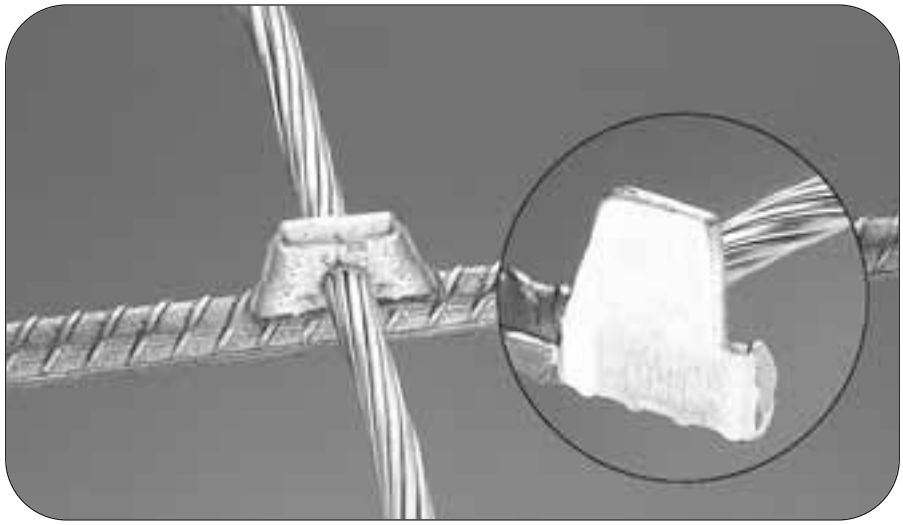
Press and hold control unit switch and wait for the ignition

Open the mould and remove the expended steel cup – no special disposal required

TECHNICAL INFORMATION

THE CADWELD® WELD

- Will carry more current than the conductor.
- Will not deteriorate with age.
- Is a molecular bond that eliminates any risk of loosening or corrosion.
- Will resist repeated fault currents
- Can be quality controlled simply by visual inspection.



RELIABILITY

As the molecular bond eliminates the concept of surface contact, an electrolyte cannot penetrate between the conductors and cause oxidation and deterioration in the course of time.

CORROSIVE ENVIRONMENTS

This reliability is of particular interest for humid or chemical environments or for bonds directly buried in the ground.

ABILITY TO WITHSTAND HIGH CURRENT

The melting temperature of CADWELD filler material is higher than the melting temperature of copper (1082°C). For this reason, in the event of abnormal heating due to a high fault current, the conductor is destroyed before the connection.

CONDUCTIVITY

The CADWELD connections form a solid bond around the conductors assuring continuity. The cross sectional area of the weld has greater current carrying capacity than the conductors.

PERFORMANCE

Standard CADWELD welds have a cross section greater than that of the conductors to be joined, which compensates for the difference in resistivity between the conductor and the weld material. Consequently, under fault conditions the weld will always remain cooler than the conductor.
If special applications do not allow for the required increase in cross section to be employed, the use of the formula:

$$R = \frac{p \times l}{S} \quad \text{and} \quad V = R \times I$$

will make it possible to define precisely the resistance of the CADWELD® weld.

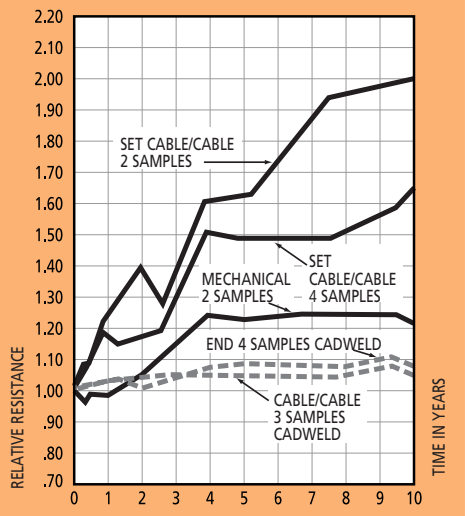
CORROSION TEST

This accelerated ageing test, carried out in a saline atmosphere at a controlled temperature, demonstrates that CADWELD® welds retain all their electrical properties during the period of the test whereas the resistance of mechanical connections increase with time and this alters their conductive properties.

CADWELD'S fine performance is due to its reliability resulting from the molecular bond.

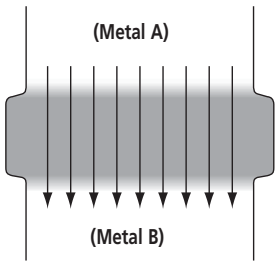
Comparison between CADWELD Bonded Connection and Mechanical Connection CADWELD Weld (Metal A) (Metal B).

The CADWELD bonded connection provides permanent conductivity over the whole of the section due to molecular bonding between the metal surfaces.



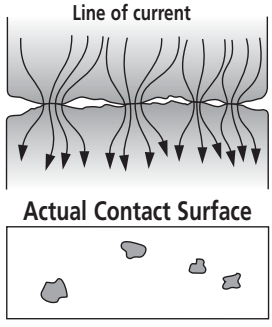
Comparison between CADWELD® Bonded Connection and Mechanical Connection

CADWELD WELD



The CADWELD bonded connection provides permanent conductivity over the whole of the section due to molecular bonding between the metal surfaces.

MECHANICAL CRIMPED CONNECTION



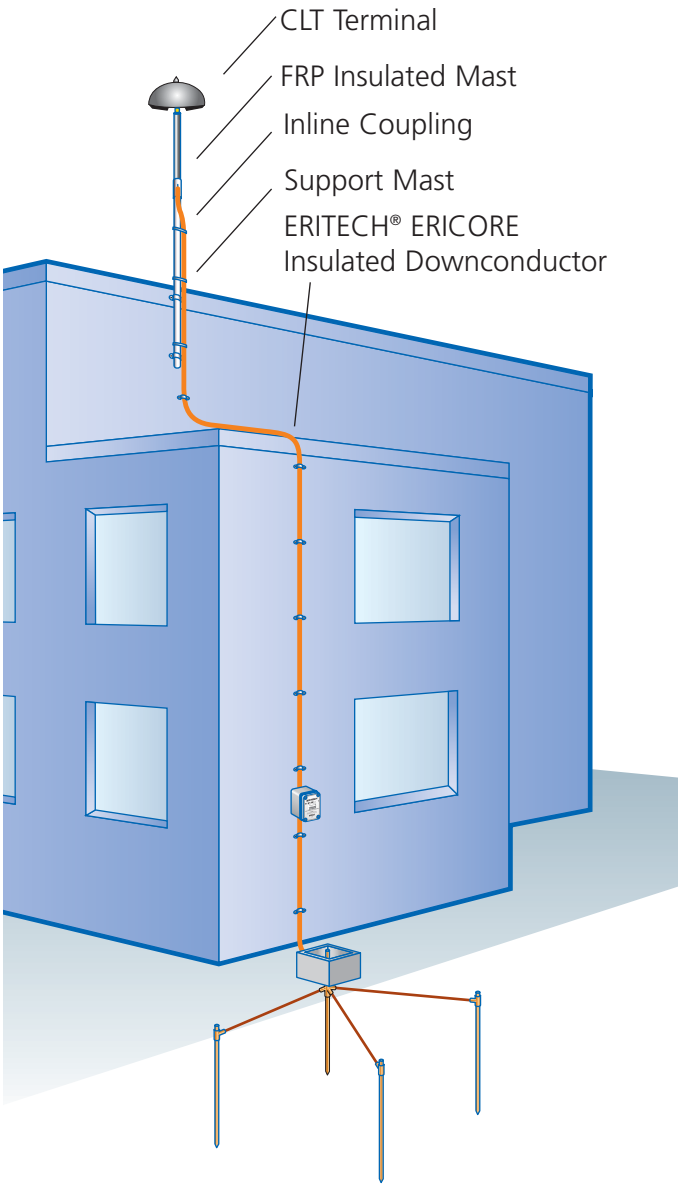
The mechanical connection presents a significant difference between the apparent contact surface and the actual surface.

TECHNICAL INFORMATION

Nominal Wire Size		ERICO® CADWELD® Mould Reference	Number of Strands	Nominal Diameter of Strands (mm)	Nominal Cable Diameter (mm)	Nominal Cable Diameter (inch)	Nominal Strand Area (mm^2)	Nominal Wire Cross Sectional Area (mm^2)
AWG	Cross Sectional Area (mm^2)							
#10		1B	7	0.98	2.95	0.12	0.75	5.26
	6	A7	7	1.04	3.12	0.12	0.85	5.95
#8		1E	7	1.23	3.71	0.15	1.19	8.32
	10	W2	7	1.35	4.05	0.16	1.43	10.02
#6		1H	7	1.55	4.67	0.18	1.89	13.21
	16	W3	7	1.70	5.10	0.20	2.27	15.89
#4		1L	7	1.96	5.89	0.23	3.02	21.12
	25	Y1	7	2.14	6.42	0.25	3.60	25.18
#3		1Q	7	2.20	6.60	0.26	3.80	26.61
	25	Y1	19	1.35	6.75	0.27	1.43	27.20
#2		1V	7	2.47	7.42	0.29	4.79	33.54
#2 Solid		1T	1	6.54	6.54	0.26	33.62	33.62
	35	Y2	19	1.53	7.65	0.30	1.84	34.93
#1		1Y	19	1.50	8.43	0.33	1.77	33.58
#1 Solid		1X	1	7.35	7.35	0.29	42.41	42.41
	50	Y3	19	1.78	8.90	0.35	2.49	47.28
1/0 Solid		2B	1	8.25	8.25	0.32	53.49	53.49
1/0		2C	19	1.89	9.46	0.07	2.81	53.43
2/0 Solid		2F	1	9.27	9.27	0.36	67.43	67.43
2/0		2G	19	2.13	10.65	0.42	3.56	67.70
	70	Y4	19	2.14	10.70	0.42	3.60	68.34
	95	Y5	37	1.78	12.46	0.49	2.49	92.07
	95	Y5	19	2.52	12.60	0.50	4.99	94.76
3/0		2L	19	2.59	12.95	0.47	5.27	100.10
4/0 Solid		2P	1	11.68	11.68	0.46	107.22	107.22
4/0		2Q	19	2.89	13.41	0.53	6.56	124.63
	120	Y6	37	2.03	14.21	0.56	3.24	119.75
250 KCM		2V	37	2.07	14.61	0.58	3.37	124.52
	150	Y7	37	2.25	15.75	0.62	3.98	147.11
300 KCM		3A	37	2.29	16.00	0.63	4.12	152.39
350 KCM		3D	37	2.47	17.30	0.68	4.79	177.29
	185	Y8	37	2.52	17.64	0.69	4.99	184.54
400 KCM		3H	37	2.64	18.49	0.73	5.47	202.53
	240	Y9	61	2.25	20.25	0.80	3.98	242.54
500 KCM		3Q	61	2.30	20.65	0.81	4.15	253.44
	300	Y0	61	2.52	22.68	0.89	4.99	304.24

KCM was previously MCM, ie 1000 circular mils, a measure of the wire cross-sectional area.
Note that KCM "overstates" the true cross sectional area (measured in sq. mils) of a conductor by 4/π (i.e. 1.273)
1 mil = 0.001 inch
Square Inches x 1273 = KCM
Square Millimeters x 1.974 = KCM
KCM x 0.5607 = Square Millimeters

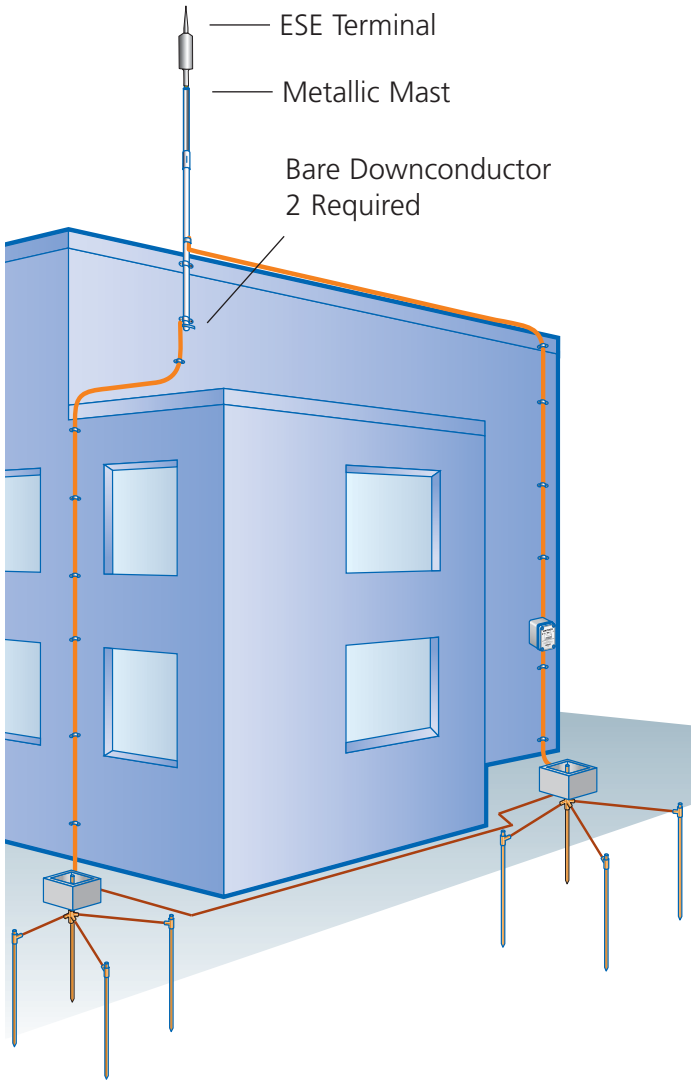
ERITECH® SYSTEM 3000



The ERITECH® SYSTEM 3000 is a technically advanced lightning protection system. The unique Collection Volume Method design (CVM), and features of this system allow the achievement of superior technical performance, and hence more reliable lightning capture.

The ERITECH® DYNASPHERE air terminal provides a preferred point for lightning discharges which would otherwise strike and damage an unprotected structure and/or its contents. The ERITECH DYNASPHERE is connected to a single insulated downconductor (ERITECH ERICORE) and the ground system in such a way as to provide a totally integrated system.

ERITECH® SYSTEM 1000



The ERITECH® SYSTEM 1000 SI Interceptor terminal is designed and tested to the French Standard NFC17-102 and Spanish norm UNE-21186. The standards provide simple placement rules and determination of the protected area.

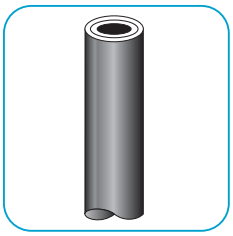
The terminals are erected with conductive masts and connected to the ground with two downconductors running on opposite walls.

ERITECH® SYSTEM 3000

ERITECH® DYNASPHERE AIR TERMINAL

Reference code	Part No.	Description		Unit weight kg
D/SMKIV-SS	702085	ERITECH® DYNASPHERE	1	5
INTMKIV-SS	702089	ERITECH® INTERCEPTOR	1	2

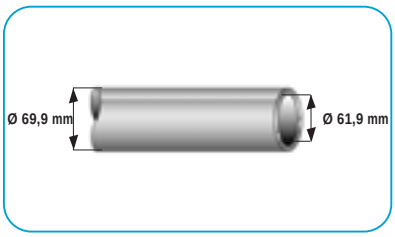
ERITECH® ERICORE DOWNCONDUCTORS



Reference code	Part No.	Section		Unit weight kg
ERICORE/PER M	701875	50 mm²		1,2 per meter

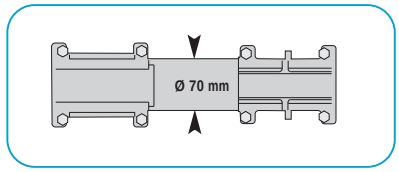
Reference code	Part No.	Description		Unit weight kg
• • • Terminations				
ERICORE/TRM/OS	701915	Factory Upper Termination, outside drum	1	1,5
ERICORE/TRM/IS	701895	Factory Upper Termination, inside drum	1	1,5
ERICORE/LT KITA	702005	Lower Termination	1	1,5

INSULATED MASTS



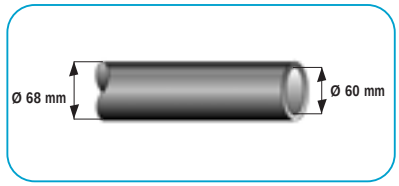
Reference code	Part No.	Colour	Length (mm)		Unit weight kg
• • • Fiberglass reinforced					
FRP/2M/BLACK	702030	Black	2000	1	5
FRP/4.6M/BLACK	702045	Black	4600	1	11,5

INLINE COUPLING



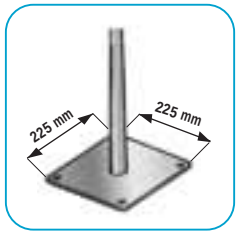
Reference code	Part No.		Unit weight kg
I/LCOUPL	701320	1	10,5

ALUMINIUM MASTS



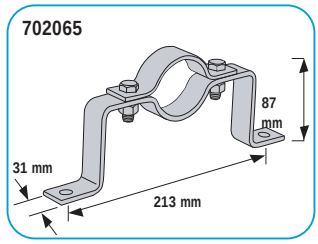
Reference code	Part No.	Length (mm)		Unit weight kg
• • • Aluminium				
ALUM 3ME	502000	3000	1	8,25
ALUM 4M	701370	4000	1	11
ALUM 5M	701380	5000	1	13
ALUM 6M	701390	6000	1	16

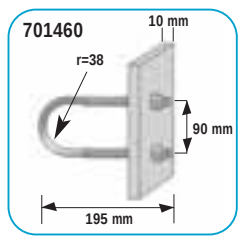
ALUMINIUM MASTS & BASES



Reference code	Part No.	Length (mm)		Unit weight kg
• • • Aluminium				
MBMAST3ME	502040	3000	1	9,6
MBMAST4M	701340	4000	1	12
MBMAST5M	701350	5000	1	15
MBMAST6M	701360	6000	1	17

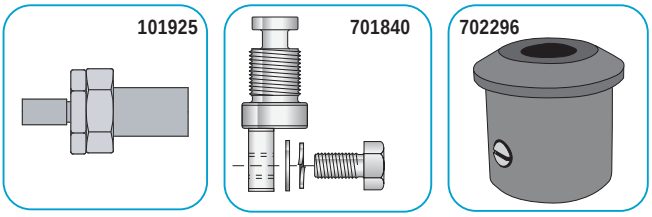
MAST BRACKETS





Reference code	Part No.	Description		Unit weight kg
7000250S4	702065	Stainless steel mast bracket	1	1,12
UBOLT	701460	Pair of UBOLTs	1 pair	0,4

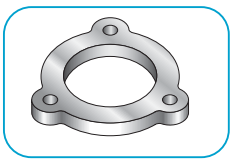
ERITECH® DYNASPHERE/ERITECH® INTERCEPTOR SI ADAPTORS



Reference code	Part No.	Description		Unit weight kg
ER1-ARCC-SS	101925	Adaptor to fix ARC to ER1-xxx-SS*	1	0,1
THERMLUGCOUPL	701840	For bare downconductor	1	0,1
INTCPT-ADBUTT	702296	For SI terminal to FRP	1	0,05
INTCPT-ADF2BSPF	702297	SI terminal to 2" pipe. British thread	1	0,1
INTCPT-ADF2NSP	702298	SI terminal to 2" pipe. USA thread	1	0,1
INTCPT-ADM3/4UNC	702299	SI terminal to 3/4" pipe. USA thread	1	0,1
INTCPT-ADM116UN	702301	SI terminal to ER2-xxxx-SS*	1	0,1
INTCPT-ADM16	702306	16mm Conventional Rod to ER2-xxxx-SS*	1	0,1

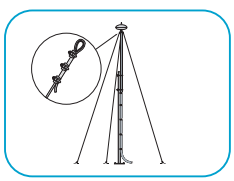
* See ERITECH® INTERCEPTOR SI Masts

GUY RING



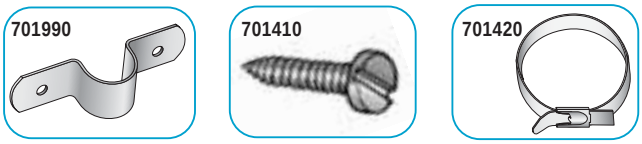
Reference code	Part No.	ø mm in	ø mm out		Unit weight kg
••• Aluminium					
GUYRING	701280	60	91	1	0,11

GUY KIT



Reference code	Part No.	Description		Unit weight kg
GUYKIT 4MGRIP	701305	4m vertical guy	1	0,400
GUYKIT 7MGRIP	701315	7m vertical guy	1	0,700

ERITECH® ERICORE FIXINGS



Reference code	Part No.		Unit weight kg
CONSAD/E2	701990	5	0,19
CONSAD/FX	701410	100	0,01
CABTIE-SS	701420	1	0,05

