

ERICO®



Grounding Products

Copperbonded, Pointed Earth Rods (250µm)

ERICO is the world's largest manufacturer of UL listed earth rods and accessories. We offer a complete range of rods with a variety of driving heads, coupling methods and connections for reliable earthing in nearly any application.

Earth 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 earth 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 relatively long service life but they are considerably more expensive than their galvanised counter part. In addition, solid copper rods are not well suited to deep driving or even driving short lengths into hard ground without bending.

As a compromise, steel cored earth rods, swaged in a copper or stainless steel sheath were developed. These ground rods are much less expensive than the solid alternative. Although they are capable of being deep driven, 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.

Eritech copperbonded earth rods have an electrolytic coating of copper deposited over a layer of nickel. This process ensures a long lasting, molecular bond between the copper layer and steel core. ERICO recommends copperbonded earth 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. Copperbonded earth rods have a high resistance to corrosion and provide a low resistance path to ground.



UL listing of copperbonded earth rods requires compliance with the UL 467. This Standard requires compliance with bend and adhesion tests which easily identify poor product. The adjacent photo shows two ground rods subjected to the same bend test. The Eritech copperbonded earth rod (shown on the left) will bend without detriment to the copper coating. However, the copper sheathed earth rod (shown on the right) has developed cracks and creases to the outer sheath which will significantly reduce service life and introduce risk to the equipment and perhaps life

Part Number	Diameter mm (in)	Length m (ft)	Std Pack	Wt/100 kg	
611350	12.7 (1/2")	1520 (5')	5	168	
611360	12.7 (1/2")	1830 (6')	5	202	
611380	12.7 (1/2")	2440 (8')	5	269	
611300	12.7 (1/2")	3050 (10')	5	336	
615850	14.2 (5/8")	1520 (5')	5	192	
615860	14.2 (5/8")	1830 (6')	5	230	
615880	14.2 (5/8")	2440 (8')	5	307	
615800	14.2 (5/8")	3050 (10')	5	384	
613460	17.3 (3/4")	1830 (6')	5	375	
613480	17.3 (3/4")	2440 (8')	5	455	
613400	17.3 (3/4")	3050 (10')	5	564	

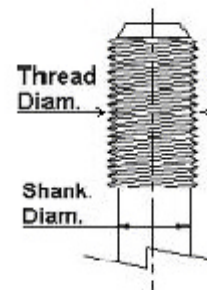
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Copperbonded, Sectional Earth Rods (250µm)

Eritech sectional earth rods may be extended by use of a threaded bronze coupling. While threaded rods are of immense benefit when placing earth electrodes in deep drilled holes, they have also have sufficient strength and proven design for easy driving.


The threads are cold rolled which ensures the grain flow of the metal remains intact unlike a cut thread, which is much weaker for having breached this same grain structure. The thread rolling process raises the thread so that the thread is larger than the shank diameter. This difference in dimensions often leads to confusion over the size of the earth rod. The following diagram and table explains the issue more clearly.

Nominal Diameter	Thread Size & Type	Shank Diameter
5/8"	5/8" UNC	14.2 mm
3/4"	3/4" UNC	17.2 mm



Rolling the thread also maintains the integrity of the copper layer, which is electroplated over a layer of nickel. This process ensures a long lasting, molecular bond between the copper layer and steel core. ERICO recommends copperbonded earth rods because the copper coating will not slip or tear when driven nor will it crack if the rod is bent. Preserving the integrity of the copper plating in the thread also maintains the reliability of the electrode by providing a corrosion resistant interface between the earth rod and coupling.

These earth rods have UL approval which means they comply with all of the requirements as per the Standard UL467. They display the UL mark and are clearly identified with the Eritech brand and ERICO part number. This information is roll-stamped within 300 mm of the chamfered end for easy inspection after installation.

Part Number	Diameter mm (in)	Length m (ft)	Std Pack	Wt/100 kg	
635880	14.2 (5/8")	2440 (8')	5	307	
635800	14.2 (5/8")	3050 (10')	5	384	
633480	17.3 (3/4")	2440 (8')	5	455	
633400	17.3 (3/4")	3050 (10')	5	564	

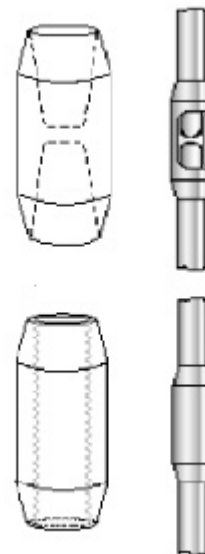
Grounding Products

Earth Rod Couplings

ERICO has a range of couplings to extend both the pointed and sectional earth rods quickly and easily without the risk of rod separation when deep driven. Threaded earth rods and couplings are ideal for use in deep-drilled holes.

These couplings are manufactured in high strength silicon bronze and have UL approval.

Part Number	Diameter mm (in)	Description	Std Pack	Wt/100 kg
CC12F	12.7 (1/2")	Pointed	25	7.8
CC58	14.2 (5/8")	Pointed	25	11.4
CC34	17.2 (3/4")	Pointed	25	18.2
CR58	14.2 (5/8")	Threaded	25	11.4
CR34	17.2 (3/4")	Threaded	25	18.2



Earth Rod Driving Accessories

A sleeve or stud, fitted to the top of an earth rod, protects it from damage while being driven into the ground. Failure to use these devices may result in "mushrooming" which would prevent correct placement of the coupling

Part Number	Diameter mm (in)	Description	Std Pack	Wt/100 kg
Earth Rod Driver – Pointed Rods				
DH58C	14.2 (5/8")	Pointed	1	54
DH34C	17.2 (3/4")	Pointed	1	54
Drive Stud – Use w/Threaded Coupling				
DS58	14.2 (5/8")	Threaded	25	3.13
DS34	17.2 (3/4")	Threaded	25	6.72

Earth Rod Driver – Pointed Rods

This is a safe, simple and effective means to install longer earth rods. They can be driven below grade, without the use of heavy sledgehammers or ladders, saving time and as reducing the risk of employee injury.

The driver body has an ergonomic grip and accepts both the 5/8" and 3/4" insert, which are used as the rod nears ground level. A retaining collar holds the insert in place when the driver is not in use.

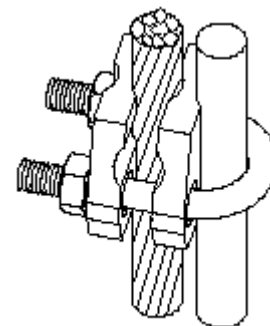
Part Number	Description	Wt/each kg
EGRD58	Driver body 1.5m w/insert for rods to 5/8"	10
EGRD58I	Replacement insert for rods to 5/8"	3
EGRD34	Driver body 1.5m w/insert for rods to 3/4"	10
EGRD34I	Replacement insert for rods to 3/4"	3



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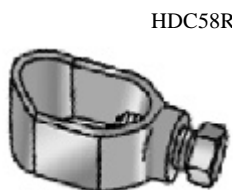
Earth Rod Clamps

An earth rod clamp provides an easy means by which to disconnect the earthing conductor from an earth rod for testing purposes. Even though this implies regular inspection, corrosion resistance, conductivity and mechanical strength are essential considerations in clamp design to ensure an earthing system remains operative for many years. Eritech earth rod clamps are available in a number of different styles to suit a variety of conductors.

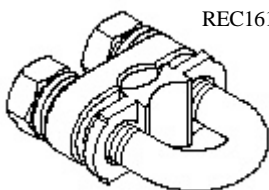


GUV type earth rod clamps are designed with the option to connect a cable at right angles to the earth rod as an alternative to the parallel connection (shown above). This is a useful feature when connecting larger cables in a tight locations such as an inspection pit.

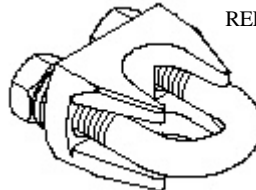
Part Number	Rod Size mm	Cable Range sqmm	Std Pack	Wt/100 kg
Single Bolt Clamp - Cable				
HDC58R	12-15	10-35	50	8.2
U-Bolt Clamp – Vertical Cable				
REC16120	12-15	16-120	10	16
REP16120	14-19	16-120	10	21
U-Bolt Clamp – Vertical or Horizontal Cable				
GUV16070	13-25	16-70	5	39
GUV70185	13-25	70-185	5	39
Single Bolt Clamp – Flat Tape				
RTC1220	13-15	25 x 3	10	16
RTC2051	14-19	50 x 6	10	31