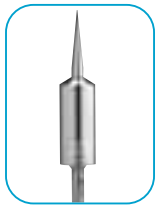
LIGHTNING EVENT COUNTER

Meets NFC-17100/NFC-17102

Reference code	Part No.		Unit weight kg
LEC-IV	702050	1	2

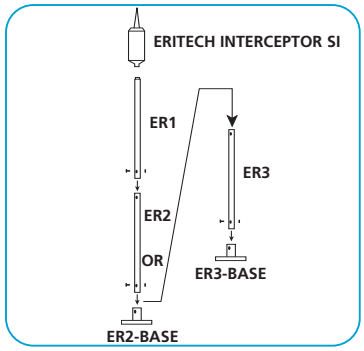
ERITECH® SYSTEM 1000

ERITECH® INTERCEPTOR SI AIR TERMINAL



Reference code	Part No.	Description		Unit weight kg
SI25	701535	ESE, 25µs	1	3
SI40	701536	ESE, 40µs	1	3
SI60	701537	ESE, 60µs	1	3

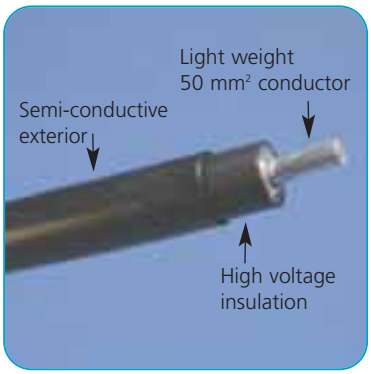
ERITECH® INTERCEPTOR SI MASTS

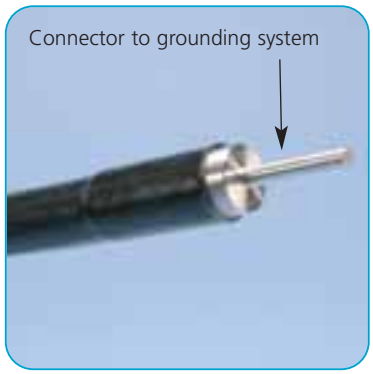


Reference code	Part No.	Description		Unit weight kg
••• Stainless Steel				
ER1-1000-SS	702255	Upper Section, 1m	1	3,5
ER1-2000-SS	702260	Upper Section, 2m	1	6,2
ER2-2000-SS	702265	Mid Section, 2m	1	4,9
ER2-3000-SS	702270	Mid Section, 3m	1	7,3
ER2-BASE	702290	Base for ER2 mast	1	5,2
ER3-2000-SS	702275	Lower Section, 2m	1	5,3
ER3-3000-SS	702280	Lower Section, 3m	1	7,9
ER3-BASE	702295	Base for ER3 mast	1	5,6

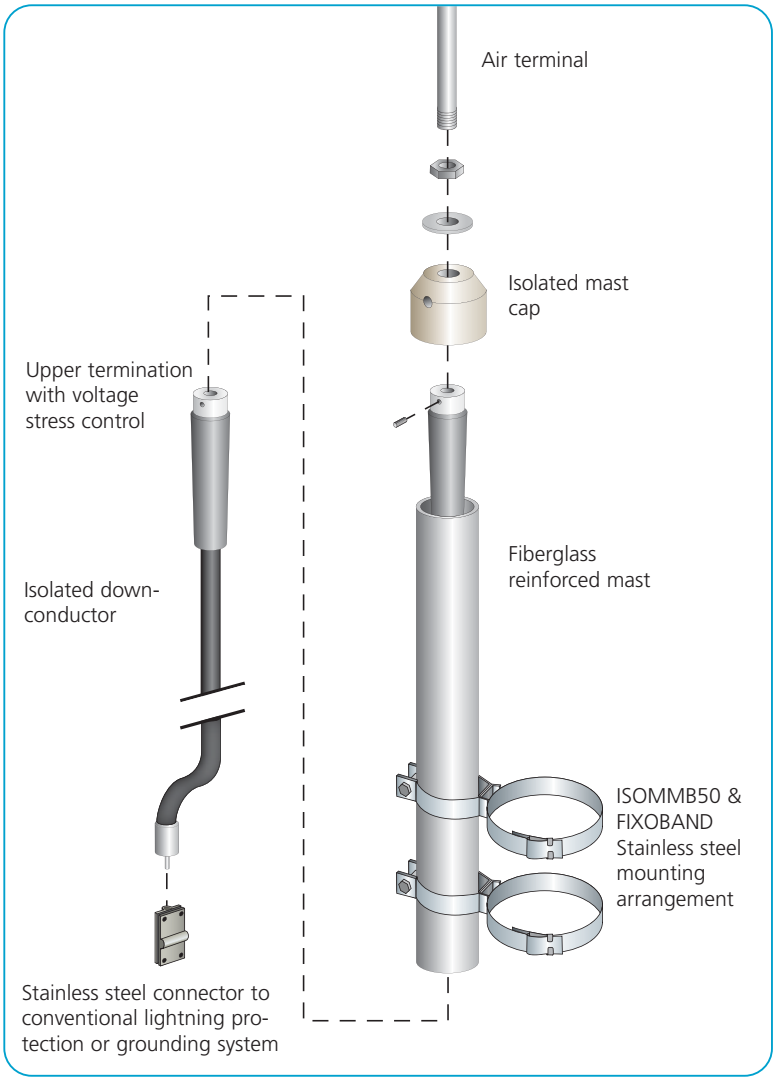
ISOLATED DOWNCONDUCTOR SYSTEM

Since ERICO® offered its first isolated downconductor, thousands of buildings have proven this concept. The pioneering use of semi-conductive external outer sheath to bond to the structure and control cable break down was a key to success. The original implementation (ERITECH® ERICORE) was a screened cable version designed for low impedance, this allowed the use of very long cable lengths. The latest ERITECH® Isolated Downconductor customizes this development by offering a lower cost cable targeted at the typical shorter installation requirements of the telecommunication industry. The cable is designed, tested and applied to meet the requirements of IEC 62305 lightning protection standards.





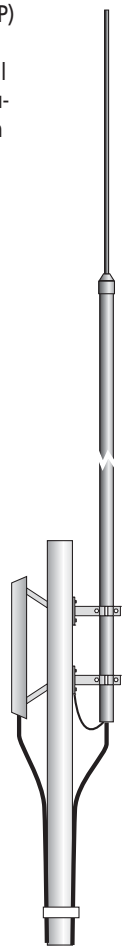
ERITECH Isolated Downconductor low cast cable



ERITECH Isolated Downconductor

What is the ERITECH Isolated Downconductor system?

The ERITECH isolated system provides a traditional air terminal fitted to an isolated fiberglass reinforced plastic (FRP) mast. The isolated downconductor internally connects to the air terminal inside the FRP. The FRP mast has natural isolation properties, high strength for windy sites and low weight to minimise mast loading.



ERITECH Isolated System

ISOLATED DOWNCONDUCTOR SYSTEM

AIR TERMINAL

LPAAR0515 (#710020) 500 mm 0.25 kg
LPAAR1015 (#711070) 1000 mm 0.53kg

Aluminium air terminal, 16 mm diameter.

CABLE TIE

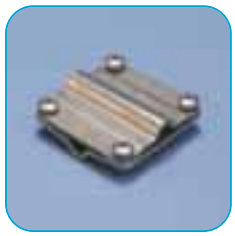
CABTIE-SS (#701420)
Stainless Steel Cable Tie 0.05 kg

520 mm stainless steel cable tie for securing downconductor.

ISOLATED MAST CAP

ISOCAP50 (#702086) 0.1 kg

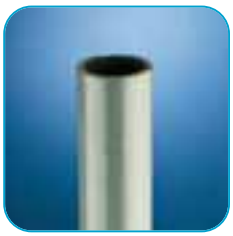
Fits to top of ISOFRP3M mast for mounting of air terminal.



MULTIPURPOSE CLAMP

CCS-308 (#545170) Stainless Steel Clamp 0.15 kg

For connection of lower termination to 25x3 mm, 30x2 mm or 8-10 mm diameter lightning protection or grounding systems.



ISOLATED MAST

ISOFRP3M (#702087) 4.2 kg

3 m fiber glass mast, 50 mm diameter.

LIGHTNING EVENT COUNTER

LEC-IV (#702050) Lightning Event Counter 2.0 kg

Installed upon downconductor to record number of lightning strikes.

ISOLATED MAST BRACKET

ISOMMB50 (#702088) 0.4 kg

For mounting ISOFRP3M. Use 20 mm stainless steel Fixoband to allow mounting on virtually any mast type/diameter.

MAST BRACKET

ALOF-1-GS (#702175) 1.5 kg
Galvanised mast bracket providing 190 mm offset.

ACF-2-GS (#103100) 2.1 kg
Galvanised x mast bracket

ISOLATED DOWNCONDUCTOR

ISODC 0.58 kg/m

Supplied with factory upper termination fitted and materials for customer lower termination. Order required length in meters.

DUAL DOWNCONDUCTOR ADAPTOR

ISODUAL (#702094) 0.2 kg
For connecting second parallel ISODC for increased safety distance.

CABLE SADDLE AND SCREWS

2HPS (#400680) Saddle 0.02 kg

CONSAD/FX (#701410) Screw 0.01kg

Galvanised steel cable saddle and stainless steel screws for securing ISODC.

42014 (#591290)
Fixoband Tool
1.8 kg

FEI20 (#591230)
Stainless Steel
Strap 20 mm 0.1 kg

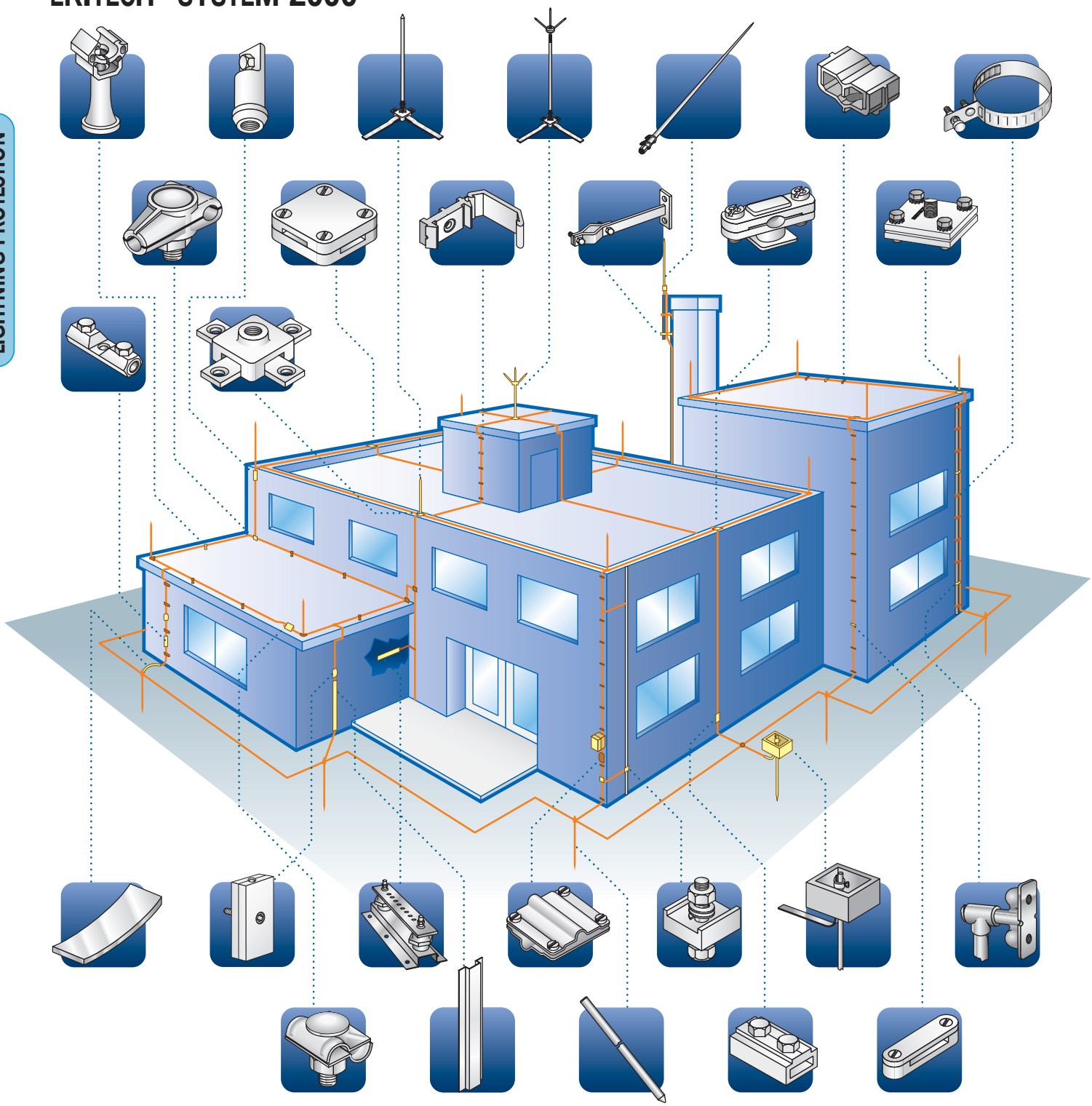
CEI20 (#591080)
Stainless Steel
Buckle 0.01 kg

Strapping materials and tools for installation of mast mounting bracket ISOMMB50.

ERICO® offers a large range of products for lightning and grounding applications. Please contact us should you require additional materials.

LIGHTNING PROTECTION

ERITECH® SYSTEM 2000



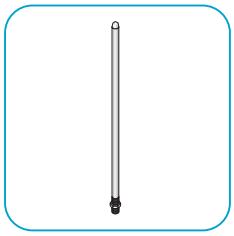
The ERITECH® SYSTEM 2000 lightning protection system is comprised of these principal components:

- Air Termination Network
- Downconductors
- Grounding System
- Bonding

This Illustration is not drawn to scale, nor does it portray an actual or typical application. It is designed to illustrate some of the major components of the ERITECH® SYSTEM 2000 Lightning Protection System and their relationship with one another.

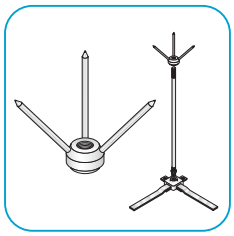
Air terminal placement is designed using the computer aided design to EN 62305-3, AS 1768, NFPA 780. This ensures the most effective placement of air terminations on the structure. Downconductors are positioned to provide the most direct path from the air termination to a low impedance grounding system, to help ensure safe and effective dissipation of the lightning impulse. Equipotential bonding of all circuits and conductors is necessary to reduce ground potential differences and to limit equipotential damage.

AIR TERMINALS



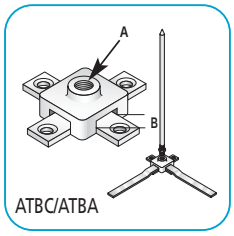
Reference code	Part No.	ø mm	L mm		Unit weight kg
• • • Copper					
CAR0510	711080	10	500	1	0,480
CAR0515	711090	16	500	1	0,750
CAR1010	711100	10	1000	1	1,100
CAR1015	711110	16	1000	1	1,510
CAR2015	711010	16	2000	1	3,000
• • • Aluminium					
AAR0510	711050	10	500	1	0,190
AAR1010	711060	10	1000	1	0,380
AAR0515	710020	16	500	1	0,265
AAR1015	711070	16	1000	1	0,530

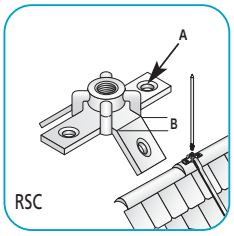
MULTIPLE POINT AIR TERMINAL



Reference code	Part No.	ø mm	L mm		Unit weight kg
CMPR	711120	16	500	1	1,200

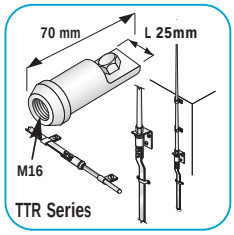
AIR TERMINALS BASES

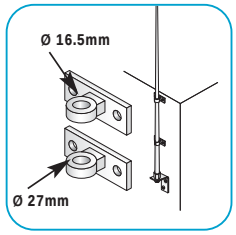




Reference code	Part No.	A mm	B mm		Unit weight kg
• • • Copper					
ATBC10	711150	10	25	1	0,500
ATBC15	711160	16	25	1	0,500
RSC115	711170	16	31	1	1,700
• • • Aluminium					
ATBA10	711130	10	25	1	0,160
ATBA15	711140	16	25	1	0,160

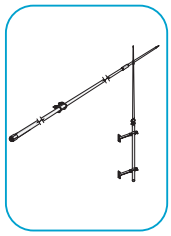
AIR TERMINAL TO TAPE COUPLING/BRACKETS

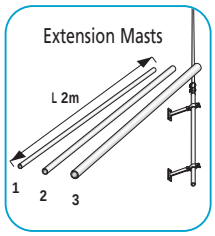




Reference code	Part No.	Material		Unit weight kg
• • • Threaded rod to tape coupling				
TTRC16	711210	Copper	1	0,230
TTRA16	711200	Aluminium	1	0,080
• • • Rod brackets				
CBR015	711190	Copper	2	0,900
ABR015	711180	Aluminium	2	0,280

SIMPLE AIR TERMINAL



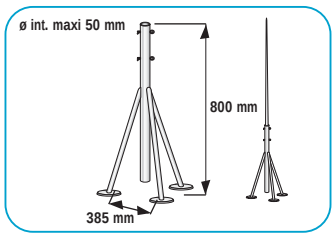


Air Terminal height (m)	Number of mast
2,40	0
4,15	1 (ER1)
5,90	2 (ER1+ER2)
7,65	3 (ER1+ER2+ER3)

Reference code	Part No.	Lightning Rod height	Ømm		Unit weight kg
• • • Chrome - nickel plated copper					
ASL-240-CC	101700	2,40 m	30	1	3,750

Reference code	Part No.	Ømm		Unit weight kg
• • • Galvanized steel extension masts				
ER1-2000	101920	33	1	13,800
ER2-2000	101930	36	1	14,200
ER3-2000	101940	42	1	15,000

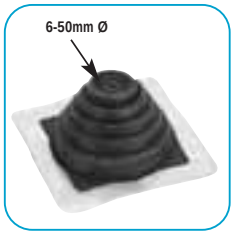
TRIPOD FOR MAST OR SIMPLE AIR TERMINAL

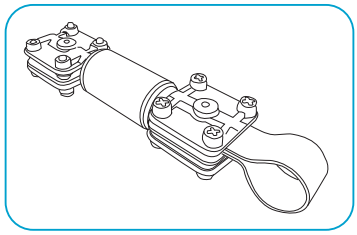


Reference code	Part No.	Nr of masts		Unit weight kg
• • • Galvanized steel				
TFS 800	101950	0-3	1	8,280

LIGHTNING PROTECTION

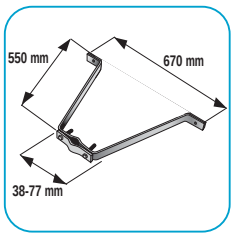
WATERPROOF CONE/AERIAL SPARK GAP





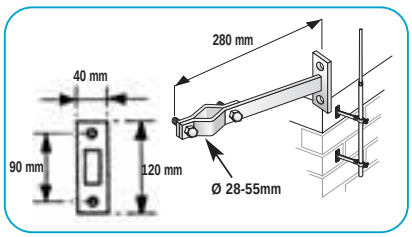
Reference code	Part No.		Unit weight kg
WPC	702230	1	0,070
SG-AERIAL-302	702285	1	0,500

SET OF TWO 54 cm BRACKETS



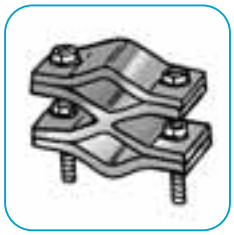
Reference code	Part No.		Unit weight kg
LSEB 4554	702180	1 pair	10,5

BRACKETS FOR MAST OR AIR TERMINAL



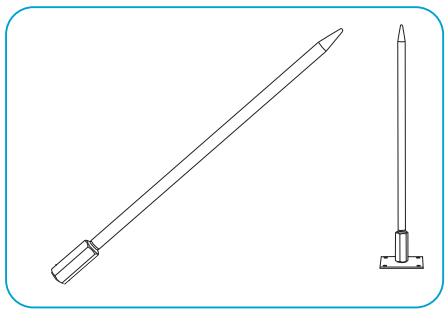
Reference code	Part No.		Unit weight kg
••• Galvanized steel			
ALOF1-GS	702175	1	1,500

X-SHAPED BRACKET



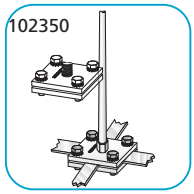
Reference code	Part No.	Description	Admissible ø mm		Unit weight kg
ACF-2-GS	103100	Set of 2 Fasteners	30 to 50	1	2,10

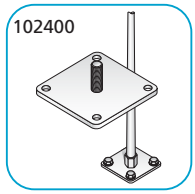
STRIKING RODS

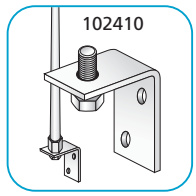


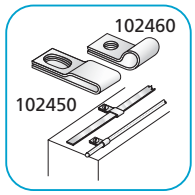
Reference code	Part No.	Lightning rod height		Unit weight kg
••• Chrome - nickel plated copper				
ARC-2205-CNC	101900	0,50m	1	0,550
ARC-2210-CNC	101910	1m	1	0,800
••• Stainless steel				
ARC-2205-SS	102000	0.50m	1	0,500
ARC-2210-SS	102010	1m	1	0,750

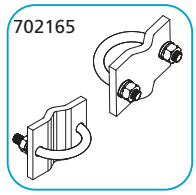
AIR TERMINAL BASES AND FASTENERS





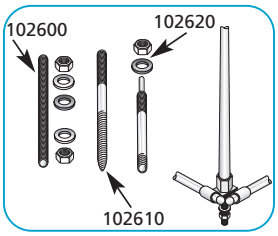






Reference code	Part No.	Description		Unit weight kg
ASB-TCA	102350	Base rod support and cross-over	1	0,250
ASP-100-TS	102400	Support plate	1	0,430
ASA-TB	102410	Angle support plate	1	0,200
ABFF-6530-TC	102450	For flat conductor (30x2)	1	0,070
ABFR-6530-TC	102460	For round conductor (8mmø)	1	0,050
ASFR-C	102500	Cement block support	10	1,000
TMC-SS	702165	Tape to Mast Clamp	1	0,200

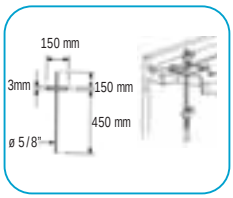
FASTENERS FOR AIR TERMINAL



Reference code	Part No.	Description		Unit weight kg
ATR-10-SS	102600	M10 threaded rod, 100 mm long	10	0,080
ACB-10-SS	102610	Supporting anchor bolt* Angle support plate	10	0,060
AEM-10-SS	102620	Expanding support pin, M10 85 mm long, drilling depth 60 mm	10	0,040

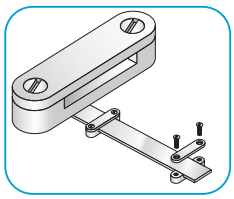
*Supplied with impermeable collar

PUDDLE FLANGES



Reference code	Part No.	Material		Unit weight kg
PFC001	710290	Copper	1	-
PFA001	710295	Aluminium	1	-

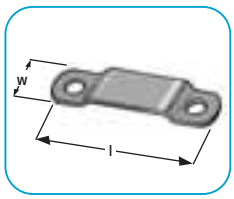
DC TAPE CLIPS



Minimum Order Required

Reference code	Part No.	Description		Unit weight kg
• • • Copper				
DCC253	711220	for 25x3 bare copper tape	50	0,070
DCC256	711230	for 25x6 bare copper tape	50	0,080
DCC316	711660	for 31x6 bare copper tape	25	0,090
DCC506	711240	for 50x6 bare copper tape	25	0,160
DCC600	711250	for 25x3 PVC covered Cu tape	50	0,100
DCC605	711260	for 25x6 PVC covered Cu tape	50	0,130
DCC610	711270	for 50x6 PVC covered Cu tape	25	0,260
• • • Aluminium				
DCA253	711730	for 25x3 bare aluminium tape	50	0,030
DCA600	711760	for 25x3 PVC covered Al. tape	25	0,040

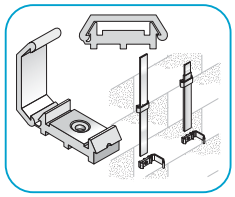
BARE TAPE CLIPS



Minimum Order Required

Reference code	Part No.	Description	l mm	w mm		Unit weight kg
• • • Copper						
TAPC253	711570	for 25x3 bare copper tape clip	40	15	25	0,500
TAPC506	711590	for 50x6 bare copper tape clip	69	15	25	0,800
• • • PVC Covered Copper						
TAPC254	711580	for 25x3 PVC covered copper tape clip	44.5	15	25	0,500
• • • Aluminium						
TAPA253	711550	for 25x3 bare aluminium tape clip	40	15	25	0,100

NON METALLIC DC TAPE CLIPS

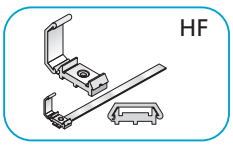


Reference code	Part No.	Colour		Unit weight kg
• • • For use with 50x6 bare Cu/Al tape				
PDC506BL	711360	Black	50	0,02

NON METALLIC UNIVERSAL DC CLIP/BASE

Reference code	Part No.	Description	Colour		Unit weight kg
PDCUC	711352	Ø8 mm bare/insulated 25 mm x 3 mm bare/insulated 30 mm x 2 mm bare	Clear	50	0,007
PDCUCABBL	711341	Black adhesive base with hardware	Black	50	0,015
PDCUCABBN	711342	Brown adhesive base with hardware	Brown	50	0,015
PDCUCABGY	711343	Grey adhesive base with hardware	Grey	50	0,015
PDCUCABST	711344	Stone adhesive base with hardware	Stone	50	0,015
PDCUCABWH	711345	White adhesive base with hardware	White	50	0,015
PDCUCABGN	711346	Green adhesive base with hardware	Green	50	0,015

SLATE HOLDFAST NON METALLIC DC CLIP & GLAZING BAR HOLDFAST

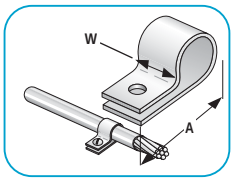


Reference code	Part No.	Colour		Unit weight kg
• • • For 25x3 bare tape				
HF250BN	711800	Brown	50	0,020
HF250GY	711810	Grey	50	0,020
• • • For 25x3 PVC covered tape				
HFP253BN	711820	Brown	50	0,020
HFP253GY	711830	Grey	50	0,020
HFP253ST	711840	Stone	50	0,020

GLAZING BAR HOLDFAST

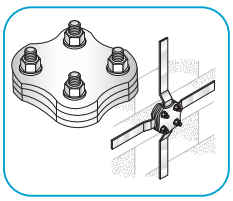
Reference code	Part No.		Unit weight kg
• • • Copper			
GBH C	710300	5	-
• • • Aluminium			
GBH A	710305	5	-

ONE HOLE CABLE CLIP



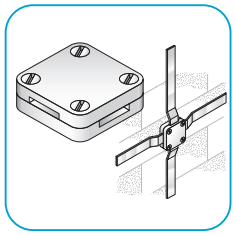
Reference code	Part No.	ø mm	A mm	W mm		Unit weight kg
• • • Copper						
PC008C	711380	8	28	10	50	0,01
PC010C	711390	10	42	15	50	0,01
• • • Aluminium						
PC008A	711370	8	28	10	50	0,01
PC010A	711040	10	42	15	50	0,01

PLATE TYPE TEST CLAMP



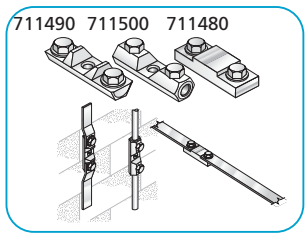
Reference code	Part No.	Description		Unit weight kg
• • • Copper				
PCT400	711450	26x12 mm	1	0,60

SQUARE TAPE CLAMP



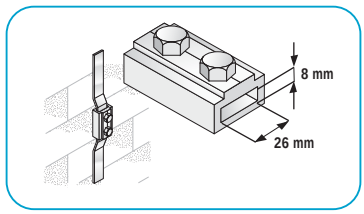
Reference code	Part No.	Description		Unit weight kg
• • • Copper				
STC253	711410	25x3 mm	5	0,200
STC256-506	711510	25x6 mm to 50x6 mm	5	0,770
• • • Aluminium				
STA253	711400	25x3 mm	5	0,090

BI-METALLIC CONNECTORS



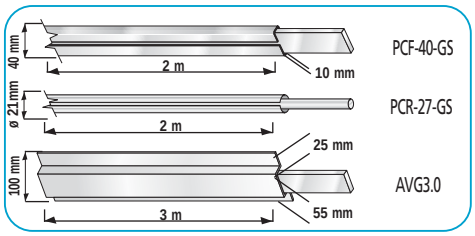
Reference code	Part No.	Description		Unit weight kg
• • • Stainless Steel				
BIM800	711490	25x3 mm	5	0,200
BIM900	711500	round max 8 mm	5	0,200
• • • Copper / Aluminium				
BIM700	711480	25x3 mm	5	0,190

OBLONG TEST OR JUNCTION CLAMP



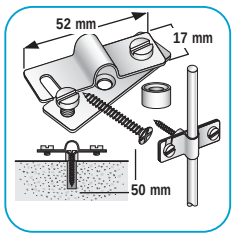
Reference code	Part No.	Description		Unit weight kg
• • • Copper				
OBC268	711440	26x8 mm	2	0,290
• • • Aluminium				
OBA268	711430	26x8 mm	2	0,100

PROTECTIVE SLEEVE FOR DOWN CONDUCTOR



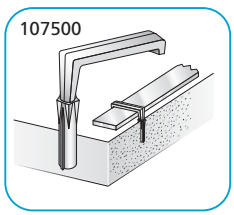
Reference code	Part No.	Description		Unit weight kg
• • • Galvanized				
PCF-40-GS	102800	Protective sleeve for down conductors	1	1
PCR-21-GS	102850	Protective sleeve for round down conductors	1	0,90
AVG3.0	711030	Anti vandal guard	1	2,90

BRASS SUPPORT FOR DOWNCONDUCTOR



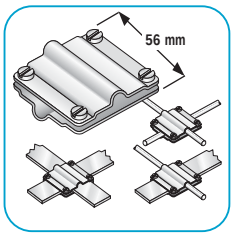
Reference code	Part No.		Unit weight kg
SR	545260	50	0,027

ANCHOR WITH LEAD PIN



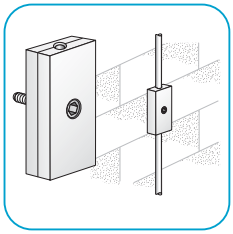
Reference code	Part No.	Description		Unit weight kg
• • • Galvanized				
SDH-3-GI	107500	with lead pin	50	0,021

MULTIPURPOSE CLAMP



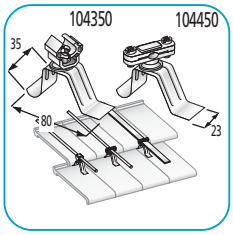
Reference code	Part No.	Material		Unit weight kg
• • • Round 8 mm max or tape 30x2 mm max				
CCFR-308	545270	Brass	25	0,150
CCS-308	545170	Stainless steel	25	0,150
CCG-308	545180	Galvanized steel	25	0,150

EARTH TESTING CLAMP



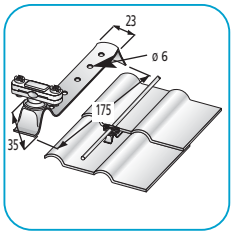
Reference code	Part No.		Unit weight kg
• • • For Round max 10 mm or flat max 30 mm			
CCJ-70-CA	102700	1	0,4

SUPPORT HOOKS FOR ROOF TILES



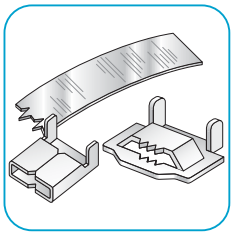
Reference code	Part No.	Conductor		Unit weight kg
• • • Plastic / Stainless steel 55 mm height				
R2-SRL-25	104350	6 mm Ø	50	0,038
R2-SFT-25	104450	5-11 mm Ø or 30x2 mm	50	0,052

SUPPORTS WITH ADJUSTABLE FASTENING PLATE



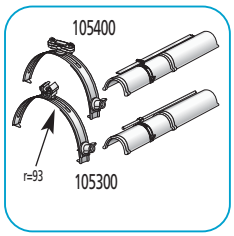
Reference code	Part No.	Conductor		Unit weight kg
• • • Plastic / Stainless steel 35mm height				
R1-SRL-25A6	104200	6 mm Ø	50	0,042
R1-SFT-25	104300	5-11 mm Ø or 30x2 mm	50	0,042

FIXOBAND



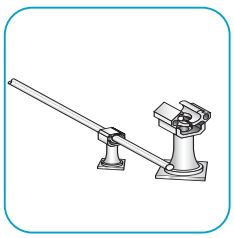
Reference code	Part No.	Description		Unit weight kg
CEI20	591080	Stainless steel bonding	100	0,009
FEI20	591230	Stainless steel buckle	50	0,104
BEI20	591280	Stainless steel serrated buckle	100	0,017
42014	591290	Fixoband Tool	1	1,800

SUPPORT FOR HIP OR RIDGE TILES



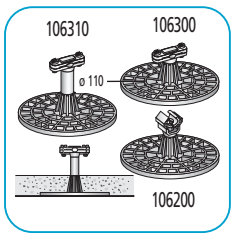
Reference code	Part No.	Conductor		Unit weight kg
••• Diameter 180-260 mm, plastic / stainless steel				
T1-SRL-25/6	105300	6 mm Ø	10	0,092
T1-SFT-25	105400	5-11 mm Ø or 30x2 mm	10	0,105

SUPPORT FOR ROUND CONDUCTOR



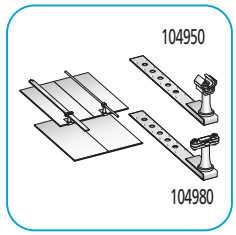
Reference code	Part No.	Conductor		Unit weight kg
••• Plastic 16 mm height				
SRL-23-N6	103700	6 mm Ø	50	0,008
SRL-23-N8	103710	8 mm Ø	50	0,008
SRL-23-N10	103720	10 mm Ø	50	0,008

PLASTIC SUPPORT BLOCK



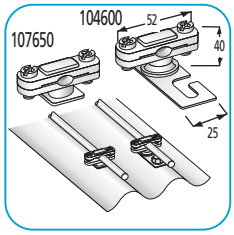
Reference code	Part No.	Conductor	Height		Unit weight kg
••• Plastic					
SFRR-SRL-45/6	106200	6 mm Ø	45mm	10	0,014
SFRR-SFT-45	106300	5-11 mm Ø or 30x2	45mm	10	0,028
SFRR-SFT-65	106310	5-11 mm Ø or 30x2	65mm	10	0,029

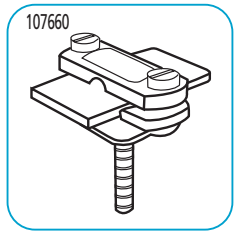
SLIDE RAIL FOR ROOF TILE OR TILE SLATE



Reference code	Part No.	Conductor		Unit weight kg
••• Plastic / stainless steel 40mm height				
R6-SRL-40/6	104950	6 mm Ø	50	0,069
R6-SFT-40	104980	5-11 mm Ø or 30x2	50	0,083

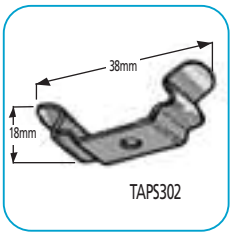
PLASTIC SUPPORT FOR DOWNCONDUCTOR

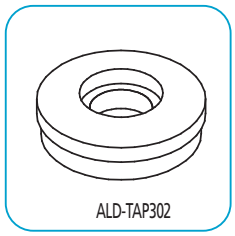




Reference code	Part No.	Conductor		Unit weight kg
••• Plastic				
SFT-23-N	107650	5-11 mm Ø or 30x2 mm	50	0,020
SFTP-23-N	107660	5-11 mm Ø or 30x2 mm	50	0,020
R3SFT-25	104600	5-11 mm Ø or 30x2 mm	50	0,037

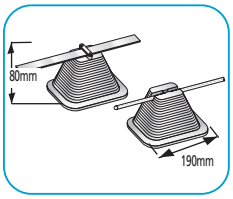
STAINLESS STEEL CLIP 30X2





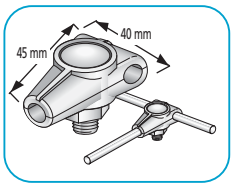
Reference code	Part No.		Unit weight kg
TAPS302	711620	100	0,002
ALD-TAP302	711195	100	-

BLOCKS FOR ROUND OR FLAT CONDUCTORS



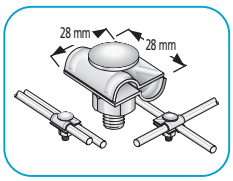
Reference code	Part No.	Conductor	Fill		Unit weight kg
SFR-BC-8	106030	8 mm Ø	Concrete	20	0,970
SFT-BC	106080	5-11 mm Ø or 30x2	Concrete	20	0,982
SFT-BE	106060	5-10 mm Ø or 30x2	Empty	100	0,100

T CONNECTOR



Reference code	Part No.	Material		Unit weight kg
• • • 8-10 mm diam.				
CTR-10	101230	Galvanized	25	0,12
CTR-8CU	710030	Copper	10	-
CTR-8AL	710040	Aluminium	10	-

CROSS CONNECTOR

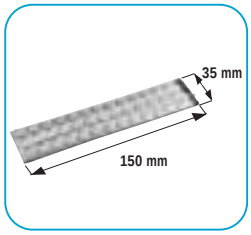


Reference code	Part No.	Material		Unit weight kg
• • • 6-8 mm diam.				
CCR-68-S	101250	Stainless steel	25	0,48
CCR-68-CU	101260	Copper	25	0,54
CCR-68-GS	101265	Galvanized steel	25	-

SLIDE FASTENER ROOFSTILE FOR CONDUCTORS

Reference code	Part No.		Unit weight kg
R7-SFT-20	702250	10	0,05

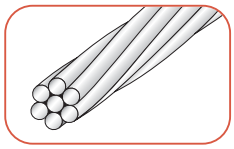
HOT STICKING STRIP



Reference code	Part No.		Unit weight kg
HSF	702240	10	0,02

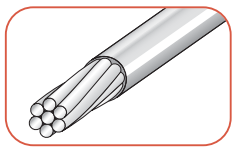
CONDUCTORS - Minimum Order Quantity Required

COPPER CABLE



WITHOUT INSULATION

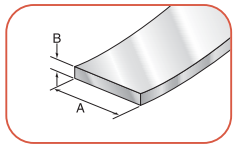
Reference code	Part No.	Strand Description	Section mm²		Unit weight kg
SC-EC-25	197900	7x2,14	25	50 m	0,23/m
SC-EC-35	197910	7x2,52	35	50 m	0,31/m
SC-EC-50	197920	19x1,78	50	50 m	0,46/m
SC-EC-70	197930	19x2,14	70	50 m	0,62/m
SC-EC-95	197940	19x2,52	95	50 m	0,85/m
SC-EC-120	710900	37x2,00	120	50 m	1,03/m
SC-EC-150	710920	37x2,25	150	50 m	1,33/m
SC-EC-185	197950	37x2,50	185	50 m	1,61/m



WITH GREEN / YELLOW INSULATION

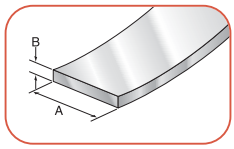
Reference code	Part No.	Strand Description	Section mm²		Unit weight kg
• • •					
IC-EC-25	198000	204x0,395	25	50 m	0,27/m
IC-EC-35	198010	286x0,395	35	50 m	0,37/m
IC-EC-50	198020	408x0,395	50	50 m	0,53/m
• • •					
IC-ECH-25	198050	7x2,14	25	50 m	0,26/m
IC-ECH-35	198060	7x2,52	35	50 m	0,36/m
IC-ECH-50	198070	19x1,78	50	50 m	0,52/m
IC-ECH-70	198080	19x2,14	70	50 m	0,72/m
IC-ECH-95	198090	19x2,52	95	50 m	0,98/m
IC-ECH-120	710980	37x2,03	120	50 m	1,16/m
IC-ECH-150	710990	37x2,25	150	50 m	1,54/m
IC-ECH-185	711000	37x2,52	185	50 m	2,10/m

BARE COPPER TAPE



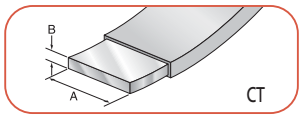
Reference code	Part No.	Width (A)mm	Thick. (B)mm		Unit weight kg
TC-EC-2530-25	710515	25	3,0	25 m	0,67/m
TC-EC-2530-50	710510	25	3,0	50 m	0,67/m
TC-EC-2560-15	710535	25	6,0	15 m	1,34/m
TC-EC-3020-30	197650	30	2,0	30 m	0,53/m
TC-EC-3850-10	710555	38	5,0	10 m	1,70/m
TC-EC-3860-30	710560	38	6,0	30 m	2,04/m
TC-EC-5060-20	710580	50	6,0	20 m	2,64/m

TINNED COPPER TAPE



Reference code	Part No.	Width (A)mm	Thick. (B)mm		Unit weight kg
TC-ECT-2530-30	197720	25	3,0	30 m	0,67/m
TC-ECT-3020-30	197710	30	2,0	30 m	0,53/m
TC-ECT-3020-75	545200	30	2,0	75 m	0,53/m
TC-ECT-4030-30	197970	40	3,0	30 m	1,06/m
TC-ECT-4040-35	197975	40	4,0	35 m	1,42/m

PVC COVERED COPPER TAPE



Reference code	Part No.	Colour	Dimensions AmmxBmm		Unit weight kg
CTBL253-25	710595	Black	25x3,0	25 m	0,77/m
CTBN253-25	710605	Brown	25x3,0	25 m	0,77/m
CTGN253-25	710616	Green	25x3,0	25 m	0,77/m
CTGY253-25	710645	Grey	25x3,0	25 m	0,77/m
CTST253-25	710655	Stone	25x3,0	25 m	0,77/m
CTWH253-25	710666	White	25x3,0	25 m	0,77/m
CTYGN253-25	710667	Yell./Green	25x3,0	25 m	0,77/m
CTGN256-30	710620	Green	25x6,0	30 m	1,55/m
CTGN506-20	710630	Green	50x6,0	20 m	2,95/m