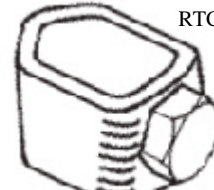
HDC58R



REC16120



REP16120



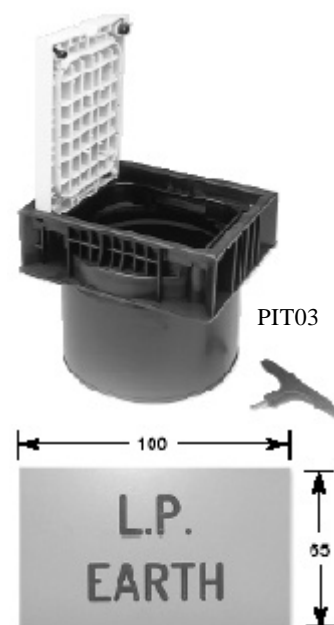
RTC Type

Inspection Pit and Markers

The use of an inspection pit allows easy access to the earthing connection. This facilitates periodic inspection of the connection for corrosion and regular maintenance, to ensure the safety of personnel and equipment from earth fault currents and the high currents injected into the earth by a lightning protection system.

An inspection pit with a locking lid provides a level of security to critical earthing connections and allows easy disconnection for periodic measurement of the earthing system resistance.

The Eritech PIT03 is a lightweight inspection pit of robust construction capable of withstanding traffic loads of 5 tonne.



Part Number	Description	Wt/each kg
PIT03	Pit, plastic trafficable to 5,000kg	1.35
LBLPIL032	Label, traffolyte, "LP EARTH"	
LBLPIL033	Label, traffolyte, "MAIN EARTH"	

Grounding Products

Earth Enhancement Material

Soil structure can vary and make it difficult to achieve uniform, low levels of resistivity across a wide area. Under almost all soil conditions, the use of a ground enhancement material will improve the effectiveness of the earthing system.

GEM is a low resistance (12ohm-cm), non-corrosive material for areas with high resistivity soil such as rocky ground, mountain tops and sandy soil; as a backfill for earth rods placed in drilled holes; where limited space makes adequate earthing difficult by conventional methods.

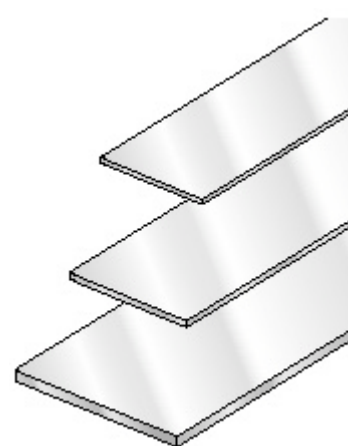


Part Number	Description	Wt/bag kg
GEM25A	Ground Enhancement Material * packed in 25lb bag with handle for easy pouring	11.4

Earthing Conductors, Flat Strip

The most common earthing conductor is a soft drawn, stranded copper conductor. Flat copper strip is also popular because it offers a large surface area. When site conditions are corrosive towards copper (eg. sulphurous soil), a tinned copper conductor is often the first choice.

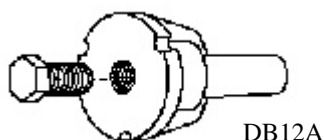
Part Number	Description	Wt/roll kg
TCEC253050	25 x 3 mm, 50m roll	34
TCEC4030	40 x 3 mm, 50m roll	65
TCEC5030	50 x 3 mm, 50m roll	41
TCECT253	25 x 3 mm, 30m roll, tinned	21
CET50	50 x 0.5 mm, 50m roll	7



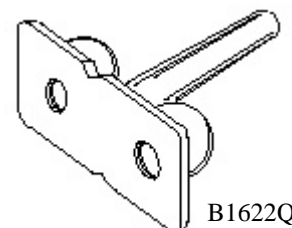
Earth Plates, for use with CADWELD

Earth plates are fitted within concrete structures and provide convenient earthing / equipotential bonding connection points to the earthing system. This is a particularly useful for means for connection to equipment, machinery and structure earthing.