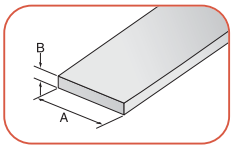
LSF COVERED COPPER TAPE

Reference code	Part No.	Colour	Dimensions AmmxBmm		Unit weight kg
LSF-253	710615	Green	25x3,0	50 m	0,77/m

LEAD COVERED COPPER TAPE

Reference code	Part No.	Width (A)mm	Thick. (B)mm		Unit weight kg
LCT-253	710625	25	3,0	50 m	2,56/m

PLAIN COPPER BARS

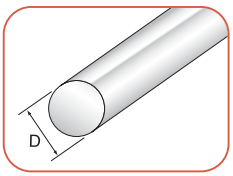


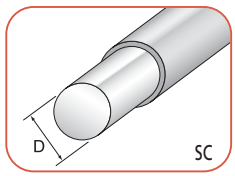
Reference code	Part No.	Dimensions mm		Unit weight kg
HDB2003	710670	20x3x4000	1	2,14
HDB2503	710680	25x3x4000	1	2,68
HDB2506	710690	25x6x4000	1	5,34
HDB3806	710700	38x6x4000	1	8,00
HDB5006	710710	50x6x4000	1	10,68
HDB5010	550900	50x10x4000	5	17,80

TINNED COPPER BAR

Reference code	Part No.	Dimensions mm		Unit weight kg
THDB5060	710730	50x6x4000	1	10,68

SOLID COPPER ROUND CONDUCTOR





BARE SOLID COPPER ROUND CONDUCTOR

Reference code	Part No.	ø (D) mm	Cross Section		Unit weight kg
RC-EC-6	198150	6	28,3	100 m	0,25/m
RC-EC-8	198160	8	50,3	100 m	0,45/m
RC-EC-8-3	545210	8	50,3	30 m	0,45/m

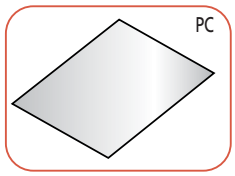
TINNED SOLID COPPER ROUND CONDUCTOR

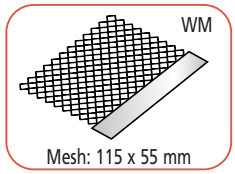
Reference code	Part No.	ø (D)mm	Cross Section		Unit weight kg
RC-ET-6	198200	6	28,3	100 m	0,25/m
RC-ET-8	198210	8	50,3	100 m	0,45/m

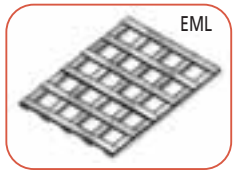
PVC COVERED SOLID COPPER ROUND CONDUCTOR ø 8 mm

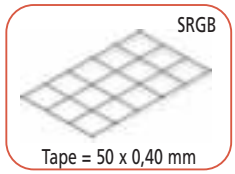
Reference code	Part No.	Colours	Cross Section		Unit weight kg
SCBL	710800	Black	50,3	50 m	0,49/m
SCBN	710810	Brown	50,3	50 m	0,49/m
SCGY	710820	Grey	50,3	50 m	0,49/m
SCST	710830	Stone	50,3	50 m	0,49/m

COPPER PLATES AND LATTICES / GRIDS









COPPER PLATES

Reference code	Part No.	Dimensions mm		Unit weight kg
PC1.5-0606	710190	600 x 600 x 1,5	1	5,000
PC3-0606	710200	600 x 600 x 3,0	1	9,600
PC1.5-0909	710210	900 x 900 x 1,5	1	11,510
PC2.-1020	504550	1000 x 2000 x 2	1	35,600
PC3-0909	504590	900 x 900 x 3	1	21,630

COPPER LATTICES AND GRIDS

Reference code	Part No.	Dimensions mm		Unit weight kg
EML663	710230	600 x 600 x 3	1	3,980
EML993	710240	900 x 900 x 3	1	7,200
WM3-2088-B	504500	8800 x 2000 x 3	1	54,000
WM2-1030-B	504510	3000 x 1000 x 2	1	5,000
WM3-1020-B	504520	2000 x 1000 x 3	1	5,400
WM2-1020-B	504530	2000 x 1000 x 2	1	4,000
• • • Galvanized steel				
WMS-1030-B	504540	3000 x 1000 x 3	1	8,700

SIGNAL REFERENCE GRIDS

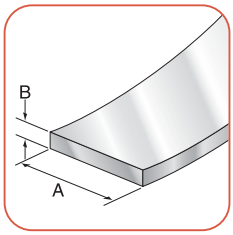
Reference code	Part No.	Length (m)	Width (m)	Spacing (m)		Unit weight kg
SRGBC120	167900	36,57	2,44	0,60	1	86,18
SRGBD100	167901	30,48	3,04	0,60	1	90,72
SRGBE100	167902	30,48	3,65	0,60	1	104,33
SRGBF100	167903	30,48	4,26	0,60	1	127,01
SRGBG100	167904	30,48	4,87	0,60	1	145,15

SIGNAL REFERENCE GRID CONNECTOR & BRACKET

Reference code	Part No.	Max. Size		Unit weight kg
SRGC46	167905	Up to 25 mm² stranded	50	0,10
SRGC46BR	167906	25 mm pedestal	10	0,13

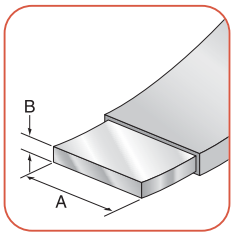
CONDUCTORS - Minimum Order Quantity Required

BARE ALUMINIUM TAPE



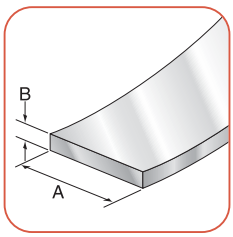
Reference code	Part No.	Width A mm	Thick B mm		Unit weight kg
FAT-253-50	710740	25	3	50 m	0,21/m
BAT-2560	710960	25	6	50 m	0,41/m
BAT-5060	710965	50	6	50 m	0,81/m

PVC COVERED ALUMINIUM TAPE



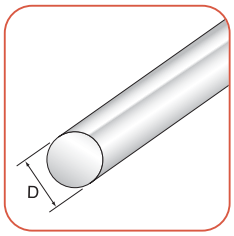
Reference code	Part No.	Width A mm	Thick B mm	Colours		Unit weight kg
ATBL253	710750	25	3	Black	50 m	0,30/m
ATBN253	710760	25	3	Brown	50 m	0,30/m
ATGY253	710770	25	3	Grey	50 m	0,30/m
ATST253	710780	25	3	Stone	50 m	0,30/m
ATWH253	710790	25	3	White	50 m	0,30/m

BARE GALVANIZED STEEL TAPE



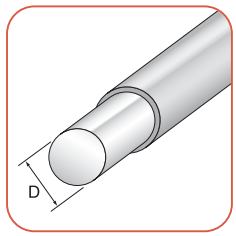
Reference code	Part No.	Width A mm	Thick B mm		Unit weight kg
30TC-HGSP-3035	197810	30	3,5	30 m	0,82/m

BARE ALUMINIUM ROUND CONDUCTOR



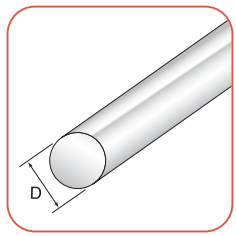
Reference code	Part No.	Cross-section mm²	D ø mm		Unit weight kg
RAW-8	198250	50,3	8	300 m	0,14/m
ASCO8	711530	50,3	8	50 m	0,14/m

PVC COVERED ALUMINIUM ROUND CONDUCTOR



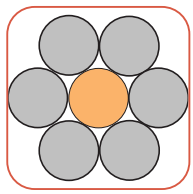
Reference code	Part No.	Cross-section mm²	D ø mm	Colours		Unit weight kg
SABL	710840	50,3	8	Black	50 m	0,18/m
SABN	710850	50,3	8	Brown	50 m	0,18/m
SAGY	710860	50,3	8	Grey	50 m	0,18/m
SAST	710870	50,3	8	Stone	50 m	0,18/m

BARE GALVANIZED ROUND CONDUCTOR

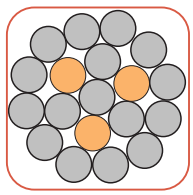


Reference code	Part No.	Cross-section mm²	D ømm		Unit weight kg
RSCC-8	197860	50,3	8	100 m	0,400/m
RSCC-10	197870	78,5	10	100 m	0,630/m

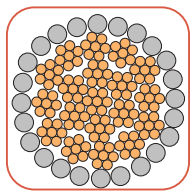
Theft Deterrent Composite Cable



CC5A04



CC5A05

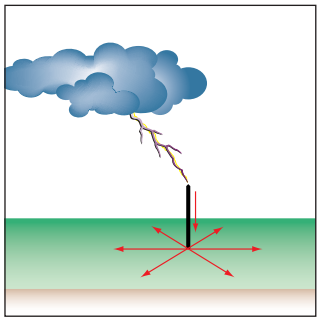


CC5A12

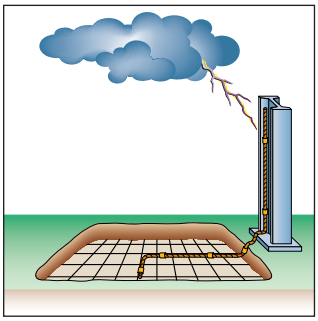
Reference Code	Part No.	Description	Outside Diameter	Fusing Capacity Equivalency		Unit weight kg
CC5A04	CC5A04	(1) Tinned Copper, (6) Galvanized Steel Strands	8.38 mm	100% of 16 mm²	76 m	25,9
CC5A05	CC5A05	(3) Tinned Copper, (16) Galvanized Steel Strands	8.48 mm	100% of 16 mm²	76 m	26,3
CC5A12	CC5A12	(133) Tinned Copper, (24) Galvanized Steel Strands	14.53 mm	100% of 70 mm²	60 m	61,2

*Weight does not include reel.

GROUNDING & BONDING



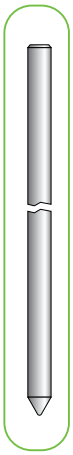
RADIAL DESIGN



EQUIPOTENTIAL MESH ELECTRODES

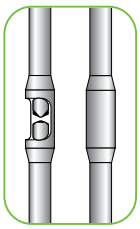
GROUNDING SOLUTIONS

- High strength corrosion resistant ERITECH® Ground Rods, clamps and accessories
- Prefabricated wire mesh
- Ground Enhancement Material (GEM) greatly improves ground grid resistance and impedance
- CADWELD® molecular bonding connections



Copperbonded Pointed Ground Rods

- A uniform copper thickness provides better corrosion resistance in most soil conditions. Copperbonded rods last longer, drive easier and will not crack.
- Copper exteriors, molecularly bonded to nickel-sealed high-strength steel cores, exceed the requirements of ANSI®/UL® 467-1984 (ANSI C33.8-1972) and CSA®.
- Copper Coating: standard copper plating thickness exceeds UL and ANSI specs. of 0.254mm, conforms to KEMA 83C and EN50164-2 Norms.
- The rods exceed a tensile strength of 515,000 kPa and straightness tolerance of 8.3 x 10-4m/m.
- Extending rods may be extended with use of threadless couplers.

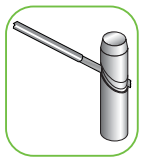


TYPE CC Threadless Couplings for Copperbonded Pointed Rods

- Enables ground rods to be driven deep quickly and easily without the risk of rod separation.
- Made of high-strength silicon bronze.
- Tapered so that when the rod is driven into the coupling, the two parts compress to form a conductive connection.

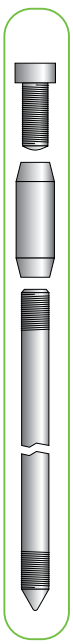
Type DH Tempered steel Driving Heads

Couplers



Earthrod Pigtail

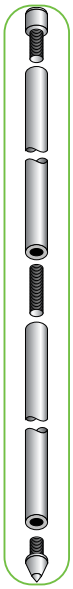
Copperbonded Sectional Ground Rods



- Copperbonded externally coupled ground rods have all the features of standard copperbonded rods plus cold-rolled threads at each end for joining with couplings.
- The cold-rolled threads of ground rods with their continuous unbroken grain flows are stronger than cut-threads.
- High-strength couplings are threaded bronze and chamfered at both ends for easy driving.
- Threaded coupling design allows for full contact of rod point with butt end of preceding rod. These high strength, corrosion-resistant couplings ensure low resistance copper-to-copper connections.

Couplers for threaded rods

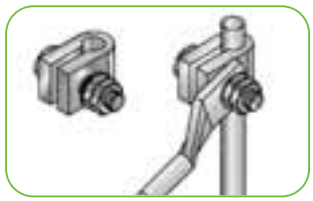
Steel driving studs for sectional ground rods



Solid copper and stainless steel threaded ground rods

Type SCR (solid copper)

- C101 to comply with material standards.
- For use in highly corrosive soil conditions.



Rod to Cable Lug (Split Clamps)

- Manufactured in Gunmetal (LG2) and Naval Brass to comply with material standards
- Rod to Cable Lug clamps (threaded and unthreaded)
- Permits easy connection of ground conductors to both threaded and unthreaded ground rods

Type SSR (Stainless steel)

- A2 grade

Ground Rod Driver

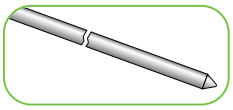
This one tool enables driving of rods to ground level, without heavy sledge-hammers or ladders and without deforming the end of the rod. Heavy-duty steel construction provides robustness and excellent driving force, while the soft rubber ergonomic grip provides user comfort.

The ERITECH® brand of Ground Rod Drivers from ERICO® is the simple, effective and affordable way to install ground rods.

The Ground Rod Driver includes driver body with soft rubber grip, insert for driving rods to ground level, and retaining collar which holds insert in place during storage.

- Usable on all types of round ground rods: copperbonded, galvanized, stainless steel
- 14,2 mm (5/8") and 17,2 mm (3/4") inserts are interchangeable with standard driver body to enable easy driving of standard rods.
- The driver will not deform the end of the rod, making connection of the ground conductor quick and easy
- Integral insert prevents driver from slipping off the rod near ground level.
- Convenient retaining collar holds the insert in the tool when not in use.
- Self-contained and easy to store.
- Saves time and money and dramatically reduces risks of employee injury.

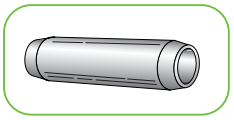
COPPERBONDED GROUND RODS STANDARD TYPE



- Electrolytically copperbonded steel
- Copper coating min. 250u according to standard UL467

Reference code	Part No.	ø inches	ø Approx. ø mm	Nominal Length m	Nominal Length feet		Unit weight kg
• • • Non extending							
1,2M38	155000	3/8	9	1,2	4′	5	0,650
1,5M38	155010	3/8	9	1,5	5′	5	0,800
2,1M38	155030	3/8	9	2,1	7′	5	1,100
3,0M38	155050	3/8	9	3	10′	5	1,600
• • • Extending							
1,2M12	155060	1/2	12,5	1,2	4′	5	0,800
1,5M12	155070	1/2	12,5	1,5	5′	5	1,150
2,1M12	155090	1/2	12,5	2,1	7′	5	1,600
3,0M12	155110	1/2	12,5	3	10′	5	2,300
1,2M58	155240	5/8	14,2	1,2	4′	5	1,500
1,5M58	155250	5/8	14,2	1,5	5′	5	1,900
2,1M58	155270	5/8	14,2	2,1	7′	5	2,650
3,0M58	155290	5/8	14,2	3	10′	5	3,750
1,2M34	155420	3/4	17,2	1,2	4′	5	2,150
1,5M34	155430	3/4	17,2	1,5	5′	5	2,750
2,1M34	155450	3/4	17,2	2,1	7′	5	3,800
3,0M34	155470	3/4	17,2	3	10′	5	5,450

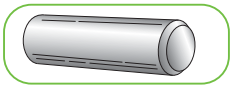
THREADLESS COUPLINGS FOR COPPERBONDED POINTED RODS



- BR-brass couplers 58% Cu, typical mechanical resistance 6 micro-Ohms
- BZT-Copper couplers 99% Cu, typical mechanical strength 10kN, typical resistance 4 micro-Ohms

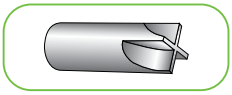
Reference code	Part No.	Rod ø		Unit weight kg
• • • Bronze				
CC12F	158000	1/2″	25	0,108
CC58	158010	5/8″	25	0,134
CC34	158020	3/4″	25	0,202

DRIVING HEADS FOR COPPERBONDED POINTED RODS



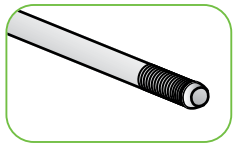
Reference code	Part No.	Rod ø		Unit weight kg
• • • Tempered steel				
DH12	158120	1/2″	5	0,158
DH58	158130	5/8″	5	0,435
DH34	158140	3/4″	5	0,226

DRIVING POINTS FOR GROUND RODS



Reference code	Part No.	Rod ø		Unit weight kg
• • • Tempered steel				
DT12	158060	1/2″	5	0,110
DT58	158070	5/8″	5	0,156
DT34	158080	3/4″	5	0,272

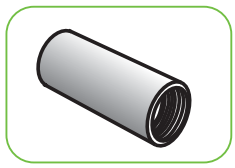
COPPERBONDED GROUND RODS THREADED TYPE, EXTENDING, WITH THREADED COUPLER



- Rolled thread to preserve copper coating

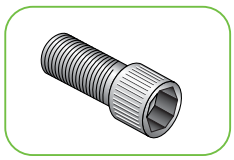
Reference code	Part No.	ø inches	ø Approx. ø mm	Nominal Length m	Nominal Length feet		Unit weight kg
S1,2M916	155180	9/16	12,7	1,2	4′	5	0,800
S1,5M916	155190	9/16	12,7	1,5	5′	5	1,150
S2,1M916	155210	9/16	12,7	2,1	7′	5	1,600
S3,0M916	155230	9/16	12,7	3	10′	5	2,300
S1,2M58	155300	5/8	14,2	1,2	4′	5	1,500
S1,5M58	155310	5/8	14,2	1,5	5′	5	1,900
S2,1M58	155330	5/8	14,2	2,1	7′	5	2,650
S3,0M58	155350	5/8	14,2	3	10′	5	3,750
S1,2M34	155480	3/4	17,2	1,2	4′	5	2,150
S1,5M34	155490	3/4	17,2	1,5	5′	5	2,750
S2,1M34	155510	3/4	17,2	2,1	7′	5	3,800
S3,0M34	155530	3/4	17,2	3	10′	5	5,450

COUPLERS FOR THREADED RODS



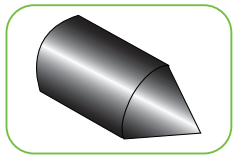
Reference code	Part No.	Rod ø		Unit weight kg
• • • Brass				
SC916	158030	9/16″	25	0,104
SC58	158040	5/8″	25	0,086
SC34	158050	3/4″	25	0,172

DRIVING STUD FOR THREADED RODS



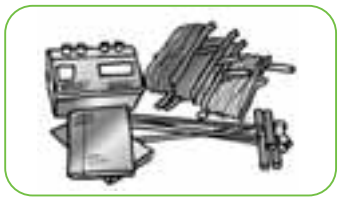
Reference code	Part No.	Rod ø		Unit weight kg
• • • Tempered steel				
DS916	158090	9/16″	25	0,052
DS58	158100	5/8″	25	0,074
DS34	158110	3/4″	25	0,126

THREADED DRIVING TIP SDT SERIES



Reference code	Part No.	Rod ø		Unit weight kg
• • • Tempered steel				
SDT58	SDT58	5/8″	25	0,040
SDT34	SDT34	3/4″	25	0,070

GROUND RESISTANCE TESTER



Reference code	Part No.		Unit weight kg
EST3640	EST3640	1	15,880
EST4610	EST4610	1	15,909
EST4630	EST4630	1	15,880
EST6472	EST6472	1	16,818

Technical data available upon request.

GROUND ENHANCEMENT MATERIAL (GEM)

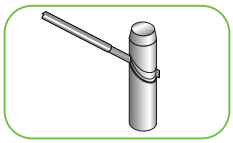
Developed in 1992, GEM Ground Enhancement Material is a superior conductive material that solves your toughest grounding problems.

GEM improves grounding effectiveness regardless of soil conditions. It is the ideal material to use in areas of poor conductivity such as rocky ground, mountain tops and sandy soil.

GEM is also the answer in situations where ground rods can't be driven. Or where limited land area makes adequate grounding difficult with conventional methods.

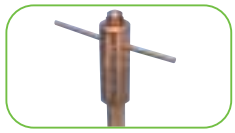
Once GEM is installed, it maintains its low resistance for the life of the project. GEM's performance is backed by rigorous independent tests and proven field experience.

EARTHROD PIGTAIL FOR GROUND RODS



Reference code	Part No.	rod ø	Cable size mm²	Cable lengh mm		Unit weight kg
PT-12-25/300	158610	1/2"	25	300	5	0,180
PT-58-25/300	158675	5/8"	25	300	5	0,200
PT-58-35/300	158690	5/8"	35	300	5	0,200
PT-58-50/300	158290	5/8"	50	300	5	0,365

ERITECH® HAMMERLOCK



Part No.	Rod ø	Conductor Range		Unit weight kg
EHL12FC1K	1/2"	10-16 mm² str	25	0,137
EHL12FC1V	1/2"	22-35 mm² str*	25	0,134
EHL12FC2G	1/2"	50-70 mm² str**	25	0,134
EHL58C1K	5/8"	10-16 mm² str	25	0,129
EHL58C1V	5/8"	22-35 mm² str*	25	0,116
EHL58C2G	5/8"	50-70 mm² str**	25	0,209
EHL34C1K	3/4"	10-16 mm² str	25	0,213
EHL34C1V	3/4"	22-35 mm² str*	25	0,159
EHL34C2G	3/4"	50-70 mm² str**	25	0,169
• • • Dual-Hole (2 Conductors)				
EHL12FC1K1K	1/2"	10-16 mm² str	25	0,134
EHL58C1K1K	5/8"	10-16 mm² str	25	0,209

* 6 mm solid ** 8 mm solid

SOLID COPPER OR STAINLESS STEEL GROUND RODS & ACCESSORIES

SCR15-710070 - Copper
SCR20-710080 - Copper

SOLID COPPER INTERNAL THREADED GROUND RODS TYPE SCR

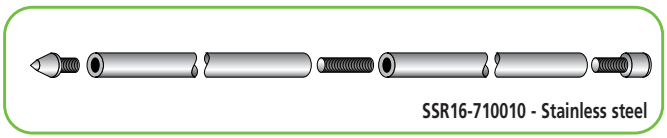
Reference code	Part No.	Rod ø mm	L		Unit weight kg
SCR15	710070	15	1,20 m	5	1,64
SCR20	710080	20	1,20 m	5	3,34

Minimum Order Quantity Required

ACCESSORIES FOR SOLID COPPER THREADED GROUND RODS TYPE SCR

Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Steel driving stud (15 mm) for SCR15				
CDS15	710090	15	5	0,020
• • • Steel driving stud (20 mm) for SCR20				
CDS20	710100	15	5	0,050
• • • M10 Phosphor bronze internal coupling Dowel (PB102) for SCR15 and SCR20				
PBD10	710110	10	5	0,020
• • • Driving point for SCR 15 (15 mm)				
SPK15	710120	15	5	0,020
• • • Driving point for SCR 20 (20 mm)				
SPK20	710130	20	5	0,050

STAINLESS STEEL INTERNAL THREADED GROUND RODS TYPE SSR



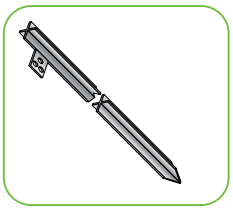
SSR16-710010 - Stainless steel

Reference code	Part No.	diam. mm	length m		Unit weight kg
SSR16	710010	16	1.20	5	1,640

ACCESSORIES FOR STAINLESS STEEL THREADED GROUND RODS TYPE SSR

Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Steel driving stud (15 mm) for SSR16				
CDS15	710090	15	5	0,020
• • • M10 Stainless steel internal coupling Dowel				
SSD10	710115	10	5	0,020
• • • Driving point for SSR16				
SPK15	710120	15	5	0,020

GALVANIZED STEEL GROUND RODS TYPE CG (NON EXTENSIBLE) (X-SHAPED)



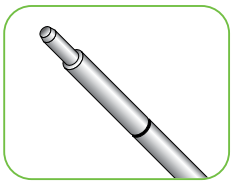
- Supplied with splice plate
- Zinc coating:
  min 55 micron/ Average min. 70 micron

Reference code	Part No.	Length m		Unit weight kg
• • • Section 50 x 50 x 3				
1,0CG50/3	158760	1	5	2,340
1,5CG50/3	158770	1,5	5	3,510
2,0CG50/3	158780	2	5	4,680

- Supplied with splice plate
- Zinc coating:
  min 78 micron/ Average min. 86 micron

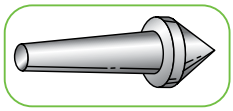
Reference code	Part No.	Length m		Unit weight kg
• • • Section 50 x 50 x 5				
1,0CG50/5	158710	1	5	3,900
1,5CG50/5	158720	1,5	5	5,850
2,0CG50/5	158730	2	5	7,800

GALVANIZED STEEL GROUND RODS TYPE SG (EXTENSIBLE)



Reference code	Part No.	Length m	ø mm		Unit weight kg
1,5SG20	158810	1,5	20	5	3,705

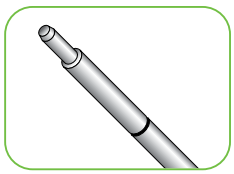
DRIVING POINTS FOR GROUND RODS SG



FOR GROUND RODS SG

Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Tempered steel				
DT-P137-1-20	158400	20	5	0,200

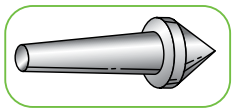
STAINLESS STEEL GROUND RODS TYPE SS (EXTENSIBLE)



- Stainless steel Z30 C13
- Resistance: > 90 / 100 daN / mm²

Reference code	Part No.	Length m	ø mm		Unit weight kg
15SS20	158540	1,5	20	5	3,700

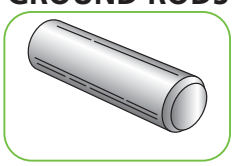
DRIVING POINTS FOR GROUND RODS SS



FOR GROUND RODS SS

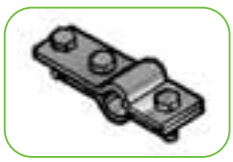
Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Tempered steel				
DT-P11-20-SS	158550	20	5	0,040

DRIVING HEAD FOR GROUND RODS SG & SS



Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Tempered steel				
DH-TR167	158380	20-30	5	0,200

CONNECTING FLANGES FOR TAPE



TO GROUND RODS SG & GROUND RODS SS

Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Hot-galvanized steel - Tape capacity 40x3				
MR127Z/20	158450	20	5	0,400

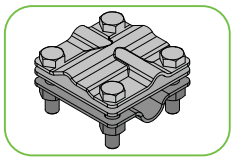
CONNECTING CLAMP FOR CABLE TO GROUNG RODS SG & SS

Reference code	Part No.	Rod ø mm		Unit weight kg
• • • Copper/Steel - Cable capacity 70mm²				
S-136-20	158440	20	5	0,070

GROUND ROD DRIVER

Reference code	Part No.	Description		Unit weight kg
EGRD58	158500	1,5 m driver body with insert for up to 14,2 mm	1	10,420
EGRD58L	158510	Replacement insert for 14,2 mm (5/8")	1	2,720
EGRD34	158520	Driver body with insert for up to 17,2	1	10,420
EGRD34L	158530	Replacement insert for 17,2 mm (3/4")	1	2,720

CONDUCTOR TO GROUND ROD CLAMP



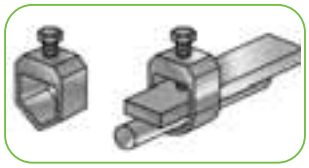
Reference code	Part No.	Description	Conductor Size Tape	Conductor Size Wire/Cable	Ground Rod Size	
MPSC404SS	120319	Conductor to Ground Rod Clamp	up to 40 mm	from 35 to 50 mm²	5/8" and 3/4"	5

SADDLE AND ROD CLAMPS

Reference code	Conductor range area (mm²)	ø mm
GUV16070	16-70	5,1-10,7
GUV70185	70-185	10,7-17,6

Reference code	Part No.	Nominal Rod ø mm		Unit weight kg
• • • Gunmetal + Copper U bolt				
UB16	710370	16	10	0,200
UB20	710380	20	10	0,200
UB25	710390	25	10	0,210
GUV16070	710400	10-20	5	0,390
GUV70185	710410	16-20	5	0,440

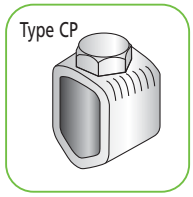
ROD TO TAPE DISCONNECT CLAMP (type A)



Reference code	Part No.	Clamp capacity A mm	Clamp capacity B mm		Unit weight kg
• • • Gunmetal					
RTC1626	158410	26x12	16	10	0,160
RTC2030	710345	31x10	20	10	-
RTC2051	710350	51x12	20	10	0,310
RTC2526	710360	26x10	25	10	0,230

ROD TO CABLE CLAMPS (type C)

Conductor Capacity
Type C: Max 70 sq mm
Type CP: Max 25 sq mm



Reference code	Part No.	Rod ø in mm		Unit weight kg
• • • Gunmetal				
C12	158260	12,5-12,7	5	0,040
C58	158160	12,5-15,0	5	0,084
C34	158170	14,2-17,2	5	0,086
C19	156900	14,2-19,0	5	0,085
C20	156910	14,2-20,0	5	0,125
C1	158250		5	0,110
• • • Bronze		Cond. size cross section		
CP38	158155	Max 16 sq mm	50	0,04
CP58	158165	Max 25 sq mm	50	0,10
CP34	158175	Max 25 sq mm	50	0,13

SP58 STAINLESS STEEL GROUND ROD CLAMP

Reference code	Part No.	Electrodes Ground Rod Sizes	Electrodes Rebar	Conductor Sizes	Min. Torque Withstand	
SP58	158185	12.7 mm - 16.0 mm	10 mm	6 mm² - 25 mm²	33.9 N/M	50

ROD TO TAPE LUG (SPLIT CLAMP)

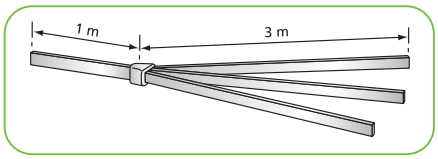
Reference code	Part No.	Description		Unit weight kg
• • • Gunmetal				
RCC10	710420	9,5 mm plain split Clamp	10	0,090
RCC16	710430	16 mm split Clamp (threaded)	10	0,340
SRC15	710440	14,2-15 mm plain split Clamp (SCR) for solid copper rod	10	0,330
SRC20	710450	20 mm plain split Clamp (SCR) for solid copper rod	10	0,300

GROUND ENHANCEMENT MATERIAL GEM

Refer to page 11 for further information

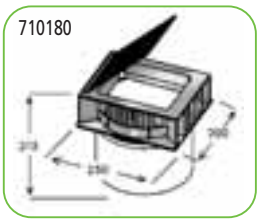
Reference code	Part No.		Unit weight kg
GEM	163670	1	11,500

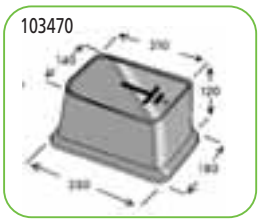
PREFABRICATED CROWSFOOT

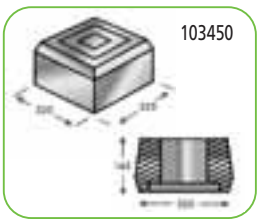


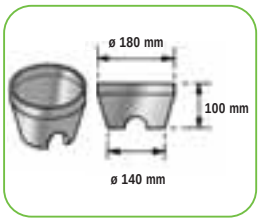
Reference code	Part No.	Rod ø in mm		Unit weight kg
GF-302	503900	Tinned copper 30 x 2	1	5,500

INSPECTION PITS



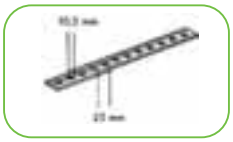






Reference code	Part No.	Material	Dimensions mm		Unit weight kg
PIT03	710180	plastic	250x200x215	1	1,350
IP-900-C	103450	concrete	325x325x145	1	27
IP-R193x122MM	103470	Cast iron	210x140x120	1	7
IP-SQ-180-CI	103480	Cast iron	ø180	1	2,400

EARTH BARS FOR INSPECTION PITS



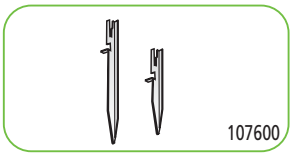
Reference code	Part No.	Dimensions & No. of holes	Designed to suit Earth Pit		Unit weight kg
• • • Copper					
BEP25x5x300MM	545140	25x5x300 mm 12 holes	Concrete Earth Pit IP-900-C(103450)	1	0,300
BEP25x5x200MM	545135	25x5x200 mm 8 holes	Plastic Earth Pit PIT03(710180)	1	0,260
BEP25x5x150MM	545530	25x5x150 mm 6 holes	Cast Iron Earth Pit IPR193(103470) IP180(103480)	1	0,150

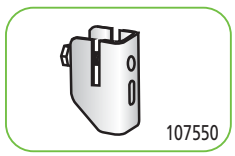
EARTH ROD SEAL KITS

Reference code	Part No.	Description		Unit weight kg
WGRS200	158922	Double Flange Earth Rod Seal*	1	4,3

* Includes PIT05 Heavy Duty Earth Inspection Kit.
The Double Flange version is delivered as a kit, which includes a 1,2 m PVC pipe, to be adjusted to site conditions. Kit is assembled with PIT05 (158923).

TAPE METAL SUPPORT FOR FOUNDATIONS OR TRENCHES AND TAPE METAL WALL SUPPORT





TAPE METAL SUPPORT FOR FOUNDATIONS OR TRENCHES

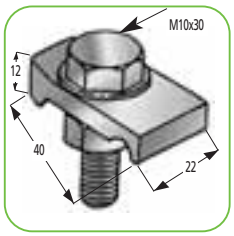
• Keeps the tape in a vertical position

Reference code	Part No.	Rod height mm		Unit weight kg
• • • Galvanized steel				
STBF-25-GS	107600	250	25	0,200
STBF-40-GS	107610	400	25	0,340

TAPE METAL WALL SUPPORT

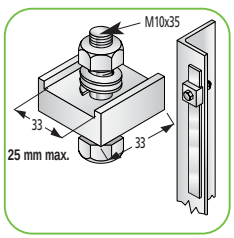
Reference code	Part No.	Material		Unit weight kg
• • • For tape below 6 mm thick				
SSF-6-GS	107550	Galvanized steel	25	0,130
SSF-6-C	107560	Copper	25	0,140

TOWER EARTH CLAMP



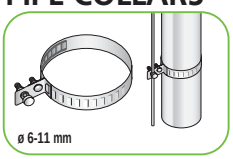
Reference code	Part No.		Unit weight kg
• • • Copper - ø 8mm			
TECLP-8-CU	710050	10	0,090
• • • Aluminium - ø 8mm			
TECLP-8-AL	710060	10	0,058

B - BOND



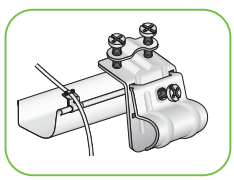
Reference code	Part No.		Unit weight kg
• • • Copper - suit 26 mm max tape width			
BBBC	710260	25	0,12
• • • Aluminium - suit 26 mm max tape width			
ABBC	710250	25	0,60

PIPE COLLARS



Reference code	Part No.	ø min. / max.		Unit weight kg
• • • Stainless steel - conductor, 6 to 11 mm				
SPC-5080-S	107000	50/80	10	0,147
SPC-70120-S	107010	70/120	10	0,170
SPC-130180-S	107020	130/180	10	0,214
• • • Copper - conductor, 6 to 11 mm				
SPC-5080-C	107050	50/80	10	0,165
SPC-70120-C	107060	70/120	10	0,191
SPC-130180-C	107070	130/180	10	0,240

FASTENERS FOR GUTTER RIM

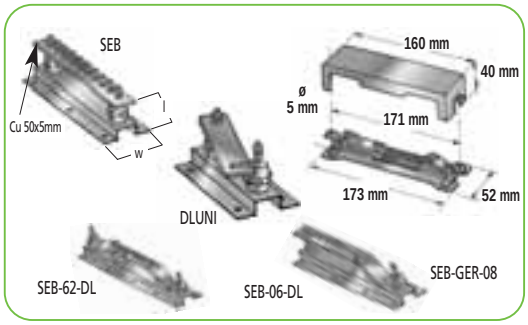


Reference code	Part No.		Unit weight kg
• • • Copper - conductor, 6 to 10 mm			
SGR-610-2	107230	10	0,067

INSULATORS

Please see ERIFLEX® Catalog.

EQUIPOTENTIAL BARS

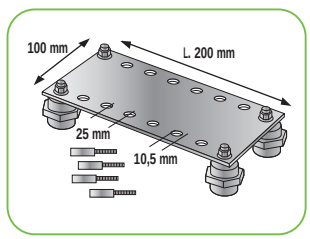


Reference code	Part No.	Nr of terminals	Disconnect links	L mm	W	L		Unit weight kg
DLUNI	545000	-	1	125	100	94	1	1,192
SEB-06	545010	6	0	400	100	94	1	1,642
SEB-06-DL	545020	6	1	475	100	94	1	2,400
SEB-10	545030	10	0	600	100	94	1	2,312
SEB-10-DL	545040	10	1	675	100	94	1	2,800
SEB-62-DL	545130	6	2	550	100	94	1	3,200
SEB-GER-08	545001	7 x 25 mm² 1 x tape 30 x 3,5 1 x 8 mm ø					10	0,314

NB: terminals do include Nuts and Bolts

EQUIPOTENTIAL PLATE SET

Meets UL 94/NFF 1611 F2



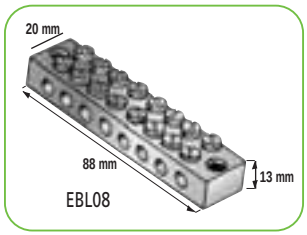
• 16 connection points

Reference code	Part No.		Unit weight kg
• • • Tinned copper 100 x 5			
SEP	545190	1	1,02

INTERSYSTEM BONDING TERMINATION (IBTB)

Reference code	Part No.	H x D x W (mm)		Unit weight kg
IBTB	IBTB	101,6 x 35,82 x 51,06	1	0,136

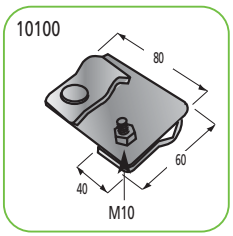
EARTH BLOCKS



EBL08
- 6 x ø 5,2 mm
- 2 x ø 6,5 mm

Reference code	Part No.		Unit weight kg
• • • Tinned brass			
EBL08	711470	10	0,158

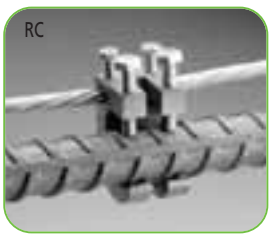
DOUBLE CONNECTING PLATE



Supporting plate for the connection of round conductors, diameter 10 mm, or flat conductors up to 40 x 4 mm on rebars up to 24 mm ø.

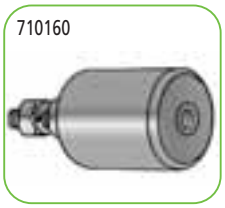
Reference code	Part No.	Conductor	Rebar		Unit weight kg
• • • Galvanized steel					
CPD-2440	101100	10 mm dia or 40x4	24 mm dia	25	0,340

REBAR CLAMPS



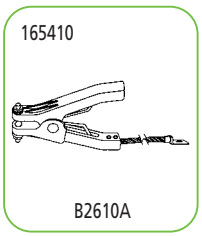
Reference code	Part No.	Conductor	Rebar		Unit weight kg
• • • Galvanized steel					
RC70	710325	8 mm dia	8-18 mm	1	0,340
RC100	710335	8 mm dia	18-38 mm	1	0,780
EK16	710355	25 mm²	25 mm-parallel	50	0,091
EK17	710365	25 mm²	25 mm-perpendicular	50	0,091

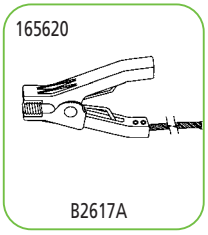
EARTH BOSS

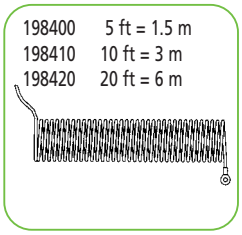


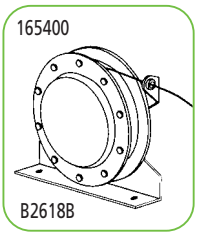
Reference code	Part No.	Length mm	ø mm		Unit weight kg
500-10-E-BOSS	710160	50	50	1	-

STATIC EARTHING







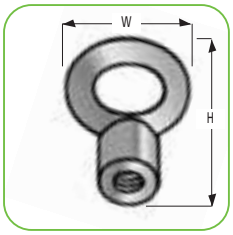


Reference code	Part No.	Description		Unit weight kg
B2610A	165410	Spring Clamp	1	0,144
B2617A	165620	Aircraft Grounding Clamp	1	1,140
A822SA111C-5	198400	Orange Coiled Cable, 5 ft (1.5 m)	1	0,450
A822SA111C-10	198410	Orange Coiled Cable, 10 ft (3 m)	1	0,540
A822SA111C-20	198420	Orange Coiled Cable, 20 ft (6 m)	1	0,820
B2618B	165400	Cable Reel Assembly	1	3,150

FENCE CLAMPS

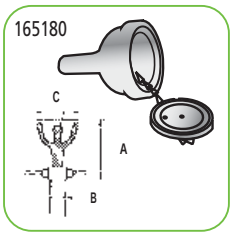
Reference code	Part No.	Conductor Size - Metric	Pipe Size - Metric
FC073	198401	16 mm² Str - 70 mm² Str	40 mm
FC074	198402	70 mm² Str - 120 mm² Str	40 mm
FC075	198403	16 mm² Str - 70 mm² Str	50 mm
FC076	198404	70 mm² Str - 120 mm² Str	50 mm
FC078	198406	16 mm² Str - 120 mm² Str	65 mm
FC079	198407	16 mm² Str - 70 mm² Str	80 mm
FC080	198408	70 mm² Str - 120 mm² Str	80 mm
FC082	198411	16 mm² Str - 120 mm² Str	90 mm

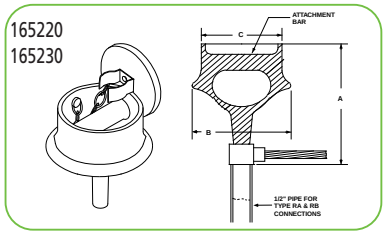
EYES BOLTS FOR COPPERBONDED GROUND RODS



Reference code	Part No.	ø inch	W	H		Unit weight kg
EBR-58	710140	5/8"	68	96	5	-
EBR-34	710150	3/4"	68	96	5	-

GROUNDING RECEPTACLES





These receptacles provide earth connections for the frames of planes, ships, tankers trucks, etc. eliminating their electrostatic charge and obtaining equipotentiality with the surrounding earth.