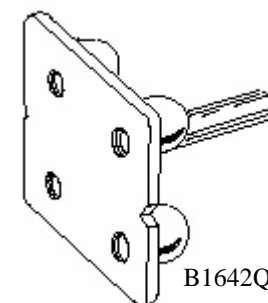
Part Number	Description	Wt/each kg
B1622Q	Rectangular plate with 2 x ½" bolt holes	0.40
B1642Q	Square plate, with 4 x ½" bolt holes	0.77
DB12A	Round plate, complete with M12 bolt	0.31



DB12A



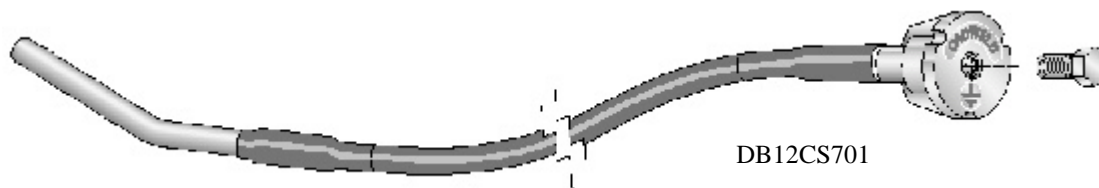
B1622Q



B1642Q

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Earth Bond, prefabricated



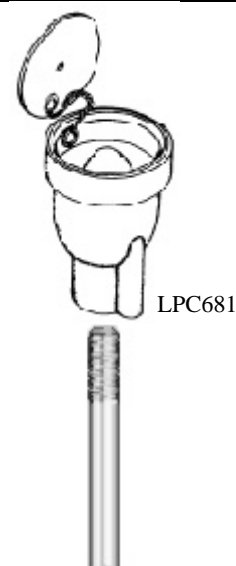
DB12CS701

Prefabricated earth bonds are a practical alternative to the use of CADWELD for connecting earth points to steel reinforcing bar. The steel rod of the bond is arc welded to construction steel before pouring concrete. The DB12CS701 has a one-metre tail of 70 sq mm conductor connected to a 12mm steel bar.

Aircraft / Static Earthing Points

This type of static earthing points is commonly used for equipotential bonding of fuel tankers and aircraft during refuelling. It is located in the apron and maybe attached to an earth rod, bonded to the steel mesh in the concrete apron or both. Fitting flush with the surface of apron, this component does not represent a trip hazard. Grounding leads are securely attached to the ball or bar via a spring clamp.

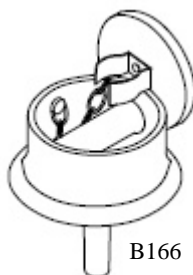
Part Number	Description	Wt/each kg
LPC681	Grounding point, for 3/4" ground rod	0.8
B165	Grounding point, 70 mm dia w/cover	0.8
B166	Ground point bar, 100 mm dia	2.1
B167	Ground point bar, 120 mm dia	7.0
B2617A	Static grounding clamp, to 3/4" dia	



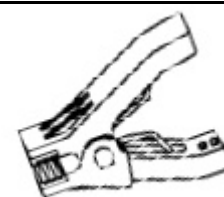
LPC681



B165



B166



B2617A

Potential Equalisation Clamp

A device used to maintain isolation of earthing systems during normal conditions and solidly clamps them together when a surge or fault occurs. It is also well suited to the protection of insulated joints in pipelines.

Part Number	Description	Wt/each kg
PEC100	Potential equalisation clamp	0.5

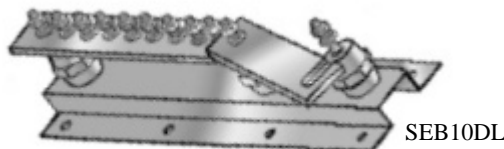


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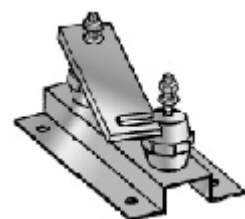
Earth Bars and Links

Earth bars provide a convenient, single point earthing and bonding location. The disconnect link provides a ready means of isolation for different earthing systems or testing of the electrode. These earth bars and links are supplied complete with hardware.