Parts are copper alloy, connections to the earth circuit can be made with CADWELD®.

Reference code	Part No.	Attachment	Depth A	ø B	ø C		Unit weight kg
B165	165180	Cast 3/4" ball	4 1/2"		2 3/4"	1	0,800
B166	165220	Cast 3/4" rod	6 1/4"	4 3/4"	3 7/8"	1	2,100
B167	165230	Cast 1-1/2" rod	7 1/4"	6 1/2"	4 3/4"	1	7,000

DENSO TAPE (DT) AND SILFOS TAPE (SFO)

Reference code	Part No.			Unit weight kg
DT50	711520	10 m x 50 mm	1	0,760
SFO50	710170	8 m x 50 mm	1	0,430

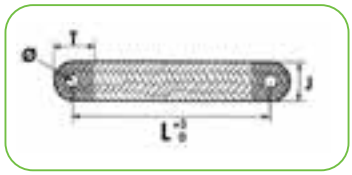
POTENTIAL EQUALIZATION CLAMP (PEC)

Reference code	Part No.		Unit weight kg
PEC100	702900	1	0,500
PEC150	702901	1	0,544

OXIDE INHIBITING COMPOUND

Reference code	Part No.		Unit weight kg
OXINHIBCOMP	710220	1	0,314

COPPER BONDING STRAPS

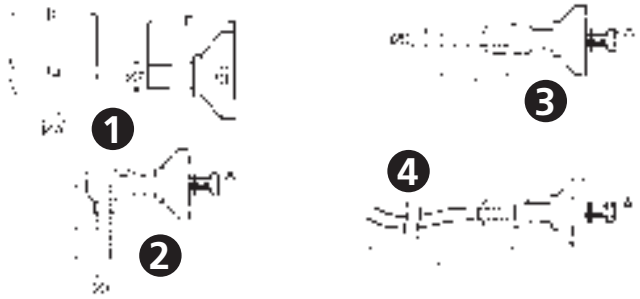


Part No.	Reference code	Intensity A	Thick. mm	Section mm²	L mm	Ø mm	J mm	T mm		Unit weight kg
563540	MBJ 16-100-6	120	1.5	16	100	6,5	15	25	10	0,018
556620	MBJ 16-100-8	120	1.5	16	100	8,5	15	25	10	0,018
563550	MBJ 16-150-6	120	1.5	16	150	6,5	15	25	10	0,035
556630	MBJ 16-150-8	120	1.5	16	150	8,5	15	25	10	0,035
563300	MBJ 16-200-6	120	1.5	16	200	6,5	15	25	10	0,033
556640	MBJ 16-200-8	120	1.5	16	200	8,5	15	25	10	0,033
556650	MBJ 16-250-8	120	1.5	16	250	8,5	15	25	10	0,040
563320	MBJ 16-300-6	120	1.5	16	300	6,5	15	25	10	0,05
556660	MBJ 16-300-8	120	1.5	16	300	8,5	15	25	10	0,05
556940	MBJ 16-500-8	120	1.5	16	500	8,5	15	25	10	0,082
556670	MBJ 25-100-10	150	1.5	25	100	10,5	23	33	10	0,027
556680	MBJ 25-150-10	150	1.5	25	150	10,5	23	33	10	0,039
563340	MBJ 25-200-6	150	1.5	25	200	6,5	23	33	10	0,052
556690	MBJ 25-200-10	150	1.5	25	200	10,5	23	33	10	0,052
563430	MBJ 25-200-12	150	1.5	25	200	12,5	23	33	10	0,052
556700	MBJ 25-250-10	150	1.5	25	250	10,5	23	33	10	0,064
556710	MBJ 25-300-10	150	1.5	25	300	10,5	23	33	10	0,077
556950	MBJ 25-500-10	150	1.5	25	500	10,5	23	33	10	0,013
556720	MBJ 30-100-10	180	2	30	100	10,5	23	33	10	0,032
556730	MBJ 30-150-10	180	2	30	150	10,5	23	33	10	0,047
556740	MBJ 30-200-10	180	2	30	200	10,5	23	33	10	0,062
556750	MBJ 30-250-10	180	2	30	250	10,5	23	33	10	0,075
556760	MBJ 30-300-10	180	2	30	300	10,5	23	33	10	0,092
556960	MBJ 30-500-10	180	2	30	500	10,5	23	33	10	0,155
556770	MBJ 35-100-10	197	2.1	35	100	10,5	23	33	10	0,037
556780	MBJ 35-150-10	197	2.1	35	150	10,5	23	33	10	0,054
556790	MBJ 35-200-10	197	2.1	35	200	10,5	23	33	10	0,072
556800	MBJ 35-250-10	197	2.1	35	250	10,5	23	33	10	0,089
565000	MBJ 35-250-25	197	2.1	35	250	25,5	40	50	10	0,089
556810	MBJ 35-300-10	197	2.1	35	300	10,5	23	33	10	0,110
556970	MBJ 35-500-10	197	2.1	35	500	10,5	23	33	10	0,180
556820	MBJ 50-100-10	250	2.5	50	100	10,5	28	38	10	0,052
556830	MBJ 50-150-10	250	2.5	50	150	10,5	28	38	10	0,077
563350	MBJ 50-200-6	250	2.5	50	200	6,5	28	38	10	0,12
556840	MBJ 50-200-10	250	2.5	50	200	10,5	28	38	10	0,120
563440	MBJ 50-200-12	250	2.5	50	200	12,5	28	38	10	0,120
563360	MBJ 50-200-16	250	2.5	50	200	16,5	28	38	10	0,11
563370	MBJ 50-200-18	250	2.5	50	200	18,5	28	38	10	0,11
556850	MBJ 50-250-10	250	2.5	50	250	10,5	28	38	10	0,127
556860	MBJ 50-300-10	250	2.5	50	300	10,5	28	38	10	0,153
563390	MBJ 50-300-16	250	2.5	50	300	16,5	28	38	10	0,15
563400	MBJ 50-300-18	250	2.5	50	300	18,5	28	38	10	0,14
556980	MBJ 50-500-10	250	2.5	50	500	10,5	28	38	10	0,255
563560	MBJ 50-500-12	250	2.5	50	500	12,5	28	38	10	0,255

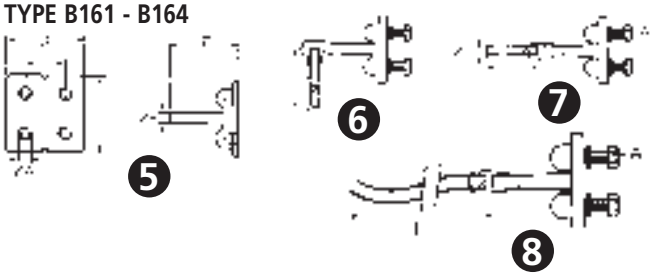
EARTH POINTS

- FIG. 1: CADWELD® mould ref. 197130 can be used to make CADWELD welded connection of 1 or 2 conductors (cross-section up to 50 mm² to the plate).
- FIG. 2: Steel bar attached at right angles to shank of earth plate by CADWELD welding.
- FIG. 3: Steel bar attached to end of earth plate by CADWELD welding.
- FIG. 4: 50 mm2 green: yellow insulated conductor attached to end of earth plate by CADWELD welding.

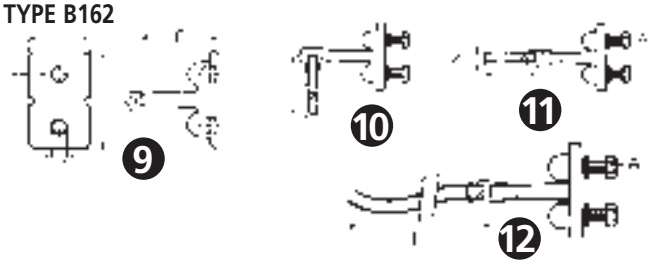
TYPE DB



TYPE B161 - B164



TYPE B162



TYPE DB - Minimum Order Quantity Required

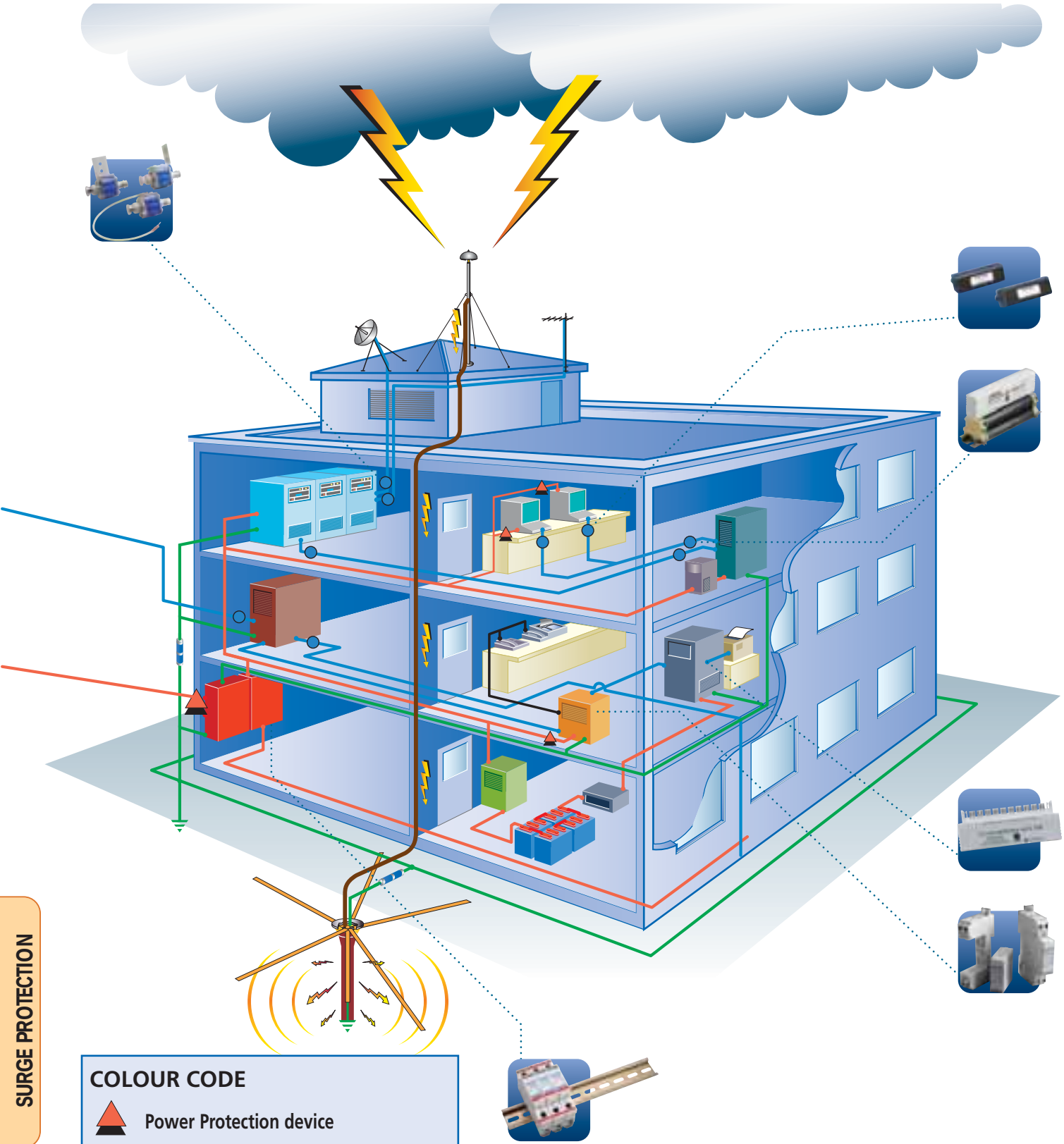
Fig. No.	Reference code	Part No.	øA	øB mm	øC mm	øD mm	F mm	L mm		Unit weight kg
1	DB-8A	166090	M8	12,7	-	30	50	-	5	0,090
	DB-10A	166120	M10	16	-	50	55	-	5	0,300
	DB-12A	166150	M12	16	-	50	55	-	5	0,305
	DB-16A	166180	M16	16	-	50	55	-	5	0,400
2	DB-8K	166100	M8	12,7	12	30	50	500	1	0,450
	DB-10K	166130	M10	16	19	50	55	500	1	1,520
	DB-12K	166160	M12	16	19	50	55	500	1	1,535
	DB-16K	166190	M16	16	19	50	55	500	1	1,560
3	DB-8KS	166110	M8	12,7	12	30	50	500	1	0,440
	DB-10KS	166140	M10	16	19	50	55	500	1	1,520
	DB-12KS	166170	M12	16	19	50	55	500	1	1,505
	DB-16KS	166200	M16	16	19	50	55	500	1	1,540
4	DB-10-C5005	166480	M10	-	50mm²	50	55	500	1	0,740
	DB-10-C501	166490	M10	-	50mm²	50	55	1000	1	0,960
	DB-10-C502	166500	M10	-	50mm²	50	55	2000	1	1,440

TYPE B161-B164 - Minimum Order Quantity Required

	Reference code	Part No.	øA	øB mm	øC mm	øD mm	F mm	G mm	L mm		Unit weight kg
5	B161-8A	166000	4xM8	14	-	65	42	30	-	1	0,435
	B161-10B	166030	4xM10	14	-	65	42	30	-	1	0,455
	B164-12A	166060	4xM12	10,7	-	85	75	44,5	-	1	0,770
6	B161-8K	166010	4xM8	14	12	65	42	30	500	1	1,980
	B161-10KA	166040	4xM10	14	12	65	42	30	500	1	1,040
	B164-12K	166070	4xM12	10,7	12	85	75	44,5	400	1	1,080
7	B161-8KS	166020	4xM8	14	12	65	42	30	500	1	1,980
	B161-10KM	166050	4xM10	14	12	65	42	30	500	1	0,850
	B164-12KS	166080	4xM12	10,7	12	85	75	44,5	400	1	1,100
8	B161-10-C5005	166510	4xM10	-	50mm²	65	-	30	500	1	0,840
	B161-10-C501	166520	4xM10	-	50mm²	65	-	30	1000	1	1,100
	B161-10-C502	166530	4xM10	-	50mm²	65	-	30	2000	1	1,600

TYPE B162 - Minimum Order Quantity Required

	Reference code	Part No.	øA	øB mm	øC mm	D mm	E mm	F mm	G mm	L mm		Unit weight kg
9	B-162-12A	166210	2xM12	10,7	-	45	85	75	44,5	-	5	0,400
10	B-162-12K	166220	2xM12	10,7	12	45	85	75	44,5	400	1	0,700
11	B-162-12KS	162230	2xM12	10,7	12	45	85	75	44,5	400	1	0,700
12	B-162-12-C5005	166540	2xM12	-	50mm²	45	85	75	44,5	500	1	0,820
	B-162-12-C501	166550	2xM12	-	50mm²	45	85	75	44,5	1000	1	1,060
	B-162-12-C502	166560	2xM12	-	50mm²	45	85	75	44,5	2000	1	1,560



COLOUR CODE

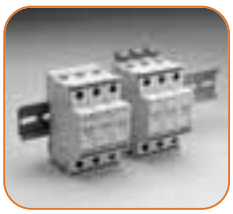
- Power Protection device
- Telecommunication and Dataline Protection device.
- Power line
- Telecoms and Data
- Earthing network

SURGE PROTECTION

DINLINE SURGE DIVERTERS 150kA

Reference code	Part No.	Description		Unit weight kg
DSD1150 2SR 275	702420	150kA, 275V	1	0,33

DINLINE SURGE DIVERTERS 100-10kA



Reference code	Part No.	Description		Unit weight kg
DSD160 1SR 275	702460	60kA, 275V, Relay	1	0,12
DSD160 1SR 275M	702465	60kA, 275V Module	1	0,10
DSD140 1S 75	702478	40kA, 75V	1	0,12
DSD140 1S 275	702491	40kA, 275V	1	0,12
DSD140 1SR 275	702521	40kA, 275V, Relay	1	0,12
DSD140 M 275	702496	40kA, 275V Module	1	0,10
DSD140 1SR 440	702530	40kA, 440V, Relay	1	0,12
DSD140 M 440	702506	40kA, 440V Module	1	0,10
DSD110 1S 275	702560	10kA, 275V	1	0,12
DSD110 M 275	702566	10kA, 275V Module	1	0,10

DINLINE SURGE DIVERTERS THREE PHASE

Reference code	Part No.	Description		Unit weight kg
DSD340 TNC 275 A	702581	40kA, 275V TN-C, Modular	1	0,4
DSD340 TNS 275 A	702591	40kA, 275V TN-S, Modular	1	0,4
DSD340 TT 275 A	702601	40kA, 275V TT, Modular	1	0,4

DINLINE SPARK GAP DIVERTER (SGD)

Reference code	Part No.	Description		Unit weight kg
SGD1100 2S NE	702400	100kA 10/350	1	0,3
SGD125 1SR NE	702426	25kA 10/350	1	0,12

TRANSIENT DISCRIMINATING FILTER (TDF)

Reference code	Part No.	Description		Unit weight kg
TDF3A120V	700001	3A, 120V	1	0,35
TDF3A240V	700002	3A, 240V	1	0,35
TDF10A120V	700003	10A, 120V	1	0,75
TDF10A240V	700004	10A, 240V	1	0,75
TDF20A120V	700005	20A, 120V	1	0,8
TDF20A240V	700006	20A, 240V	1	0,8

DINLINE SURGE FILTER (DSF)

Reference code	Part No.	Description		Unit weight kg
DSF6A 30V	702090	6A, 30V	1	0,200
DSF6A 150V	701000	6A, 150V	1	0,200
DSF6A 275V	701030	6A, 275V	1	0,200

TRANSIENT PANEL SURGE PROTECTION

Reference code	Part No.	Description		Unit weight kg
TDX100M277/480TT	702428	100kA, 277/480V	1	1,400
TDX200M277/480TT	702429	200kA, 277/480V	1	2,000

UNIVERSAL TRANSIENT BARRIER (UTB)

Reference code	Part No.	Description		Unit weight kg
UTB5SP	702861	5V, 1.5A	1	0,100
UTB15SP	702862	15V, 1.5A	1	0,100
UTB30SP	702863	30V, 1.5A	1	0,100
UTB60SP	702864	60V, 1.5A	1	0,100
UTB110SP	702866	110V, 1.5A	1	0,100
UTB5DP	702886	5V, 8A, 2 Pair	1	0,100
UTB15DP	702887	15V, 8A, 2 Pair	1	0,100
UTB30DP	702888	30V, 8A, 2 Pair	1	0,100
UTB60DP	702889	60V, 8A, 2 Pair	1	0,100
UTB110DP	702891	110V, 8A, 2 Pair	1	0,100

TRANSIENT DINLINE SURGE DIVERTER

Reference code	Part No.	Description		Unit weight kg
TDS1501SR277	702407	50kA, 277V	1	0,120
TDS1501SR560	702408	50kA, 560V	1	0,120
TDS11002SR240	702411	100kA, 240V	1	0,120
TDS11002SR277	702412	100kA, 277V	1	0,120
TDS11002SR560	702413	100kA, 560V	1	0,120
TDS350TNC277	702417	50kA, 277V TNC	1	0,360
TDS350TT277	702418	50kA, 277V TT	1	0,360

LOCAL AREA NETWORK PROTECTORS (LAN)

Reference code	Part No.	Description		Unit weight kg
LANRJ45C6	700528	RJ45, CAT6	1	0,120
LANRJ45POE	700529	RJ45, POE	1	0,120
LANRJ45RAK	700531	Rackmount Kit	1	0,820

TELECOMMUNICATION PROTECTORS (SLP/DLP/DLT)

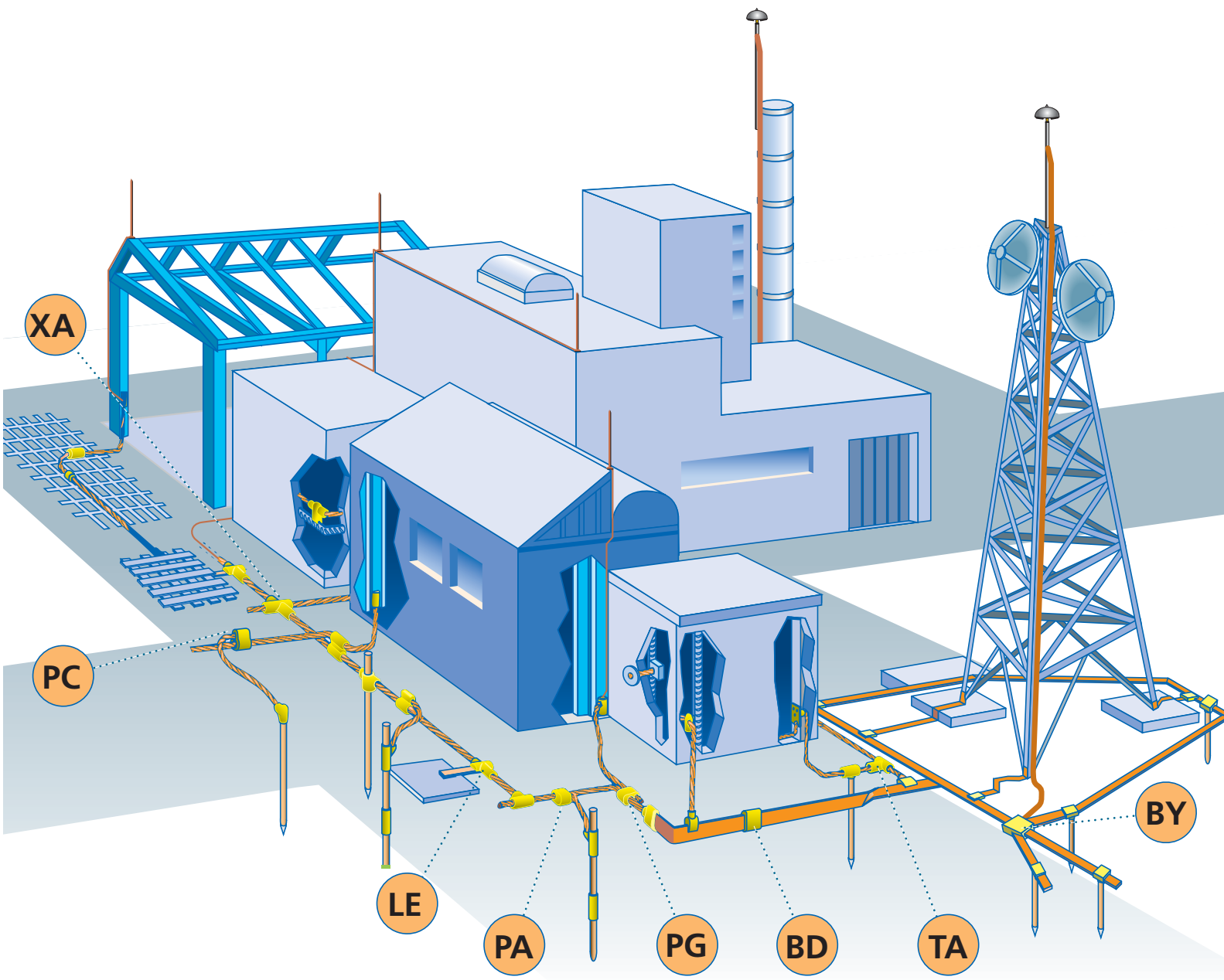
Reference code	Part No.	Description		Unit weight kg
SLP10K1F	701540	Subscriber line, high speed	1	0,100
HSP10K12	700815	12V, high speed	1	0,100
HSP10K36	700805	36V, high speed	1	0,100
HSP10K72	700850	72V, high speed	1	0,100
HSP10K230	700860	230V, high speed	1	0,100
DLT	702721	2.5mm² terminal block	1	0,150

COAXIAL PROTECTORS - TV AND VIDEO

Reference code	Part No.	Description		Unit weight kg
CATV F	702535	Cable TV Protector	1	0,100
CATV HF	700746	Antenna TV Protector HF	1	0,040
CATV MF	702525	Antenna TV Protector	1	0,100
CCTV 12	703000	CCTV protector (video)	1	0,200

COAXIAL SURGE PROTECTORS (CSP)

Reference code	Part No.	Description		Unit weight kg
CSP BNC 90	700360	BNC, 90V	1	0,200
CSP BNC 600	700405	BNC, 600V	1	0,200
CSP NMF 90	700310	NMF, 90V	1	0,200
CSP NMF 600	700355	NMF, 600V	1	0,200
CSP NB 90	700410	NB, 90V	1	0,200
CSP NB 600	700455	NB, 600V	1	0,200



THE CADWELD® MOULD NUMBERING SYSTEM

The CADWELD Mould Part Number code gives the complete information of the mould ie:
- type of connection, mould price key, and conductor size(s).

Mould type → XXX-XXXX

Mould Price Key

Code for Main or Run Conductor

Code for Tap Conductor

EXAMPLES :

TAC-Y6Y4
- Type TA
- Price Key C
- 120 mm² Run
- 70 mm² Tap

GTC-P143Y6
- Type GT
- Price Key C
- 14,2 mm Copper Clad Ground Rod
- 120 mm² Tap

SSC-Y4
- Type SS
- Price Key C
- 2 x 70 mm² cables

VSC-Y2-V76
- Type VS
- Price Key C
- Cable 35 mm²
- Vertical Pipe
- 76 mm Diameter Pipe

CADWELD® PLUS connections offer all the benefits of conventional CADWELD® connections:

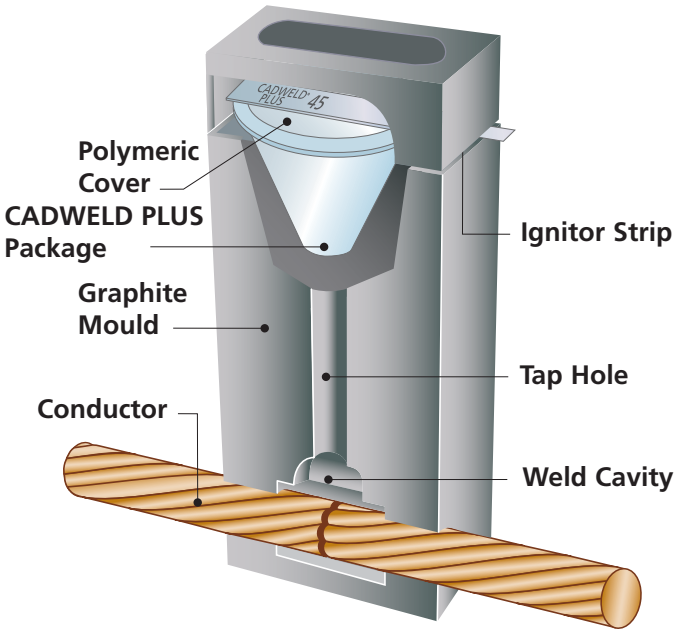
- Withstand repeated fault currents without failing during operation
- Exceed requirements of "IEEE® Std 837- Std. for Qualifying Permanent Connections Used In Substation Grounding"
- Join copper to copper, copper to galvanised or plain steel, copper to copper clad steel, copper to bronze/ brass/stainless steel, steel to steel, etc.
- Current carrying capacity equal to or greater than that of the conductor
- Permanent, molecular bond that will not loosen or corrode, resulting in a connection with a lifetime equal to that of the installation
- No external power or heat source required
- Quality Assurance Inspection is easy and visual
- Minimal installation training required
- Consists of a tamper proof, disposable, moisture-resistant welding material cup. The welding material, disk and ignition source are incorporated into the self-contained package
- Virtually unlimited shelf life
- Completes welds at distances of up to 6 ft/1.8 meters (up to 15 ft/4.6 meters with optional lead)
- Requires minimum components – no starting material, no disks, no flint igniters
- Easy to handle, store and transport – by air, land or sea in unlimited quantities
- Reduces installation time by 20%
- Has colour-coded welding material containers – by size and alloy type – for easy identification
- Has electronic ignition with a CE/UL® battery powered controller box that is designed for 600 connections with one set of 8 standard AA batteries (included) – requiring no special batteries or chargers
- Designed for use in standard CADWELD® moulds including CADWELD® MULTI

The ultimate welded connection that will never loosen, corrode or increase in resistance just got BETTER.

CADWELD PLUS is the latest advancement in the continuing evolution of ERICO's exothermic products. Since it's development in 1938, CADWELD electrical connections have become recognized as the ultimate connection for rail, cathodic, power and grounding applications. ERICO® has established itself as the worldwide connections leader. CADWELD PLUS continues this tradition of technical leadership.

The revolutionary CADWELD PLUS System is a simplified method of performing exothermically welded electrical connections. The CADWELD PLUS integrated welding material package has streamlined the installation process by eliminating ignition materials – reducing set up time.

The tamper proof, integrated welding material package consists of a steel cup containing CADWELD patented welding material alloys and ignition source. This new welding material package is designed for use in all standard CADWELD moulds including CADWELD® MULTI. Once placed in the CADWELD mould, the welding material is electronically ignited using a simple battery-powered control unit with six (6) foot lead.



CADWELD® PLUS

Feature	Benefits
Integrated Welding Material Package	• Simplifies training and set up • Saves labour • Simplifies cleaning
Colour Coded Welding Material	• Reduces risk of misapplication • Simple visual verification of correct welding material size
Electronic Control Unit	• No starting material required • Easy ignition
Six Foot Control Unit Lead	• Increased flexibility in hard to reach areas

Installation Is Easy!

4 Simple Steps For Permanently Welded Electrical Connections

Insert CADWELD® PLUS package into mould

Attach control unit termination clip to ignition strip

Press and hold control unit switch and wait for the ignition

Open the mould and remove the expended steel cup – no special disposal required

CADWELD PLUS for Grounding Applications

CADWELD PLUS Reference Code	Part No.	Size Identification Ring Color	Traditional Welding Material Part Number (Clear Cap)
15PLUSF20	165700	Black	15
25PLUSF20	165701	Red	25
32PLUSF20	165702	White	32
45PLUSF20	165703	Light Blue	45
65PLUSF20	165704	Dark Green	65
90PLUSF20	165705	Gray	90
115PLUSF20	165706	Orange	115
150PLUSF20	165707	Dark Blue	150
200PLUSF20	165708	Yellow	200
250PLUSF20	165709	Purple	250
300PLUSF20	165710	Light Green	use 2 x 150
400PLUSF20	165711	Brown	use 2 x 200
500PLUSF20	165712	Light Brown	500

CADWELD PLUS for Cathodic Applications

CADWELD PLUS Reference Code	Part No.	Size Identification Ring Color	Traditional Welding Material Part Number (Green Cap)
CA15PLUSF33	165713	Black	CA15/CA15S
CA25PLUSF33	165714	Red	CA25
CA32PLUSF33	165715	White	CA32
CA45PLUSF33	165716	Light Blue	CA45
CA65PLUSF33	165717	Dark Green	CA65

Gram weight PLUS welding material type **i.e. 45PLUSF20**

PLUSCU

PLUSCULD

CADWELD PLUS Patent Numbers 6,553,911 6,835,910 6,703,578

Accessories

Reference Code	Part No.	Description
PLUSCU	165738	CADWELD PLUS Control Unit
PLUSCU15L	165745	CADWELD PLUS Control Unit with 15 ft. (4.6 meters) Lead
PLUSCULD	165739	CONTROL UNIT Replacement Lead 6 ft. (1.8 meters)
PLUSCULD15	165746	CONTROL UNIT Replacement Lead 15 ft. (4.6 meters)

CADWELD PLUS Control Unit initiates the reaction of the metal crucible. The standard unit includes a 6-foot (1.8 meter) high temperature control unit lead. The lead attaches to the ignition strip using a custom made, purpose-designed termination clip.

After the termination clip is installed on the ignition strip, the installer pushes and holds the ignition button to start a charging and discharging sequence. Within a few seconds the control unit sends a predetermined voltage to the ignition strip and the reaction is initiated.

Traditional CADWELD® & CADWELD® PLUS Welding Material

Welding Material Size	Traditional CADWELD Reference code	Part No.		Unit Weight kg	Disk Type*	CADWELD PLUS Reference code	Part No.		Unit Weight kg
F20 Alloy - Clear Cap - Copper/Copper - Copper/Steel - Steel/Steel									
15	15	163590	20	0,015	19	15PLUSF20	165700	20	0,049
25	25	163000	20	0,025	19	25PLUSF20	165701	20	0,063
32	32	163010	20	0,032	19	32PLUSF20	165702	20	0,065
45	45	163020	20	0,045	19	45PLUSF20	165703	20	0,086
65	65	163030	20	0,065	19	65PLUSF20	165704	20	0,104
90	90	163040	10	0,090	25	90PLUSF20	165705	10	0,158
115	115	163050	10	0,115	25	115PLUSF20	165706	10	0,185
150	150	163060	10	0,150	38	150PLUSF20	165707	10	0,217
200	200	163070	10	0,200	38	200PLUSF20	165708	10	0,267
250	250	163080	10	0,250	38	250PLUSF20	165709	10	0,353
300	use (2) 150					300PLUSF20	165710	10	0,376
400	use (2) 200					400PLUSF20	165711	10	0,480
500	500	163090	10	0,500	38	500PLUSF20	165712	10	0,585
F33 Alloy - Green Cap - Cathodic protection - Steel pipe									
15	CA15	163200	20	0,015	19	CA15PLUSF33	165713	20	0,049
25	CA25	163210	20	0,025	19	CA25PLUSF33	165714	20	0,063
32	CA32	163220	20	0,032	19	CA32PLUSF33	165715	20	0,065
45	CA45	163230	20	0,045	19	CA45PLUSF33	165716	20	0,086
65	CA65	163240	20	0,065	19	CA65PLUSF33	165717	20	0,104
90	CA90	163250	10	0,090	25				
115	CA115	163260	10	0,115	25				
150	CA150	163270	10	0,150	38				

CADWELD® MULTI

4 Easy steps for multiple, permanently welded, electrical connections

Step 1 Layer batting and variable conductor sizes to be welded into dry mould

Step 2 Close mould and drop metal disk in place

Step 3 Deposit welding material and tap bottom of container to release starting material

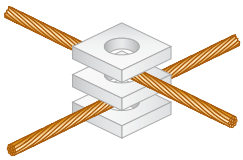
Step 4 Close the cover and ignite with flint ignitor. Open the mould after 10 seconds

CADWELD® MULTI Available Items

Part Nr	Article Nr	Description		Weight (kg)
KITCDMV01	167782	CADWELD MULTI Kit	1	25.000
The CADWELD MULTI kit (KITCDMV01) contains the following list of items:				
FMCDMV01	120883	Handle Clamp	1	1.800
CDMV01H	240399	Mold for H welds	1	1.200
CDMV0112	240398	Mold for welds on 1/2 rods	1	1.200
CDMV0158	240397	Mold for welds on 5/8 rods	1	1.200
CDMV0134	240396	Mold for welds on 3/4 rods*	1	1.200
SCDM01	120886	Set of 33 batting/gaskets	2	0.200
B399P	162070	SKK1 clamp	1	0.500
TSCSTP	197295	Toolset	1	2.000
B136B	182030	Slag Removal Spade	1	0.144
		Language free instruction sheet	1	
The following items can be used with the CADWELD MULTI Kit (KITCDMV01). They are sold separately.				
T320	165000	Flint Ignitor T320	1	0.090
90	163040	CADWELD Traditional welding material	10	0.090
115	163050	CADWELD Traditional welding material	10	0.115
PLUSCU	165738	Control Unit	1	1.088
PLUS#90F20	165705	CADWELD PLUS welding material	10	0.158
PLUS#115F20	165706	CADWELD PLUS welding material	10	0.185

Due to ERICO's continuous product improvement policy, products shown in this catalog are subject to change without notice.
If you would like to know more about the benefits of CADWELD MULTI contact ERICO or visit: www.erico.com

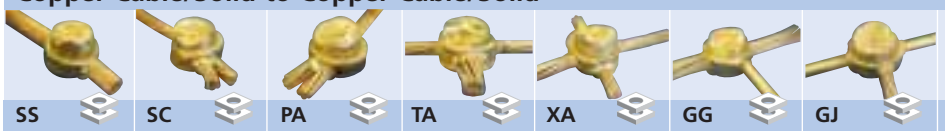
The CADWELD MULTI combines a versatile mold block and a range of gaskets (batting) to allow numerous different welded connections to be produced without the need to change the mould for each connection type.



The process is similar to the traditional CADWELD with one distinct difference... there is no need to change the mould for different connection types. The whole process is complete in about one minute. The connection table details the gasket quantities required for each weld.

CADWELD® MULTI Connection Capabilities

Copper Cable/Solid to Copper Cable/Solid

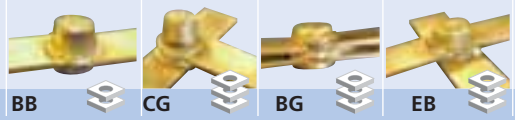


- *Copper concentric conductor sizes up to 25 mm² (6.6 mm dia.) or #3 AWG (0.26" dia.)*
- *Copper concentric conductor sizes up to 50 mm² (9.3 mm dia.) or 1/0 AWG (0.37" dia.)*

Copper Cable/Solid Strip to Rebar

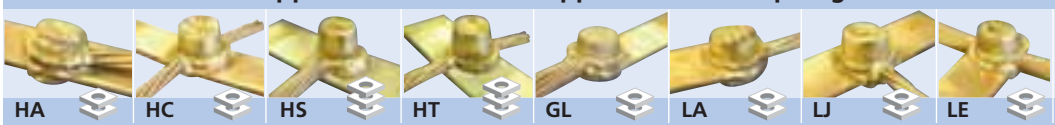
- *Copper concentric conductor sizes up to 50 mm² (9.3 mm dia.) or 1/0 AWG (0.37" dia.)*
- *Copper or steel strip sizes up to 30 x 3,5 mm (1.2" x 0.14")*
- *Rebar sizes up to 10 mm (#3)*

Copper Strip to Copper Strip



- *BB and CG: Copper strip sizes up to 30 x 3,5 mm (1.2" x 0.14")*
- *BG and EB: Copper strip sizes up to 30 x 3,0 mm (1.2" x 0.12")*

Copper Cable/Solid to Copper or Steel Strip/Lug



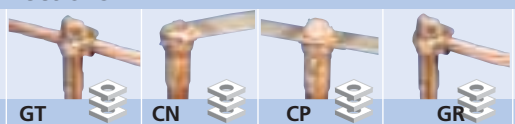
- *Copper concentric conductor sizes up to 50 mm² (9.3 mm dia.) or 1/0 AWG (0.37" dia.)*
- *Copper or steel lug / strip sizes up to 30 x 3,5 mm (1.2" x 0.14")*

Galvanized Steel Strip to Galvanized Steel Strip

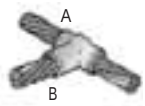
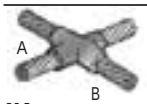
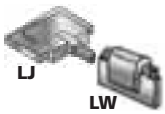
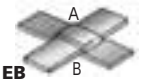
- *Galvanized steel strip sizes up to 30 x 3,5 mm (1.2" x 0.14")*

Ground Rod Connections

- *Copper concentric conductor sizes up to 10 mm² (4.2 mm dia.) or #6 AWG (0.18" dia.)*
- *Copper strip sizes up to 30 x 2,0 mm (1.2" x 0.08")*

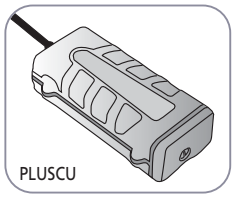


- *Copper concentric conductor sizes greater than 10 mm² (4.2 mm dia.) or #6 AWG (0.18" dia.)*
- *Copper strip sizes 30 x (2,5 - 3,0 mm) or 1.2" x (0.10" – 0.12")*
- *Steel strip sizes 30 x (0,5 - 3,5 mm) or 1.2" x (0.02" – 0.14")*