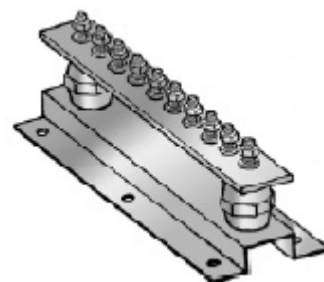
Part Number	Description	Wt/each kg
DLUNI	Disconnect link, insulated, 50 x 125mm	0.20
SEB06	Earth bar, 50 x 400, w/ 6 holes	1.65
SEB10	Earth bar, 50 x 600, w/ 10 holes	2.32
SEB06DL	Earth bar, 50 x 475, w/ 6 holes & link	2.40
SEB10DL	Earth bar, 50 x 675, w/ 10 holes & link	2.80



SEB10DL



DLUNI

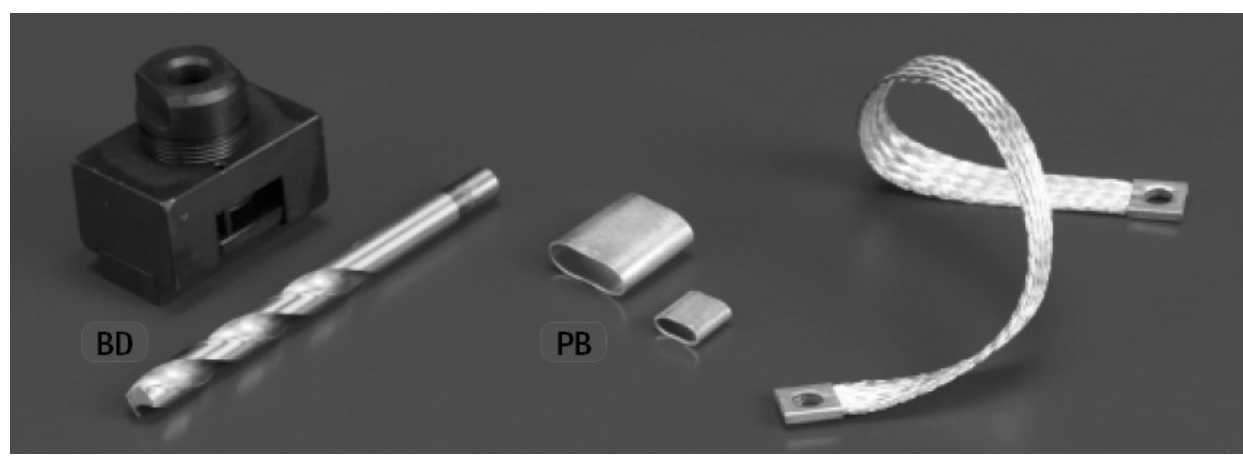
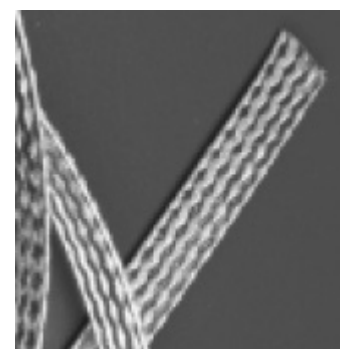


SEB10

Copper Braid (DIY)

This set up will allow the installer to make up braids to the required length on site. It is ideal for bonding between metallic structures such as fences, railing and cable trays that may become live during fault or transient conditions.

Part Number	Description	Wt/roll kg
FTCB1525	Braid, tinned flat, 25 sqmm x 25m	13.0
FTCB1550	Braid, tinned flat, 50 sqmm x 25m	25.0
PB25	Lug, copper, tinned for FTCB1525	0.01
PB50	Lug, copper, tinned for FTCB1550	0.02
BD25	Tool, crimp and drill, for PB25 lug	0.68
BD50	Tool, crimp and drill, for PB50 lug	0.72



Grounding Products

Self Adhesive Tape

This product is stable and remains flexible over a broad range of temperatures (-5°C to 45°C) and is ideal for corrosion protection of mechanical connections. Highly resistant to mineral acid, alkalis and salts.



Part Number	Description	Wt/each kg
DENSO-100-10	Tape, Denso, 100mm x 10m	

Ground Testers

These units are lightweight and portable for ease of use in the field. Their robust design and splash proof construction helps them withstand extreme conditions. The large LCD display shows required test connections and features a complete automatic test sequence for selected operations.

Part Number	Description	Wt/each kg
EST101	Handy Electronic (2-3 pole)	
EST201	System Electronic (3-4 pole)	
EST301	Universal (2-4 pole) w/CT	



EST101



EST201



EST301

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