Mould	Reference code	Part No.	Diameter Amm	Diameter Bmm	Section Amm²	Section Bmm²	Sizes mm		Unit weight kg	Remarks
 **SS**	SSC-W6	221008	8,0	8,0	50	50		1	1,37	Solid core cable horizontal splice
	SSC-W8	221011	10,0	10,0	78,5	78,5		1	1,37	
	SSC-Y1	221004	6,4	6,4	25	25		1	1,37	Multi -strand cable to cable splice
	SSC-Y2	221006	7,6	7,6	35	35		1	1,37	
	SSC-Y3	221009	9,0	9,0	50	50		1	1,37	
	SSC-Y4	221021	11,0	11,0	70	70		1	1,37	
	SSC-Y5	221013	12,5	12,5	95	95		1	1,75	
	SSC-Y6	221014	14,2	14,2	120	120		1	1,75	
 **TA**	TAC-Y1	221025	6,4	6,4	25	25		1	1,37	Horizontal + cable to cable connection
	TAC-Y2	221028	7,6	7,6	35	35		1	1,37	
	TAC-Y2-Y1	221063	7,6	6,4	35	25		1	1,37	
	TAC-Y3	222459	9,0	9,0	50	50		1	1,37	
	TAC-Y4	221035	11,0	11,0	70	70		1	1,37	
	TAC-Y4-Y2	221075	11,0	7,6	70	35		1	1,37	
	TAC-Y5	222461	12,5	12,5	95	95		1	1,37	
	TAC-Y5-Y6	225026	12,5	14,2	95	120		1	1,37	
	TAC-Y6	222463	14,2	14,2	120	120		1	1,57	
	TAC-Y6-Y4	221094	14,2	11,0	120	70		1	1,57	
	TAC-Y7	221051	15,9	15,9	150	150		1	1,57	
	TAC-Y8	221053	17,7	17,7	185	185		1	1,57	
 **XA**	XAC-Y1	221135	6,4	6,4	25	25		1	1,37	Horizontal X cable to cable connection, one cable cut
	XAC-Y2	221138	7,6	7,6	35	35		1	1,37	
	XAC-Y3	221142	9,0	9,0	50	50		1	1,37	
	XAC-Y4	221148	11,0	11,0	70	70		1	1,37	
	XAC-Y5	221153	12,5	12,5	95	95		1	1,57	
	XAC-Y6	221159	14,2	14,2	120	120		1	1,75	
 **PG**	PGC-Y1	237901	6,4	6,4	25	25		1	1,37	Parallel horizontal conductors cable to cable
	PGC-Y2	232556	7,6	7,6	35	35		1	1,37	
	PGC-Y3	232648	9,0	9,0	50	50		1	1,37	
	PGC-Y4	231342	11,0	11,0	70	70		1	1,37	
	PGC-Y4-Y1	236084	11,0	6,4	70	25		1	1,37	
	PGC-Y5	223943	12,5	12,5	95	95		1	1,57	
	PGC-Y6	231692	14,2	14,2	120	120		1	1,57	
 **PT**	PTC-Y1	221268	6,4	6,4	25	25		1	1,75	Parallel vertical conductors cable to cable
	PTC-Y2	226545	7,6	7,6	35	35		1	1,75	
	PTC-Y3	221265	9,0	9,0	50	50		1	1,75	
	PTC-Y4	221258	11,0	11,0	70	70		1	1,75	
	PTC-Y5	221256	12,5	12,5	95	95		1	1,97	
	PTC-Y6	222115	14,2	14,2	120	120		1	1,97	
 **PC**	PCC-Y1	223550	6,4	6,4	25	25		1	1,37	Cable to cable
	PCC-Y3	222560	9,0	9,0	50	50		1	1,75	
	PCC-Y6	230199	14,2	14,2	120	120		1	1,97	
 **LJ** **LW**	LJP-Y1-BAK	234737	6,4		25	60	30x2	1	0,70	Cable to tape
	LJP-Y2-BAK	234738	7,6		35	60	30x2	1	0,70	
	LJP-Y3-BAK	234739	9,0		50	60	30x2	1	0,70	
	LJC-Y3-FAM	232933	9,0		50	250	50x5	1	1,37	
	LWP-Y3-BAK	234782	9,0		50	60	30x2	1	0,70	
 **HA**	HAA-Y1	221609	6,4		25			1	0,31	Horizontal round or cable conductor to flat steel surface or top of horizontal pipe
	HAA-Y1-CA	221466	6,4		25			1	0,31	
	HAA-Y2	221607	7,6		35			1	0,31	
	HAA-A3	222689	8,0		40			1	0,31	
	HAA-Y3	221603	9,0		50			1	0,31	
	HAA-Y4	221534	11,0		70			1	0,45	
	HAA-B3-CA	240228	4,9		14,5-16			1	0,19	
 **LE**	HBA-B3	223044	4,9		14,5-16			1	0,31	Sleeve : H105
	LEP-Y3-BAK	234759	9,0		50	60	30x2	1	0,60	Tape to cable
 **VG**	VGC-Y1	228521	6,4		25			1	1,37	Cable through connections on vertical flat steel surface
	VGC-Y2	224815	7,6		35			1	1,37	
	VGC-Y3	222939	9,0		50			1	1,75	
	VGC-Y4	228347	11,0		70			1	1,75	
	VGC-Y5	223076	12,5		95			1	1,97	
	VGC-Y6	223609	14,2		120			1	1,97	
 **VS**	VSC-Y3	221407	9,0		50			1	1,57	Cable to vertical steel surface
	VSC-Y4	221405	11,0		70			1	1,57	
	VSC-Y5	221404	12,5		95			1	1,57	
	VSC-Y6	221403	14,2		120			1	1,57	
	BMP-BAK	234429			60	60	30x2	1	0,87	
 **BM**	BMP-CAJ	234426			75	75	25x3	1	0,87	Tape to tape
	G-BMP-DAJ	224123			87,5	87,5	25x3,5	1	0,87	
	BMP-CAJ-BAK	234736			75	60	25x3/30x2	1	0,60	
 **EB**	EBP-BAK	225788			60	60	30x2	1	0,87	Tape to tape
	EB-BGP-BAK	234398			60	60	30x2	1	0,85	
	EBP-CAJ	234991			75	75	25x3	1	0,58	
	G-EBP-DAJ	223432			87,5	87,5	25x3,5	1	0,58	

Weld metal size required	Frame Page 53	Toolset Page 55	Scraper tools Page 55
45	L-160	TS CST	TP-3B
65	L-160	TS CST	TP-3B
32	L-160	TS CST	TP-3B
32	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
65	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
32	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
45	L-160	TS CST	TP-3B
115	L-160	TS CST	TP-7A
150	L-160	TS CST	TP-2A
150	L-160	TS CST	TP-2A
90	L-160	TS CST	TP-7A
200	L-160	TS CST	TP-2A
200	L-160	TS CST	TP-2A
45	L-160	TS CST	TP-3B
65	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
150	L-160	TS CST	TP-2A
200	L-160	TS CST	TP-2A
45	L-160	TS CST	TP-3B
65	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
150	L-160	TS CST	TP-2A
200	L-160	TS CST	TP-2A
45	L-160	TS CST	TP-3B
65	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
200	L-160	TS CST	TP-2A
250	L-160	TS CST	TP-2A
45	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
200	L-160	TS CST	TP-2A
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
90	L-161	TS CST	TP-5B
90	L-160	TS CST	TP-7A
90	L-161	TS CST	TP-5B
45	M-129	TS CST	TP-3B
32F33	M-129	TS CST	TP-3B
45	M-129	TS CST	TP-3B
45	M-129	TS CST	TP-3B
45	M-129	TS CST	TP-3B
65	M-129	TS CST	TP-3B
15F33	M-129	TS CST	TP-3B
25	M-129	TS CST	TP-3B
65	L-161	TS CST	TP-5B
45	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
115	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
150	L-160	TS CST	TP-2A
150	L-160	TS CST	TP-2A
90	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
90	L-161	TS CST	TP-2A
90	L-161	TS CST	TP-5B
90	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B

CADWELD® PLUS Control Units

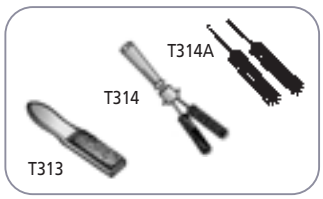


Reference code	Part No.	Description		Unit weight kg
PLUSCU	165738	Control Unit with 1,80 m lead	1	0,907
PLUSCU15L	165745	Control Unit with 4,60 m lead	1	1,088
PLUSCULD	165739	Replacement Lead 1,80 m long	1	0,146
PLUSCULD15	165746	Replacement Lead 4,60 m long	1	0,306

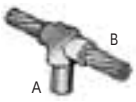
FLINT IGNITOR T320 AND SPARE FLINTS

Reference code	Part No.		Unit weight kg
T320	165000	1	0,090
T320A	165010	10	0,015

BRUSHES



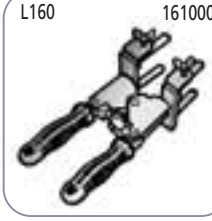
Reference code	Part No.		Unit weight kg
T313	165040	1	0,070
T314	165130	1	0,375
T314A	165270	1	0,070
KIT-120-3/4	165260	1	0,040

Mould	Reference code	Part No.	Diameter Amm	Diameter Bmm	Section Amm²	Section Bmm²	Sizes mm		Unit weight kg	Remarks
 **CH**	CHP-BAK	234733			60		30x2	1	0,70	Lug or tape to horizontal surface
 **CG**	CGP-BAK	234732			60		30x2	1	0,70	Lug or tape to horizontal surface
 **CC**	CCP-BAK	234734			60		30x2	1	0,70	Lug or tape to vertical surface
 **CF**	CFP-BAK	232003			60		30x2	1	0,52	Lug or tape to vertical surface
	CFP-CAJ	233366			75		25x3	1	0,70	
	G-CFP-DAJ	225147			87,5		25x3,5	1	0,70	
 **BW**	BWP-BAK	239887			60		30x2	1	0,90	Lug or tape to vertical surface
 **GR**	GRC-P172-Y3	226567	17,2	9,0	232,4	50		1	1,75	
	B-GRC-P143-Y3	238039	14,2	9,0	160,6	50		1	1,75	Single stranded cable to top of ground rod
 **GT**	GTC-P143-Y1	233901	14,2	6,4	160,6	25		1	1,75	Single stranded cable to top of ground rod
	GTC-P143-Y2	229737	14,2	7,6	160,6	35		1	1,75	
	GTC-P143-Y3	225814	14,2	9,0	160,6	50		1	1,75	
	GTC-P143-Y4	232996	14,2	11,0	160,6	70		1	1,57	
	GTC-P143-Y5	223520	14,2	12,5	160,6	95		1	1,57	
	GTC-P172-Y1	228682	17,2	6,4	232,4	25		1	1,75	
	GTC-P172-Y2	226670	17,2	7,6	232,4	35		1	1,75	
	GTC-P172-Y3	226083	17,2	9,0	232,4	50		1	1,57	
	GTC-P172-Y4	227687	17,2	11,0	232,4	70		1	1,57	
	GTC-P172-Y5	227549	17,2	12,5	232,4	95		1	1,57	
 **CP**	GTC-P190-2G	223138	19	10,7	283,5	66,5		1	1,57	
	CPP-P143-BAK	234735	14,2		160,6	60	30x2	1	0,70	Tape to ground rod
	CPP-P172-BAK	239694	17,2		232,4	60	30x2	1	0,68	
 **GE**	GEC-P128	232537	12,8	12,8	128,7	128,7		1	1,75	Horizontal ground round
	GEC-P143	237727	14,2	14,2	158	158		1	1,97	to ground rod splice
 **GF**	GFC-P143-Y3	238544	14,2	9,0	160,6	50		1	1,75	Horizontal stranded cable to ground
	GFC-P165-G2-B	238556	16,5	9,5	214	50		1	1,75	or other rod splice
 **LA**	LAC-Y1-BAH	224800	6,4		25	40	20x2	1	1,37	Stranded cable to lug or tape
	LAC-Y1-CAJ	222501	6,4		25	75	25x3	1	1,37	
	LAC-Y2-BAH	224150	7,6		35	40	20x2	1	1,37	
	LAC-Y2-CAJ	221443	7,6		35	75	25x3	1	1,37	
	LAZ-Y3-BAK	234740	9,0		50	60	30x2	1	0,70	
	LAC-Y3-BAH	239534	9,0		50	40	20x2	1	1,37	
	LAC-Y3-BAJ	222122	9,0		50	50	25x2	1	1,37	
	LAC-Y3-CAJ	221455	9,0		50	75	25x3	1	1,37	
	LAC-L9-EAK-A	233795	10,0		60	120	30x4	1	1,75	
 **CROWS FOOT edgewise**	BJC-BAK-CROW	234770			60	60	30x2	1	2,20	Crowsfoot with edgewise tape
 **CROWS FOOT horizontal**	BYC-BAK-CROW	234760			60	60	30x2	1	1,60	Crowsfoot with flat tape
 **RC**	RCP-Y1	234581	10-40	6,4	S-2904B	25		1	0,68	Single stranded cable to rebar
	RCP-Y2	234585	10-40	7,6	S-2904B	35		1	0,68	
	RCP-Y3	234582	10-40	9	S-2904B	50		1	0,68	
	RCP-Y4	234588	10-40	11	S-2904B	70		1	0,68	
	RCP-Y5	234592	10-40	12,5	S-2904B	95		1	0,68	
	RCP-Y6	234593	10-40	14,2	S-2904C	120		1	0,68	
 **RT**	RTP-Y1	234441	10-40	6,4	S-2904B	25		1	0,62	Single stranded cable to rebar
	RTP-Y2	234444	10-40	7,6	S-2904B	35		1	0,62	
	RTP-Y3	234445	10-40	9	S-2904B	50		1	0,62	
	RTP-Y4	234447	10-40	11	S-2904B	70		1	0,62	
	RTP-Y5	234453	10-40	12,5	S-2904A	95		1	0,62	
	RTP-Y6	234454	10-40	14,2	S-3121	120		1	0,62	
					Batting					

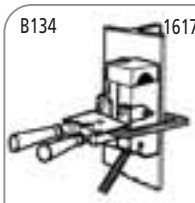
Weld metal size required	Frame Page 53	Toolset Page 55	Scraper tools Page 55
90	L-161	TS CST	TP-5B
90	L-161	TS CST	TP-5B
90	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
65	L-161	TS CST	TP-5B
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
90	L-161	TS CST	TP-5B
115	L-161	TS CST	TP-3B
150	L-160	TS CST	TP-7A
150	L-160	TS CST	TP-2A
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-7A
32	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
32	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
90	L-161	TS CST	TP-5B
45	L-160	TS CST	TP-3B
45	L-160	TS CST	TP-3B
65	L-160	TS CST	TP-3B
90	L-160	TS CST	TP-7A
115	L-160	TS CST	TP-2A
200	L-160	TS CST	TP-2A
45	L-161A	TS CST	TP-5B
45	L-161A	TS CST	TP-5B
65	L-161A	TS CST	TP-5B
90	L-161A	TS CST	TP-5B
90	L-161A	TS CST	TP-5B
90	L-161A	TS CST	TP-5B
45	SMK 21	TS CST	TP-5B
45	SMK 21	TS CST	TP-5B
90	SMK 21	TS CST	TP-5B
90	SMK 21	TS CST	TP-5B
90	SMK 21	TS CST	TP-5B
115	SMK 21	TS CST	TP-5B

FRAMES

L160 161000

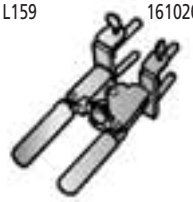


B134 161740

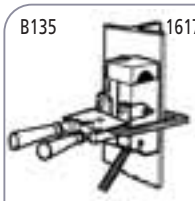


Clamp for frame L160

L159 161020

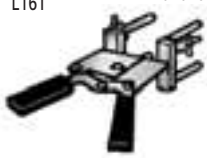


B135 161780

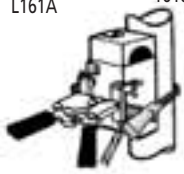


Clamp for frame L159

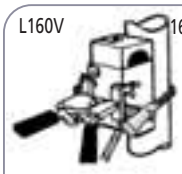
L161 161010



L161A 161090



L160V 161660



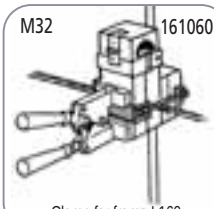
Chain support clamp for C & R moulds

SMK21 161080

M129 161030

SKK1 162070

M32 161060



Clamp for frame L160

Reference code	Part No.		Unit weight kg
L160	161000	1	1,185
L159	161020	1	1,325
L161	161010	1	0,380
B134	161740	1	0,360
B135	161780	1	0,414
L161A	161090	1	1,010
L160V	161660	1	1,775
M129	161030	1	0,315
M32	161060	1	0,880
SMK21	161080	1	0,670
SKK1	162070	1	0,500

RASP

Reference code	Part No.		Unit weight kg
T321C (complete)	162630	1	0,740

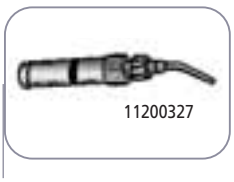
CABLE CLAMP B265

Reference code	Part No.		Unit weight kg
B265	165020	1	0,348

CADWELD MOULD SEALER

Reference code	Part No.		Unit weight kg
T403	165280	1	0,910

BLOWLAMP SOUDO 360 AND VALVED CARTRIDGE


11200327


11200300

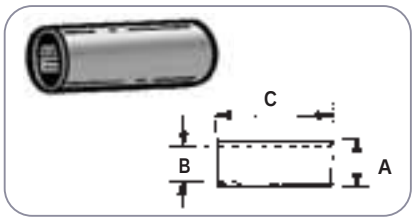
Reference code	Part No.		Unit weight kg
11200327	140160	1	0,260
11200330	140180	1	0,100

BATTING FOR P MOULD

185030 - 185020 - 185010
Used with CADWELD® "P" moulds

Reference code	Part No.	Sizes mm		Unit weight kg
S2904C	185030	50x60x12	25	0,005
S2904B	185020	50x60x20	25	0,008
S2904A	185010	50x60x25	25	0,009

COPPER SLEEVES



Available on Request

Reference code	Part No.	A mm	B mm	C mm		Unit weight kg
H101	180140	8	6	26	50	0,005
H102	180170	6,4	4,3	25	50	0,004
H103	180180	7,7	5,3	25	50	0,006
H104	180190	19	17	26	50	0,013
H105	180230	5	3	23,5	50	0,003
H107	180690	11	9	26	50	0,008
H108	180010	20	18	26	50	0,014
H109	180020	14	12	26	50	0,010
H113	180350	10	8	26	50	0,007
H115	180700	6,35	4,83	25	50	0,003
H117	180430	9	7	25	50	0,006

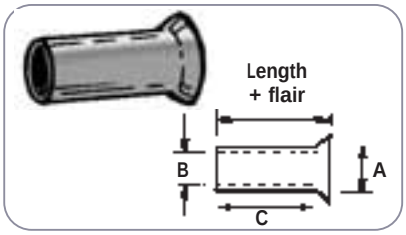
SCRAPER TOOLS

Reference code	Part No.	Equivalent Ref. Code		Unit weight kg
B136A	182125	TP5A, TP3A, TP5B	1	0,045
B136B	182130	TP2A, TP6A, TP7A	1	0,077
B136F	182135	TP4A	1	0,080

WRAP SLEEVE

Reference code	Part No.	Dimensions mm		Unit weight kg
B140	165610	76x25x0,20	25	0,001

SLEEVES



Available on Request

Reference code	Part No.	A mm	B mm	C mm	Length + flair		Unit weight kg
H101F	180150	8	6	25	26	50	0,005
H102F	180390	6,4	4,3	25	26	50	0,004
H103F	180380	7,7	5,3	25	26	50	0,006
H104F	180200	19	17	25	26	50	0,013
H106F	180250	17	15	25	26	50	0,009
H107F	180270	11	9	25	26	50	0,008
H108F	180280	20	18	25	26	50	0,014
H109F	180300	14	12	25	26	50	0,010
H111F	180320	15	13	25	26	50	0,011
H112F	180340	12	10	25	26	50	0,008
H113F	180360	10	8	25	26	50	0,007
H114F	180040	25	21	25	26	50	0,032
H116F	180740	13	11,5	25	26	50	0,007
H117F	180080	9	7	25	26	50	0,006
H104BF	180220	19	17	34	35	50	0,018
H106AF	180260	17	15	34	35	50	0,012
H109AF	180310	14	12	34	35	50	0,013
H111AF	180330	15	13	34	35	50	0,014
H113AF	180030	10	8	34	35	50	0,009

TOOL BOXES

T396

486 x 176 x 189 mm

Reference code	Part No.		Unit weight kg
T396	162436	1	4,898

TOOLSET

Reference code	Part No.		Unit weight kg
TS-CSTP	197295	1	0,450

INDEX OF PART NUMBERS IN NUMERICAL ORDER

INDEX OF PART NUMBERS IN NUMERICAL ORDER

WARNING
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Due to a policy of continuing product development, specifications are subject to change without notice.

ERICO® Facility Electrical Protection Literature

Facility Electrical Protection Solutions Brochure

Discusses effective facility electrical protection. The catalog details the ERICO® Six Point Plan of Protection and goes on to cover lightning protection, grounding, bonding and surge protection in depth. Products and detailed drawings are included, as are industries to which the technologies are most applicable.

ERITECH® Lightning Protection Catalogs

ERITECH® SYSTEM 2000 Lightning Protection Products catalog highlights products used in conventional lightning protection. Products detailed include conductors, ground rods and plates, clamps, splices, points and accessories.

ERITECH® SYSTEM 3000 Lightning Protection Products catalog details the active lightning protection process. Information on air terminals, downconductors and design software is included.

ERITECH® Grounding Products Catalog

Details ERICO's extensive offering of ground rods and accessories, ground mesh and mats, signal reference grids, ground bars, ground receptacles, transient earth clamps, ground enhancement materials, and other grounding materials.

CADWELD® Welded Electrical Connections Catalog

Covers the range of hardware required to make a CADWELD connection as well as detailed ordering information for moulds, weld materials, fence and gate jumpers and the smokeless CADWELD® EXOLON process.

Surge Protection Products Catalog

Details the extensive range of Surge Protection Devices for industries such as commercial & industrial, process control & automation and telecommunications. It includes information on AC protection products, data control and signal protection products, as well as point-of-use protection products.

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